



**DISTINGUISHING THE ENGLISH VERB SYNONYMS
IMPROVE AND *ENHANCE*: A CORPUS BASED STUDY**

BY

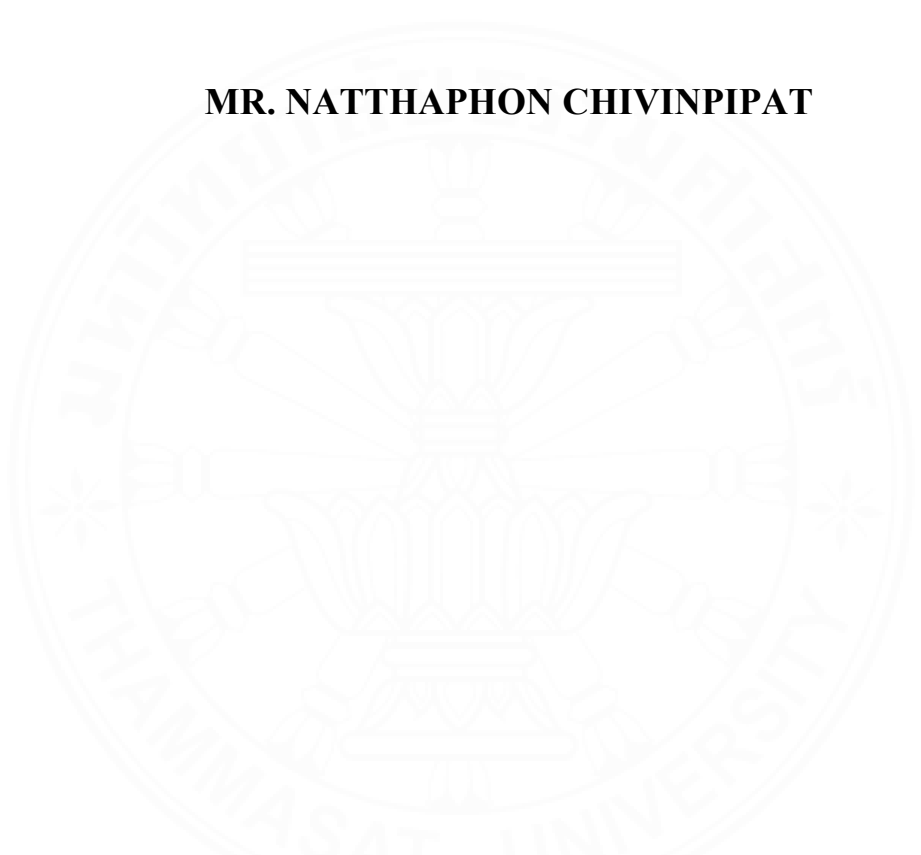
MR. NATTHAPHON CHIVINPIPAT

**AN INDEPENDENT STUDY PAPER SUBMITTED
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF ARTS IN
ENGLISH LANGUAGE TEACHING
LANGUAGE INSTITUTE
THAMMASAT UNIVERSITY
ACADEMIC YEAR 2020
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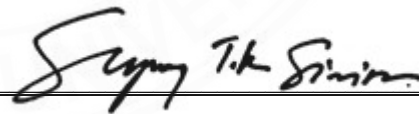
ENTITLED

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IMPROVE AND ENHANCE: A CORPUS BASED STUDY

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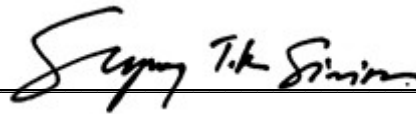
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ABSTRACT

This research was conducted to investigate two English synonymous verbs, *improve* and *enhance*, with the purpose of exploring the similarities and differences in terms of the senses of meaning, collocations, and degrees of formality. The data were obtained from two sources, which were the Longman Dictionary of Contemporary English Online and Corpus of Contemporary American English (COCA). The results indicated that the two synonymous verbs shared some core meanings and can be used interchangeably in particular contexts. However, more differences were found in the collocations of *improve* and *enhance* when they were categorized into wider ranges of themes. This implies that *improve* and *enhance* cannot be substituted interchangeably in every context. Since the two synonyms differ in terms of formality of context and collocations, it is of vital importance that learners of English as a foreign language take this variation with regard to the authentic usage of these synonyms into account.

Keywords: Synonyms, Corpus, Senses of Meaning, Collocation, Degrees of Formality, COCA

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Mr. Natthaphon Chivinpipat

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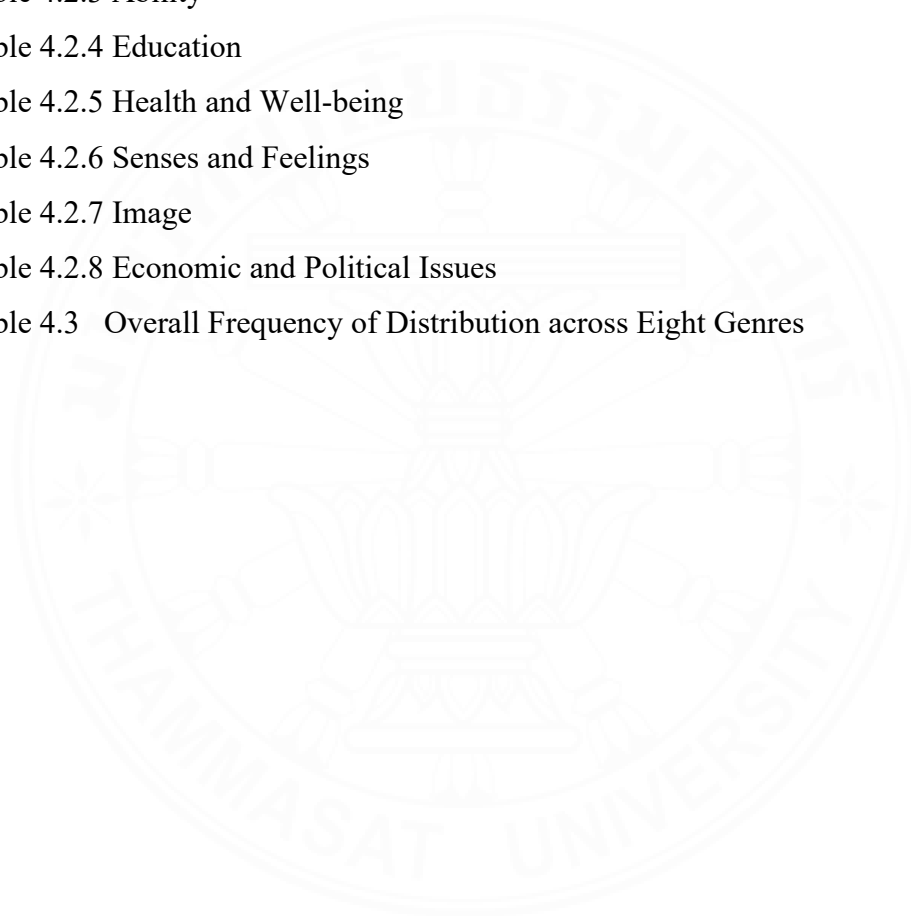
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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

English is regarded as a lingua franca, where the language serves as a means of communication among people worldwide (Kirkpatrick, 2007). English vocabulary, according to Gass & Selinker (2001), is considered the most important part of language. Although English language is a compulsory subject for Thai students at school, Thai students study English as a foreign language whereby the use of the language is limited to the classroom. Limited opportunities to produce the language outside of classroom can lead not only to students' failure in standard English testing (National Institute of Educational Testing Service, 2018), but a lack of exposure to daily communicative English can also reduce students' ability to use authentic language.

Taylor (2002) suggests that in order to become a good English user, a learner should be able to explain a single meaning with more than one lexical item. Chung (2011) identified such a phenomenon as synonymy, which involves substitution among synonymous words. According to Oxford Advanced Learner's Dictionary (2015), synonym refers to "a word or phrase that means exactly or nearly the same as another word or phrase in the same language". However, just because words share similar meanings does not always mean that all words in a set of synonyms can completely substitute for one another in every context.

As far as studying English as a foreign language is concerned, Webb (2007) mentions that EFL learners are more likely to be confused by words that are similar in meaning than words that do not have close semantic links. As a consequence, selecting appropriate synonyms in different contexts and understanding the authentic use of the language can be challenging, especially for L2 learners. As opposed to native English speakers, L2 learners can face difficulties in differentiating synonyms in terms of usage.

Regarding the context of English Language Teaching (ELT), Lee and Liu (2009) also suggest that a teacher of English language should be aware of the fact that L2 students might rely on dictionaries to provide denotative meanings without being aware of the subtle implications embedded in contexts. This is very challenging for the L2 learners and teachers since the information and examples from the dictionaries are insufficient to distinguish synonyms.

For this study, the researcher examined two synonymous verbs: *improve* and *enhance*. These two words are very important for a number of reasons. Firstly, both words are listed in the Longman Communication 3000, which is a list of the 3,000 most frequent words in both spoken and written English based on Longman Corpus Network, a collection of corpora of authentic English language. This indicates that the verbs *improve* and *enhance* are worth studying and teaching. It follows that the two synonyms *improve* and *enhance* are worthy of analysis. Secondly, *improve* and *enhance* are two synonymous English verbs, according to Longman Dictionary of Contemporary English Online and the Corpus of Contemporary American English (COCA). Thirdly, both verbs, *improve* and *enhance*, which are taught in the school level, are presented predominantly with only the meaning of “making something better”. Although dictionaries for L2 learners give some example sentences, there can be overlap and ambiguity. Without accessing the collocations co-occurring with both synonyms, students might not be able to identify the differences between them, which, consequently, can lead students to make collocational errors.

Even a number of synonyms have already been investigated, some synonyms such as *improve* and *enhance* have yet to be explored. In this independent study, uses of corpora to investigate the similarities and differences of synonyms, suggested by Hunston, (2002), Yang (2015), Petcharat and Phoocharoensil (2017), are considered more reliable guides to word usage, rather than native speaker intuitions. The information collected from the corpus can provide the language use in various types of contexts, illustrating the authentic use that would help L2 learners select the suitable synonyms for specific contexts.

1.2 RESEARCH QUESTIONS

- 1.2.1 What are the similarities and differences between the synonymous verbs *improve* and *enhance* in terms of the senses of meaning and collocations?
- 1.2.2 Do the synonymous verbs *improve and enhance* have similar or different degrees of formality?

1.3 RESEARCH OBJECTIVES

1.3.1 To investigate the similarities and differences between the synonymous verbs *improve* and *enhance* in terms of the senses of meaning, and collocations.

1.3.2 To explore the similarities and differences in the degrees of formality between the synonymous verbs *improve and enhance*.

1.4 SIGNIFICANCE OF THE STUDY

1.4.1 This independent study will help L2 learners better understand the two synonyms in terms of meanings, collocations, and degrees of formality. Since one word shares a similar meaning with the other, L2 learners must be aware of the correct use of synonyms in real contexts. In other words, students of English should realize that synonyms cannot be substituted for one another in every context.

1.4.2 This independent study demonstrates a corpus-based analysis of the synonyms *improve* and *enhance*. This study consults an up-to-date version of COCA, the Corpus of Contemporary American English (2020), to investigate words' meanings, collocations, and degrees of formality. Use of corpus software, hence, is helpful for teachers to teach and for students to learn synonyms in addition to dictionaries.

1.5 SCOPE OF THE STUDY

This study is a corpus-based analysis of two English synonymous verbs, namely *improve* and *enhance*. A differentiation of the two synonyms is based on three criteria, which are the senses of meaning, collocations, and degrees of formality. As for the senses of meaning, this study examines data from two dictionaries (Longman Dictionary of Contemporary English Online and the dictionary of COCA). Regarding collocations, only the top-30 collocates were selected based on the criteria of frequency and MI-score. This study focused on different noun collocates used to distinguish the two synonyms.

1.6 DEFINITIONS OF TERMS

1.6.1 Synonym

According to Longman Dictionary of Contemporary English (LDOCE), a synonym is a word with the same meaning as another word in the same language. Harley (2006) describes synonym as a group of words which are similar in meaning but cannot be interchangeably used in every context, for example,

Fight and *battle* are pairs of synonyms since both words share the same meaning of “to try hard to get” and “to take part in a war, battle, or competition.”

Reply and *respond* are synonyms as both words mean “to answer someone by saying or writing something or react to an action by doing something.”

1.6.2 Corpus

A corpus, defined by O’Keeffe, McCarthy, and Carter (2007), is a collection of authentic texts of both written and spoken language stored electronically in a computer database used for studying a language in various genres. Furthermore, Thornbury (2002) asserts that modern corpora are stored electronically, comprising millions of words of text, both spoken and written, for the purposes of language study. As for this study, the corpus used in the present study was Corpus of Contemporary of American English (COCA), which served as the reference for this English synonym

study. COCA refers to the Corpus of Contemporary American English, which is a free-of-charge corpus created by Mark Davies at Brigham Young University. This corpus contains data divided in eight registers which are academic journals, web, spoken, fiction, popular magazines, newspapers, blogs, TV and movies.

1.6.3 Concordance lines

A concordance line is a line of text obtained from corpus software. The concordance lines are illustrated with the target word or phrase. They may appear in the beginning, the middle or the end of one of the texts (O’Keeffe, McCarthy, and Carter, 2007). Thus, a concordance line is a tool that shows the results of searching a word or a phrase presented in a screen display in corpus programs.

1.6.4 Senses of meaning

Senses of meaning refer to the dictionary meanings of the two synonymous verbs, *improve* and *enhance*, obtained from Longman Dictionary of Contemporary Online and the dictionary of COCA.

1.6.5 Collocations

According to the Longman Dictionary of Contemporary English (LDOCE), collocation is the way in which some words often co-occur, or a particular combination of words used in this way. Collocation, described by O’Dell and McCarthy (2008), refers to words which naturally co-occur with others as follows:

- | | |
|--------------------|--|
| (Noun+Noun) | You wear a “ <u>pair of pants</u> ,” not I wear a “ <i>set of pants</i> ” |
| (Verb+Noun) | I “ <u>make the bed</u> ”, not I “ <i>do the bed</i> ” |
| (Noun+Verb) | “ <u>Lions roar</u> ”, not “ <i>lion shout</i> ” |
| (Verb+Adverb) | He “ <u>drives safely</u> ”, not he “ <i>drives securely</i> ” |
| (Adjective+Noun) | She drinks “ <u>strong coffee</u> ”, not she drinks “ <i>powerful coffee</i> ” |
| (Adverb+Adjective) | The sky is “ <u>partly clouded</u> ”, not the “ <i>sky is slightly clouded</i> ” |
| (Verb+Preposition) | She “ <u>bursts into tears</u> ”, not she “ <i>blows up into tears</i> ” |

1.6.6 Degrees of formality

Degrees of formality refer to the formality levels in which a set of synonyms tends to occur. Jackson & Amvela (2000) state that whilst some words in a set of synonyms tend to be used in informal contexts, others should be used in formal contexts. The followings are pairs of synonyms distinguished by degrees of formality.

Informal	Formal
ask	enquire
begin	commence
drink	beverage
hate	abominate

1.7 ORGANIZATION OF THE STUDY

1.7.1 Chapter One consists of the introduction, which describes the background of the study, research questions, research objectives, significance of the study, scope of the study, definition of terms, and organization of the study.

1.7.2 Chapter Two includes the literature review in four main areas: the concept of Language Corpora, the concept of synonyms, criteria for distinguishing synonyms, and relevant research studies.

1.7.3 Chapter Three explains the methodology of the study, the target words, and the collection and analysis of the data.

1.7.4 Chapter Four provides the results of the study.

1.7.5 Chapter Five contains the conclusion and recommendations for further research.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews the literature in four main areas: (2.1) the concept of language corpora, (2.2) the concept of synonyms, (2.3) criteria for distinguishing synonyms, and (2.4) relevant research studies.

2.1 THE CONCEPT OF LANGUAGE CORPORA

2.1.1 Definitions of Corpora

The term *corpus* (the plural *corpora*) is defined by Oxford Advanced Learner's Dictionary, 9th edition (2015, p. 334) as “a collection of written or spoken texts”. According to Longman Dictionary of Contemporary English Online, a corpus refers to “a large collection of written or spoken language that is used for studying the language”.

Originally, the word corpus is derived from a Latin word which means body. According to Lindquist (2009), corpus was formally used to refer to the body of work by a single author such as “The Shakespeare corpus”. The word can refer to collections of linguistic examples on slips of paper as well. However, since nowadays the word corpus usually refers to a computer-based collection of authentic texts, Bennett (2010) furthered the definition of a corpus as a principled collection of authentic texts stored electronically that can be used to study language that may not have been noticed through intuition alone. A corpus, according to Jones and Waller (2015), is not only an electronically stored, searchable collection of texts, Crawford and Csomay (2016) also point out that it is a representative of language that can be used to make statements about language use.

According to Biber, Conrad, & Reppen (1998), the corpus approach consists of four main characteristics. Firstly, a corpus analyzes how authentic language is used in real-life scenarios. Secondly, it employs a large and principled collection of naturally occurring texts which can be in the form of a written corpus, a spoken corpus and an academic spoken corpus. Thirdly, the corpus is accessed and

analyzed by a concordance program in which computers are used to analyze the language in a corpus. Finally, a corpus involves both quantitative and qualitative analytical techniques.

The present study employs the Corpus of Contemporary American English (COCA). The corpus contains texts in eight registers namely, spoken, fiction, popular magazines, newspapers, academic journals, web, blogs, and TV and movies, which will provide a clearer illustration of language for this research.

2.2 THE CONCEPT OF SYNONYMS

According to Longman Dictionary of Contemporary English Online, a synonym refers to a word with the same meaning as another word in the same language: ‘Shut’ is a synonym of ‘closed’. Meyer (2009) suggests that two synonyms can be tested by substitutability if both of them can be used interchangeably whilst the original meaning is not changed. Harley (2006) states that just because synonyms refer to a group of words that share similar meaning, it does not necessarily mean that they always substitute for each other in every context. In this case, linguists have classified synonyms into two main types: absolute synonyms and near-synonyms.

2.2.1 Absolute Synonyms

Absolute synonyms or perfect synonyms, according to Jackson and Amvela (2000, cited in Petcharat and Phoocharoensil, 2017), refer to words which are absolutely identical in meaning and completely interchangeable in every context. However, Chung (2011) argues that this type of synonym rarely occurs in language use since words do not substitute interchangeably for one another in every context. An example of this can be seen in the study of synonymous verbs, namely *want*, *fancy*, and *wish*, conducted by Figs (2013). Although the three synonyms have a similar meaning of ‘want to have or do something’, due to the differences in their meaning, as well as the degree of formality, Figs (2013, p. 24) concludes that “*want*, *fancy*, and *wish*, are not absolute synonyms”.

2.2.2 Near-synonyms

Near-synonyms, on the other hand, refer to words that have similar meanings to one another; however, they cannot substitute for one another in every context (Murphy, 2003, cited in Kiatthanakul, 2015). Jackson and Amvela (2000, cited in Petcharat and Phoocharoensil, 2017) assert that although the meanings of near-synonyms have a great overlap, they cannot substitute for each other in all contexts. This assertion has been supported by Kreidler (1998, cited in Taylor, 2003), who contends that two words never share all the same linguistic features, such as syntactic occurrences or meaning suggestions. Gu's (2017) analysis of two synonymous verbs, *gain* and *obtain*, also supports that synonyms do not have all the same meanings. The researcher found that whilst *obtain* means "to get and acquire something that is wanted or desirable", *gain*, in contrast, means "obtain and secure" with the additional meaning of increase, typically followed by weight or speed.

2.3 CRITERIA FOR DISTINGUISHING SYNONYMS

2.3.1 Senses of Meaning

A number of linguists such as O'Keeffe, McCarthy, and Carter (2007, cited in McCarthy, 2008) mention that when defining and identifying the meaning of words, the connotations of words as well as their characteristic environments of use must also be taken into account. An example of this can be illustrated with the synonyms 'sky' and 'heaven' studied by Jackson & Amvela (2000, cited in Yeh, Liou, and LI, 2007), which found that the words *sky* and *heaven* share physical and spiritual meanings, yet 'sky' usually refers to the physical whilst 'heaven' connotes the spiritual. Such an example, suggested by Yeh, Liou, and LI (2007), means that the subtle sense of meaning each synonym represents is different, although their cognitive meaning is roughly similar.

2.3.2 Collocations

The Advanced Learner's Dictionary (2015, p. 285) defines collocation as 1) a combination of words in a language that occurs very often and more frequently than would happen by chance; 2) two or more words often used together in a way that happens more frequently than would happen by chance.

Lewis (1997, p. 8) defines collocation as “the readily observable phenomenon whereby certain words co-occur in natural text with greater than random frequency”. In addition, according to O’Dell and McCarthy (2008, cited in Petcharat and Phoocharoensil, 2017), collocation is also the way words co-occur with others naturally. Lindquist (2009) also states that collocation is the relationship between a word and individual word forms which co-occur frequently with. In addition, collocation can be words or phrases that frequently occur together so naturally and repeatedly that they sound correct to native speakers (O’Keeffe, McCarthy and Carter, 2007). Hill (2000: p63-64) gives some examples of collocations:

- Unique collocations (*to foot the bill, to shrug your shoulders*): the verb is not used with any other nouns
- Strong collocations (*rancid butter*): words that almost never co-occur separately
- Weak collocations (*long hair*): words that can co-occur with many other words. These combinations are completely free and predictable to students.
- Medium-strength collocations (*to hold a meeting*). These collocations involve words that go together with a higher frequency than weak collocations.

Bennett (2010) illustrates some example of the words *big*, *good*, and *great*, which are possible adjective collocates of the noun *deal*. Whilst “a good deal” refers to a bargain, “a great deal” refers to a quantity. “A big deal”, on the other hand, is used in a situation or an event that is significant.

It is suggested that in order to improve learners’ English proficiency, they need to increase their collocational competence. Lewis (2000: p14) states that “the reason so many students are not making any perceived progress is simply because they have not been trained to notice which words go with which. They may know quite a lot of individual words which they struggle to use, along with their grammatical knowledge, but they lack the ability to use those words in a range of collocations which pack more meaning into what they say or write”.

With regard to synonyms, collocation is, therefore, one of the criteria for differentiating synonyms. Since a number of researchers state that synonyms cannot substitute interchangeably for one another in every context, pragmatic knowledge or collocational knowledge is also instrumental in determining which collocation to use, as some collocations are not appropriate for certain contexts. Hence, in order to distinguish synonyms, knowing the senses of meaning is as important as how the word collocates with others.

2.3.3 Degrees of Formality

In order to differentiate synonyms, the degree of formality — whereby some words are commonly used in formal contexts, whilst others tend to occur in informal contexts — should also be considered (Petcharat and Phoocharoensil, 2017). In other words, one word in a pair of synonyms may be appropriate in formal contexts but the other may not; or, to put it another way, one word is likely to be used in spoken English. An illustration of this is the words *commence* and *start* (Longman Dictionary of Contemporary English, 2014, cited in Petcharat, 2016). It might sound unnatural to say, “I’ll commence doing my homework tonight.” because the word *commence* normally occurs in a formal context, not in a spoken text. This example accords with Leech and Svartvick (2002, cited in Taylor, 2003), whose research found that formal language is nearly always written and is used publicly for serious purposes or in formal writings. By contrast, informal language is a type of language for public or private communication. Hence, taking the level of word formality into account is an effective way of not only learning English, but also of distinguishing synonyms.

2.4 RELEVANT RESEARCH STUDIES

A number of researchers and scholars have conducted corpus-based studies of synonyms. Their studies investigated the similarities and differences of synonyms in terms of meanings, collocations and formality by exploring and comparing the data from dictionaries and corpora.

Chung (2011) explored the differences and similarities between two synonymous verbs, *create* and *produce*, using corpora, in order to analyze the similarities and differences of two near-synonyms. Regarding the senses of meaning, Chung (2011) found that both synonymous verbs share an overlapping sense of meaning in the sense of bringing into existence, or causing to happen. However, the differences between the synonyms relate to their objects, or collocations. In this case, *produce* is frequently used in manufacturing, farming, or a man-made product in a considerable quantity; *create*, by contrast, tends to co-occur with small units and abstract objects that are lesser in quantity than the verb *produce*, and often refers to creativity.

Thamratana (2013) examined five synonymous verbs — *reduce*, *decrease*, *diminish*, *dwindle* and *decline* — to explore the similarities and differences in terms of meanings, collocations, and genres. The author collected the data from Oxford Advanced Learner's Dictionary (2010), Longman Dictionary of Contemporary English (2005), and the Corpus of Contemporary American English (COCA). The data showed that these five synonymous verbs share a core meaning; however, the meaning of each word in detail is not entirely the same. As for collocations, the corpora showed that the five synonyms occur with different parts of speech; that is, *reduce*, *decrease*, *diminish* tend to appear with nouns, whilst *dwindle* and *decline* usually co-occur with adverbs. As for the degree of formality, the dictionaries indicated that *decrease* and *decline* are used in relatively more formal context, whilst there is no indication from the dictionaries that *diminish* and *dwindle* are formal. The author also used COCA to analyze genres. The results showed that *decrease* occurs most frequently in an academic context, followed by *reduce*, *decline*, *diminish* and *dwindle* respectively.

Krawczak (2014) studied three synonyms, namely *ashamed*, *embarrassed*, and *humiliated*, which denote ‘shame’ in English. The researcher used a quantitative corpus-driven methodology for data analysis. The data is based on the fiction sections of the Corpus of Contemporary American English (COCA). The results showed that these three synonyms can be distinguished in terms of senses of meaning and collocation. Although these three words have the same core meaning — shame — *ashamed* usually refers to a dubious social status, problems with emotions or the body, and social failures. Whilst *embarrassed* usually relates to factors concerning social interaction such as politeness norms or personal insecurities, *humiliated*, on the contrary, is closely associated with external factors which cause a loss of status. The study also further investigated the lexical concept of shame in which, the word, in fact, refers to seriousness, potential destruction, and a long-lasting state, but embarrassment, by contrast, relates to a brief emotional state concerning the situation that causes it. On the other hand, the concept of humiliation is found to be in the middle between the two previous concepts.

As sense of meaning is one of the criteria to distinguish synonyms, Ruengrong (2014) conducted a study to differentiate three synonymous verbs: *ruin*, *demolish*, and *destroy*. The meanings of these words were obtained from The Oxford Advanced Learner’s Dictionary, 8th edition (OALD8, 2010). The study revealed that the definitions of the three synonyms are not absolutely the same. Although they share a core meaning denoting “to break or attack something”, the definition of each word differs in details. Whilst *destroy* is usually associated with the context of war by human means, *demolish*, by contrast, refers to tear down as in building. *Ruin*, on the other hand, means to damage something beyond repair. As for the degrees of formality, the COCA corpus shows that *demolish* has a high degree of formality since *demolish* is used more frequently in written texts followed by *ruin* and *destroy*, which are used more often in spoken texts. Since these three synonymous verbs convey different meanings and contexts, they cannot substitute for each other in all contexts. Ruengrong (2014, p. 30), hence, concludes that “*Ruin*, *demolish*, and *destroy* are near-synonyms, not perfect or absolute synonyms”.

Phitayakorn (2016) examined three synonymous verbs: *advise*, *recommend*, and *suggest*. The research shows that the three synonymous verbs have

the same core meaning, denoting “to tell someone to do something or what they should do”. However, the researcher found that whilst *advise* is used by noun collocates who have more knowledge or experience such as *solicitors, bankers, advisers, committees, directors, officers, and analysts*, *recommend* tends to be used by those possessing special knowledge of a particular subject or situation such as *committees, councils, agencies, authors, boards, directors, doctors* and *experts*. On the other hand, *suggest* is more often associated with supporting evidence and documents such as *evidence, results, data, estimates, figures, indicators, observations*, and *studies*. Hence, the three synonyms cannot be used interchangeably in every context because they are different not only in the senses of meaning in detail but also in their usage.

Kiatthanakul (2015) examined three synonymous verbs: *achieve*, *accomplish*, and *attain*. Although the three synonymous verbs share the same core meanings, denoting “to succeed in doing or completing something, especially after trying very hard or working hard”, they present different senses of meanings. Whilst *achieve* is usually associated with the sense of achieving a particular goal or succeeding at a particular kind of job or activity, the word *accomplish* is used when completing something or finishing successfully. On the other hand, the verb *attain* usually refers to the sense of reaching a particular age, level, size or condition. Hence, it is evident that the senses of meanings of each verb are not exactly the same which, as a result, leads to both similarities and differences in the noun collocates of each verb. For example, the noun collocates that co-occur with *achieve* convey a meaning of succeeding in something through hard work and effort, such as *goal, level, success, victory*, and *aim*. However, the noun collocates that co-occur with *accomplish* are associated with success in something with a sense of responsibility such as a *mission, task, work, deal, journey*, and *program*. On the other hand, the noun collocates of *attain* convey a meaning of reaching something such as a *level, age, condition*, which differs from the meanings of *achieve* and *accomplish*. Since the three synonymous verbs differ in the senses of meanings and noun collocates, Kiatthanakul (2015: p53) concludes that “*achieve, accomplish, and attain* are near-synonyms, not perfect or absolute synonyms”.

Srithanyarat (2016) investigated two synonyms: *to be sorry* and *to apologize*. In this case, the researcher found that Thai EFL learners are confused about when to use each word and when to express their feelings in the correct situations. Although both synonyms are used for apologizing or asking for forgiveness, *apologize* is associated with only one meaning which is “being sorry for having done something that has caused problems or unhappiness for someone”. *To be sorry*, on the contrary, can refer to other context “saying no”, “sad”, “sorry”, “disappointment”, “politely asking someone to do something”, and “politely interrupting someone”. The researcher also found that *to be sorry* and *to apologize* have different degrees of formality based on their genres in COCA corpus. The findings showed that *to apologize* has a higher degree of formality than *to be sorry*. The researcher concludes that *to apologize* is used as a formal admission of wrongdoing with a sense of responsibility. On the other hand, *to be sorry*, is used for admissions of regret, but *to be sorry* can also be used to acknowledge the speaker’s personal feelings about a mistake without taking responsibility. Due to different senses of meaning and degrees of formality, *to be sorry* and *to apologize*, stated by Srithanyarat (2016: p40), “are near-synonyms which are not interchangeable in all contexts”

Wongwanitkajon (2018) securitized the use of the synonymous verbs *fight* and *battle*. Although both words have the same core meaning of “to try hard to get, prevent, achieve or get rid of something” and “to take part in a war, battle, election, or competition”, there are similarities and differences in the noun collocates of both synonyms. In this case, Wongwanitkajon (2018) categorized the results of noun collocates from the COCA corpus into different themes. As for (1) warfare and military, although *fight* and *battle* share some noun collocates, which are *army*, *enemy*, *insurgents*, *rebels*, *terrorism*, and *terrorist*, proper-noun collocates such as *German*, *Russians*, and *Soviets* only collocated with *fight*. As for (2) health and medicine, the results showed both *fight* and *battle* share some noun collocates stating physical and mental disease names such as a *virus*, *AIDS*, *obesity*, *disease*, *cancer*, and *nausea*. However, the collocate stating the process of the treatment *chemotherapy* co-occurs only with *battle*. For (3) social issues, three noun collocates *corruption*, *poverty*, and *racism* co-occur with both *fight* and *battle*. However, the study found

that *fight* is more often associated with human rights issues, in which its collocates are *equality, freedom, injustice, rights, and slavery*. On the contrary, *battle* is related more to the context of addiction issues, in which its collocates are *abuse, addiction, alcoholism, and drugs*. The study suggests that although *fight* and *battle* can be used interchangeably in the same themes, the different noun collocates of each synonym found in the COCA corpus indicate that *fight* and *battle* cannot substitute each other in all contexts since some noun collocates tend to co-occur with a certain synonym.

Sumintana (2018) investigated the similarities and differences of two synonymous verbs: *cure* and *heal*. Although *cure* and *heal* denote the same sense of meaning, which is relief from pain, from native speaker intuition and the real sense of their meaning they are used differently. The researcher, hence, focused on the different usage of the targeted words *cure* and *heal* by noun collocations. As for noun collocates, the researcher obtained data from the COCA corpus, showing the target words' collocations that frequently occurred in the top ten rankings for each synonym. Whilst the top five noun collocates of *cure* are *cancer, disease, ill, AIDS, patients*, the top five most frequent noun collocates of the word *heal* are *wound, division, country, world, heart*. The researcher indicated that *cure* mostly co-occurs with the context of disease, illness, and something that needs some treatment to get better. The word *heal*, on the other hand, is associated with something abstract that takes time to get better or something that can recover by itself, such as relationships, wounds, souls, and scars. It was concluded that the two synonyms *cure* and *heal* are near-synonyms.

Jariyanupong (2018) conducted an analysis of the synonymous verbs *reveal, disclose* and *divulge*. The researcher indicated that although the three synonyms share the same core meaning of “show”, or “display”, these synonyms have slightly different meanings and different uses for each context. Whilst *reveal* means to make known or show something that is hidden or surprising, *disclose* is to give information to the public that was not previously known. On the other hand, *divulge* is to make something private, sensitive, or secret known.

Another relevant study of using collocations to differentiate synonyms was conducted by Wongrat (2018) on two synonymous verbs: *predict* and *forecast*. The researcher collected concordance lines from the COCA corpus and presented the top ten nouns collocated with the verb *predict* and *forecast*. It was found that *predict*

was used in a diverse range of contexts or situations, whilst the use of *forecast* was mostly restricted to the context of weather or disasters. As a result, *predict* co-occurs with different characteristics of noun. The noun collocations of *predict* can be classified into eight groups: (1) group categorized in terms of their levels, (2) economy and business, (3) medical, (4) engineering and construction, (5) science and experiments, (6) weather, (7) law, and (8) politics. In contrast to *predict*, forecast collocations were categorized into only two themes: (1) weather and (2) natural disasters. The findings on noun collocates shown in COCA indicate that *predict* and *forecast* cannot substitute for one another in all contexts. Since the study illustrates that two synonymous verbs present both similarities and differences in usage with different noun collocates, Wongrat (2018) considered *predict* and *forecast* as near-synonyms.

It can be seen that determining whether target synonyms are perfect synonyms or near-synonyms involves analyzing a number of criteria, such as senses of meaning, collocations, and the degrees of formality. Previous studies have concluded that perfect or absolute synonyms hardly ever exist. Although words share similar meanings, the concepts of words themselves are not exactly the same. In addition, two words never share all the same linguistic features such as collocations, and degrees of formality.

Hence, the present study will concentrate on senses of meaning, collocations, and degrees of formality. Furthermore, data will be collected from both Longman Dictionary of Contemporary English Online and the Corpus of Contemporary American English (COCA) with an emphasis on identifying the similarities and differences between two synonymous verbs.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 TARGET WORDS

The target words in this research are two synonymous verbs: *improve* and *enhance*. The two English words are listed in the Longman Communication 3000, which is a list of the 3,000 most frequent words in both spoken and written English based on statistical analysis of the 390 million words contained in the Longman Corpus Network, a collection of corpora of authentic English language. The reason for selecting these two target words, based on the Longman corpus, was mainly because the Longman Communication 3000 shows learners of English which words are most common and thus important for them to learn and study in order to communicate effectively.

Secondly, the target words *improve* and *enhance* are two frequent English synonymous verbs, according to Longman Dictionary of Contemporary English Online (2016) and the Corpus of Contemporary American English (COCA). Therefore, this study will focus on analyzing the two synonymous verbs by investigating their similarities and differences in terms of the senses of meanings, collocations, and styles or genres.

3.2 RESEARCH INSTRUMENTS

3.2.1 Longman Communication 3,000 words

The Longman Communication 3000 helps researchers see clearly which words are most frequent in written and spoken English. The frequency of words in the dictionary helps users not only select appropriate words or phrases in a variety of situations, but also which words are really worth learning and knowing how to use. For this IS study, the selected words are *improve* and *enhance*, due to the fact that both words occur with a very high frequency in written English.

3.2.2 Longman Dictionary of Contemporary English Online

After the two target words were selected for the study, the research continued by searching for definitions and examples of the two words *improve* and *enhance*. Longman Dictionary of Contemporary English Online (LDOCE, 2016) was selected as one of the research instruments for the present study. The LDOCE provided the researcher with access to Longman Learners' dictionaries, which contain the words, phrases and meanings of the target words, including words for content areas and corpus-based example sentences. This online dictionary also provides synonyms and collocation, showing words that usually co-occur.

3.2.3 The Corpus of Contemporary American English (COCA)

After the data from The LDOCE was collected, the researcher also relied on another source of data, i.e., COCA (the Corpus of Contemporary American English), which was the main corpus of this IS study. This corpus, according to Lindquist (2009), is American-English oriented and contains texts collected from media in a variety of genres. COCA provides a list of all matching strings, allowing users to see the frequency of words or phrases in eight registers: spoken, fiction, popular magazines, newspapers, academic journals, web, blogs, and TV and movies). Besides the LDOCE, COCA also has a dictionary which was used to recheck and verify the definitions and synonyms of the synonymous verbs *improve* and *enhance*. As for the senses of meaning, in contrast to the definitions found in the dictionary, concordance lines in COCA provide authentic use of language of each word in real contexts, which, ultimately, are tools to distinguish the two synonyms.

3.3 DATA COLLECTION

In order to find out the collocation information, the procedures to retrieve the information were as follows.

1. The researcher accessed the website of the COCA corpus <https://www.english-corpora.org/coca/>
2. Once the page was on 'SEARCH', a blank space was displayed. The target verb (*improve* or *enhance*) was filled in, but one at a time.

3. Once entered, the page would be on 'dictionary' page. The researcher could then retrieve the definitions of the target words. This data was used to compare with data from the LDOCE.
4. In order to retrieve the data on noun collocates, the link 'collocates' which is located on the left top of the page, was clicked.
5. After clicking on the page 'collocates', the noun collocates of the target word were displayed on the left. The list displayed 100 noun collocates for each synonymous verb *improve* and *enhance* with indication of tokens and MI scores. For this study, the top 30 noun collocates of each synonymous verb were selected based on frequency and MI scores (≥ 3). The selected noun collocates that had at least ≥ 3 of the MI values, as suggested by Phoocharoensil (2020), were considered statistically significant.

3.4 DATA ANALYSIS

This study extracted only the top 30 collocates for a number of reasons. Firstly, Cheng (2012) suggests that the noun collocates shown in COCA should be noun collocates whose MI score is ≥ 3 , which is considered the significant value for collocational association. Secondly, Szudarski (2018) also suggests that the number of tokens and frequency should be taken into account since the number of occurrences in frequency can be so low that it can hardly represent the use of authentic language. Hence, the selection of noun collocates was not conducted randomly but based on the significant value for collocational association by the MI score and number of tokens. Thus, the noun collocates of each verb analyzed in this study were the top 30.

This study investigated not only the similarities and differences of noun collocates of each synonym but also scrutinized and examined how the two synonymous verbs are used with these noun collocates. At this point, the COCA corpus software granted the researcher access to a collection of texts, both written and spoken, in a diverse range of contexts by various sources. Examples of authentic use of language are used to illustrate how each noun collocate co-occurs with the target word. This helped in the analysis of the use of the two synonyms *improve* and *enhance* with different noun collocates in real situations. As for this independent

study, the different top 30 noun collocates of each synonymous verb will be discussed with examples of authentic texts to explore how each synonym is used with particular noun collocates. This ultimately allowed the researcher to differentiate the two synonyms.

The methodology of this study also involved studying authentic contexts obtained from the COCA corpus. The analysis showed the common noun collocates that both *improve* and *enhance* share, and also the noun collocates that the synonymous verbs do not have in common. Therefore, not only did this corpus aid in the investigation of the frequency and distribution of synonyms but also allowed for the examination of how these synonyms co-occur with different collocates. Finally, the degree of formality was analyzed based on their genres. Synonyms can also be distinguished when each word occurs more frequently in a particular genre.



CHAPTER 4

RESULTS AND DISCUSSION

The following presents the findings related to the two synonymous verbs *improve* and *enhance* in terms of meanings, collocations, and degrees of formality.

4.1 SENSES OF MEANING

The definitions of the two synonymous verbs were obtained from both dictionaries, which are Longman Dictionary of Contemporary English Online (LDOCE) and The Corpus of Contemporary American English (COCA).

Table 4.1 illustrates the definitions of *improve* and *enhance* from LDOCE and COCA

	Meanings	
Synonyms	Longman Dictionary of Contemporary English Online	The Corpus of Contemporary American English (COCA)
<i>Improve</i>	<p>To make something better, or to become better</p> <p><i>Examples from Longman Corpus</i></p> <ul style="list-style-type: none"> - A course for students wishing to <u>improve</u> their English. - The temporary company will help train employees to <u>improve</u> their skills. 	<p>To make better</p> <p><i>Examples from COCA</i></p> <ul style="list-style-type: none"> - Plants can <u>improve</u> well-being at work. - The quality of thought can <u>improve</u> the quality of life.
<i>Enhance</i>	<p>To improve something</p> <p><i>Examples from Longman Corpus</i></p> <ul style="list-style-type: none"> - The publicity has <u>enhanced</u> his reputation. - You can <u>enhance</u> the flavour of most dishes with the careful use of herbs. 	<p>(1) To make better (2) To increase</p> <p><i>Examples from COCA</i></p> <ul style="list-style-type: none"> - People buy new cars to <u>enhance</u> their prestige. - Salts <u>enhance</u> flavor, salts preserve foods from decay.

4.2 COLLOCATIONS FROM CORPUS DATA

Although the main collocates of verbs are nouns and adverbs, this study emphasizes only noun collocates. Each of the 100 concordance lines of each verb *improve* and *enhance* were put into a spreadsheet to allow for comparisons. Cheng (2012) argues that noun collocates listed in COCA that should be analyzed are noun collocates whose MI score is ≥ 3 , which is claimed to be the significant value for collocational association. Nonetheless, some scholars such as Szudarski (2018) also argue that the results listed in COCA should not be selected solely based on MI scores, since the number of occurrences in a corpus can be very low, and some rare combinations are often given prominence. Hence, the noun collocates of each verb analyzed in this study were the top 30 in frequency, which was considered the strength of collocation based on a combination of both MI score and frequency, as suggested by Schmitt (2010).

As a result, the similarities and differences could be investigated in terms of noun collocates as well as the frequency of occurrence. According to Table 4.2, the results from COCA illustrate that the verbs *improve* and *enhance* co-occur with the same and different noun collocates. The black circle ● represents the common noun collocates of *improve* and *enhance*, and the white circle ○ represents the different noun collocates.

The ranking was listed by their frequency of occurrences with the two synonyms, ranging from the highest to the lowest. Regarding the noun collocates of the two synonyms, it is very noticeable that the verb *improve* has a higher number of tokens than the verb *enhance*. Table 4.2 illustrates both the shared noun collocates and different noun collocates. However, since this study also focuses on comparing and contrasting the noun collocates of each synonym, the top 30 noun collocates which differ in terms of meanings and context were categorized into different themes. These themes include 1) Attributes and Qualities, 2) Production and Result, 3) Ability, 4) Education, 5) Health and Well-being, 6) Senses, 7) Image, 8) Economic and Political Issues. Authentic examples of each theme that the synonyms are associated with are provided. The results are as follows.

Table 4.2 illustrates top 30 Noun Collocates of *Improve* and *Enhance*

Improve				Top	Enhance			
4342	5.52	quality	●	1	973	4.90	performance	●
2884	3.62	health	○	2	772	4.61	ability	●
2667	4.74	performance	●	3	688	3.50	experience	○
1813	3.99	condition	○	4	670	5.31	learning	●
1690	4.23	skill	○	5	595	4.27	quality	●
1414	3.31	effort	○	6	511	4.11	skill	●
1322	3.25	situation	○	7	487	4.68	understanding	●
1283	3.57	economy	○	8	258	3.25	strategy	○
1151	6.01	efficiency	●	9	238	4.35	capacity	○
1109	3.51	ability	●	10	230	5.71	effectiveness	●
1030	4.45	outcome	○	11	227	3.38	safety	●
776	3.55	safety	●	12	218	5.24	efficiency	●
642	3.29	score	○	13	202	3.42	communication	●
584	3.33	communication	●	14	201	4.58	reputation	○
543	3.25	understanding	●	15	188	4.96	capability	●
492	3.24	learning	●	16	167	4.87	flavor	○
473	5.17	accuracy	●	17	167	5.49	productivity	●
462	5.33	productivity	●	18	156	3.00	status	○
377	3.71	achievement	●	19	148	3.39	instruction	●
361	4.73	effectiveness	●	20	147	3.56	teaching	●
351	3.19	teaching	●	21	142	4.26	awareness	○
342	3.00	instruction	●	22	136	5.13	credibility	○
336	4.57	U.S.	○	23	132	5.66	self-esteem	●
335	3.72	mood	○	24	131	4.38	motivation	○
325	4.98	well-being	●	25	118	5.10	well-being	●
267	4.24	fitness	○	26	101	3.43	achievement	●
243	3.62	infrastructure	○	27	91	3.13	perception	○
232	3.63	capability	●	28	88	6.02	prestige	○
174	6.56	America	○	29	88	4.88	logo	○
161	3.63	literacy	●	30	86	4.35	literacy	●

Table 4.2.1 Attributes and Qualities

	Attributes and Qualities	
	<i>Improve</i>	<i>Enhance</i>
Shared Collocates	quality	
	efficiency	
	effectiveness	
Different Collocates	accuracy	credibility

The LDOCE Online defines attribute as “*a quality of feature, especially one that is considered to be good or useful*”. In this category, *improve* and *enhance* share some noun collocates, which are *quality*, *efficiency*, and *effectiveness*, as shown in Table 4.2.1 and exemplified below:

(quality) “The quality of thought ***improves*** the ***quality*** of life”.

“Genetic improvements ***enhance quality*** of crops”.

‘Efficiency’ is categorized into this theme as *efficiency*, defined by The LDOCE Online “*is the quality of doing something well and effectively, without wasting time, money, or energy*”.

(efficiency) “New innovative ideas ***improve efficiency*** of the services”.

“***Enhancing*** water use ***efficiency*** in irrigated agriculture”.

(effectiveness) “Brett and I know that we can greatly ***improve*** our ***effectiveness*** by making time for focused study”.

“Training in media relations and communications can help scientists express complex ideas in clearer and simpler ways that will ***enhance*** the ***effectiveness*** of their communication with nonscientific audiences”.

It seems that the noun collocates *quality*, *efficiency*, and *effectiveness* can be used interchangeably by both synonyms. However, whilst *accuracy* tends to co-occur with *improve* more than with *enhance*, *credibility* seems to prefer *enhance* over *improve*.

‘Credibility’ is put into this category because The LDOCE Online describes *credibility* as “*the quality of deserving to be believed and trusted*”.

(credibility) “Leaning on information from other sources is a way to enhance credibility”.

“So to enhance your credibility, it is worthwhile to gain explicit certification in appropriate skills at some level”.

‘Accuracy’ is discussed in this theme since The LDOCE Online defines *accuracy* as “*the quality of being correct or true*”.

(accuracy) “We need to come up with a way to maintain news-neutrality, and ideally improve accuracy in spite of proliferating sources”.

“I have persevered with Siri, correcting what it's heard to improve accuracy”.

The findings on *improve* and *enhance* in the context of attributes and quality are inconsistent with Ruengrong’s (2015) study of the synonymous verbs *ruin*, *demolish*, and *destroy*. Although the three synonyms share the same core meaning denoting a sense of breaking or attacking something, each synonymous verb is used not only in different context, but most noun collocates that co-occur each synonym are also different. Whilst the top noun collocates of *ruin* are *life*, *career*, *reputation*, and *happiness*, the top noun collocates of *demolish* are *building*, *house*, *home*. On the contrary, *destroys* co-occurs most frequently with *weapons*, *country*, *cells*, *soul*, *government*, and *Iraq*.

As shown in Table 4.2.1, the results indicate that not only can both *improve* and *enhance* be used in the context of attributes and quality, but both *improve* and *enhance* also share a number of noun collocates such as *quality*, *efficiency*, and *effectiveness*. This suggests that whilst some synonyms can be used quite interchangeably in certain contexts with some shared noun collocates, other synonyms such as *ruin*, *demolish*, and *destroy* studied by Ruengrong (2015) may have different top noun collocates from the first place, indicating each synonym is to be used in a particular context.

Table 4.2.2 Production and Result

	Production and Result	
	<i>Improve</i>	<i>Enhance</i>
Shared Collocates	productivity	
	performance	
	communication	
	achievement	
Different Collocates	effort	-
	outcome	-
	score	-
	infrastructure	-

Table 4.2.2 shows a comparison of *improve* and *enhance* noun collocates in the ‘production and result’ category.

From the table, the noun collocates that are shared by both *improve* and *enhance* are *productivity*, *performance*, *communication* and *achievement*.

‘Productivity’ is put in this category as *productivity*, defined by The LDOCE Online, is “*the state of producing something, or the rate in which goods are produced*”.

(productivity) “They cut costs, but don't ***improve*** *productivity*”.

“China still has potential sources for ***enhancing*** *productivity*”.

‘Performance’ is classified into this theme as *performance*, according to The LDOCE Online, can refer to “*an action of carrying out a task or function (production), or the act of doing something (production)*”.

(performance) “His *performance* in English was ***improved*** because of his study”.

“Steroids ***enhance*** *performance* in baseball”.

‘Communication’ is discussed in this theme because *communication*, defined by The LDOCE Online, is “*the way people express themselves (production) so that other people will understand (result)*”.

(communication) “Even though we want to ***improve*** our *communication* with our kids, be preceptive to their level of interest in the conversation”.

“Online learning environments can create communities that ***enhance communication*** among students with disabilities and their families”.

‘Achievement’ belongs to this category since *achievement*, indicated by The LDOCE Online, can refer to a “*result gained by effort or hard work*”.

(achievement) “He has been crafting a five-year plan to ***improve achievement*** in schools”.

“Sport involvement ***enhances*** academic *achievement*”.

However, Table 4.2.2. also presents the noun collocates that tend to strongly collocate only with *improve* such as *effort, outcome, score, infrastructure*.

‘Effort’ is classified into this group since *effort*, according to The LDOCE Online, “*is work that people do (production) to achieve something in a particular situation (result)*”.

(effort) “It's important to remember that constructive criticism can help you ***improve*** your *efforts* in the workplace”.

“Today, there are more than 130 employees getting their energy from helping world-leading brands to ***improve*** their marketing *efforts* and to develop deeper connections with consumers on a global scale via Research Communities”.

(outcome) “Healthy competition will ***improve outcomes*** and improve access but will not do anything to reduce the cost of health care”.

“Such devices would increase costs, but could ***improve outcomes***”.

‘Score’ is put into this group because *score*, according to The LDOCE Online, can refer to “*the number of points that a person or group of people gets (result) in a scientific test, experiment, or performance (production)*”.

(score) “Amy's *score* ***improved*** from 10/30 (33%) to 28/30 (93%)”.

“What is the best way to ***improve*** my *score* from 8 to 12 in two months?”.

‘Infrastructure’ is discussed in this category since *infrastructure*, according to The LDOCE Online, can refer to “*the basic physical, organizational structures, and facilities produced by efforts of human (results)*”.

(infrastructure) “Critics say the government should have done more to *improve infrastructure* during the good years”.

“If the money is used to really *improve infrastructure*; it will help business and the economy, including rich people”.

It is now evident that *improve* and *enhance* are used in the context of *production* and *result*. However, *improve* is used more frequently with a more diverse range of context. Secondly, it can also be seen that *improve* tends to co-occur with noun collocates associated with tangibility and accountability such as *outcome*, *score*, *infrastructure*. On the other hand, *enhance* is quite restricted to noun collocates that represent the state of being abstract and action that needs observation such as *performance*, *communication*, and *achievement*.

The notion of being abstract found in this study relates to Sumintana’s (2019) study of the synonyms *cure* and *heal*, wherein the findings also focused on noun collocates. The findings imply that *cure* is likely to be used in the context of diseases and problems. Noun collocates that tend to co-occur with *cure* are *diabetes*, *arthritis*, *cold*, and *depression*. On the other hand, *heal* appears with noun collocates that are abstract, suggesting relations and feelings such as *heart*, *people*, *divisions*, and *rift*. Therefore, synonyms can be distinguished when one synonym tends to co-occur with abstract noun collocates, whereas the other synonym tends to deal with physical and tangible things.

Table 4.2.3 Ability

	Ability	
	<i>Improve</i>	<i>Enhance</i>
Shared Collocates	ability	
	skill	
	understanding	
	capability	
	literacy	
Different Collocates	-	capacity

As for the category of ability, five noun collocates — *ability*, *skill*, *understanding*, *capability* and *literacy* — are shared by both synonyms.

(ability) “What steps can we take to ***improve*** our *ability* to tackle challenges like climate change that cross national boundaries?”.

“Foresight ***enhances*** *abilities* to capitalize upon opportunities”.

‘Skill’ is classified into this theme as *skill*, defined by The LDOCE Online, “*is an ability to do something well, especially because you have learned and practiced it*”.

(skill) “This will not only help ***improve*** *skills* but may also improve Work ethic”.

“Children learn new problem to ***enhance*** language and social *skills*”.

‘Capability’ is put into this group because according to The LDOCE Online, *capability* is “*the natural ability, skill, or power that makes a machine, person, or organization able to do something, especially something difficult*”.

(capability) “Soldiers using sunlight to ***improve*** combat *capability*”.

“We expect to enter additional strategic markets, as well as ***enhance*** our *capabilities* in existing markets in order to meet our goals”.

(understanding) “Project was conducted to ***improve*** *understanding* of the risk factors for breast cancer in this region”.

“Visual displays of data are used to express information and enhance understanding of presentations”

‘Literacy’ is categorized into this group since *literacy*, stated by The LDOCE Online, refers to “*the state of being able to read and write*”.

(literacy)

“The state education department has rolled out programs to improve students' *literacy* by the end of third grade”.

“Teachers need to adapt their instructional methods to enhance the *literacy* of students while enabling learners to develop higher level thinking processes”.

However, the noun collocate *capacity* seems to co-occur with *enhance* specifically. In this case, ‘capacity’ is discussed in this category since according to The LDOCE, *capacity* refers to “*someone’s ability to do something*”.

(capacity)

“Enhancing schools' *capacity* to support children in poverty”.

“Globalization has enhanced our *capacity* to create surplus and wealth at all levels of the economy, personal, corporate, national, and global”.

This finding conforms to Kiatthanakul’s (2015) study of the synonymous verbs *achieve*, *accomplish*, and *attain*, which found that each of these synonyms co-occurs with noun collocates implying *a particular target or duty*, or *having the responsibility for doing or completing things*. As a result, the most common noun collocates that co-occur with all three synonyms are *goal(s)*, *level(s)*, *mission(s)*, and *level(s)*. However, *achieve*, *accomplish*, and *attain* also co-occur with different noun collocates. Whilst *success*, *victory*, and *aim* appear with *achieve*, *accomplish* co-occurs with *mission*, *task*, *work*, *deal*, *journey*, and *program*. *Attain* is used with *age* and *condition*. As for *improve* and *enhance* in the context of ability, both verbs share a number of noun collocates such as *ability*, *skill*, *understanding*, *capability* and *literacy*, which indicates that *improve* and *enhance* can be used quite interchangeably in the context of ability. However, the noun collocate *capacity* seems to co-occur more with *enhance* than with *improve*. This suggests that *improve* and *enhance* can have different noun collocates, despite the fact that each noun collocate implies the sense of ability.

Table 4.2.4 Education

	Education	
	<i>Improve</i>	<i>Enhance</i>
Shared Collocates	learning	
	teaching	
	instruction	
Different Collocates	-	

Table 4.2.4 presents the common noun collocates that occur with *improve* and *enhance*. Unlike the previous themes, *improve* and *enhance* are used quite interchangeably in the context of education, since the noun collocates that are categorized into this group such as *learning*, *teaching*, and *instruction* can co-occur with both *improve* and *enhance*.

- (learning)** “Reasons online courses fail to *improve* student *learning* Include lack of face-to-face interactions with instructors and classmates”.
- “Students often need both verbal and written feedback from instructors to *enhance learning*”.
- (teaching)** “Hierarchical observation was deployed in order to *improve teaching* efficiency; employing assistant teachers, for example”.
- “Diverse programs have been implemented to restructure curriculum, and *enhance teaching*”.
- (instruction)** “Educators can use the results to *improve instruction* with the goal of improving student achievement”.
- “Schools can use music to *enhance instruction* in other subject areas”.

Table 4.2.5 Health and Well-being

	Health and Well-being	
	<i>Improve</i>	<i>Enhance</i>
Shared Collocates	safety	
	well-being	
Different Collocates	health	security
	condition	-
	situation	-
	fitness	-

With regard to health and well-being, the two synonyms share common noun collocates which are *safety* and *well-being*.

‘Safety’ is classified into this theme because *safety*, according to The LDOCE describes, can refer to “*when someone or something is safe from danger or harm*”.

(safety) “They've installed a new staircase, and fences to ***improve*** ***safety***”.

“Traffic calming measures (e.g., refuge islands, curb bulb outs), help manage traffic speeds and can ***enhance*** the ***safety*** of a roadway for all users”.

(well-being) “The experiment shows that plants ***improve*** ***well-being*** at work”.

“We continue to ***enhance*** the ***well-being*** of our students”.

Table 4.2.5 also presents some different noun collocates such as *health*, *condition*, *situation*, and *fitness*. These collocates tend to co-occur more frequently with *improve*.

(health) “We can ***improve*** ***health*** and reduce health care costs by simply limiting our exposure to toxics”.

“Increasing fruits, vegetables, and reducing sodium and sugar inmate meals may ***improve*** ***health*** and decrease chronic disease”.

‘Condition’ is categorized into the theme of health and well-being since The LDOCE defines *condition* as “*the state that something is in, especially how good or bad its physical state is*”. Hence, the term can be related to state, health, and fitness.

(condition) “Type 2 diabetes, or some other chronic health *condition* that could be *improved* with exercise”. (health)

“Ms. Matthai said that working *conditions* for women had *improved* a good deal over the last 30 years”. (well-being)

‘Fitness’ is put into this group since *fitness*, according to The LODCE, refers to “*when you are healthy and strong enough to do hard work or play sports*”.

(fitness) “Biking is a fantastic alternative for those seeking another way to *improve* their *fitness*”.

“People run to lose weight, maintain a healthy weight, prevent disease, increase their energy and *improve* their *fitness*”.

‘Situation’ is included under this theme as *situation*, according to The LDOCE Online, is “*a particular condition in which one finds oneself*”.

(situation) “We cannot *improve* the refugees' *situation* without expecting any negative response from the country they fled from”.

“NGOS accepted that aid would occasionally have to be given even if it failed to *improve* the human rights *situation*”.

Although *health*, *condition*, *situation*, and *fitness* appear more often with *improve*, the noun collocates *security* seems to co-occur with *enhance*.

‘Security’ is categorized into this theme since The LDOCE Online describes *security* as “*things that are done to keep a person, building, or country safe from danger or crime*”.

(security) “To *enhance security* in the principal resort areas, the Government of Jamaica has taken a number of steps, including assignment of special police foot and bicycle patrols”.

“After the Sept, 11, 2001, terrorist attacks, we want to make sure that *security* is *enhanced*, but we also want to make sure that those enhancements are done with the least amount of inconvenience to customers”.

The results from Table 4.2.5 also indicate that although *improve* and *enhance* share some noun collocates such as *safety* and *well-being*, there are noun collocates associated with health and well-being that tend to co-occur more often with *improve* than with *enhance*.

This finding is in line with Wongwanitkajon's (2018) study of *fight* and *battle*, whose results revealed that although both *fight* and *battle* can be used in the context of health and medicine, appearing with the same noun collocates such as *infections*, *bacteria*, *virus*, *obesity*, *disease*, *cancer*, and *nausea*, there are noun collocates that co-occur only with the verb *battle* such as *depression*, *diabetes*, *disorder*, *fatigue*, *illness*, *injury*, and *weight*.

What can be learnt from the findings is that although the synonyms can substitute for one another in a certain context, there are noun collocates that tend to appear with a certain synonym, whilst there are certain noun collocates that tend to co-occur with a particular synonym, despite the fact that these noun collocates are categorized into the same theme.

This accords with the findings of Phitayakorn (2016), whose study of three synonymous verbs, i.e., *advise*, *recommend*, and *suggest*, showed that these synonyms are, in fact, different in terms of subject-noun collocates. Although the three synonyms have a similar meaning, which is *to tell someone to do something or what they should do*, each synonym is used by particular subject-noun collocates. The research found that although both *advise* and *recommend* are used by subjects or people with more knowledge or experience, however, the subject-noun collocates of *advise* and *recommend* are different. Whilst *advise* co-occurs with *solicitors*, *bank(s)*, *adviser(s)*, *committee*, *director(s)*, *officer(s)*, and *analyst*, *recommend* tends to be used by different subject noun collocates such as *committees*, *council*, *agencies*, *authors*, *board*, *directors*, *doctors* and *experts*.

With regards to *improve* and *enhance*, although the two synonyms can be used in the same context of health and well-being, there are certain noun collocates that appear particularly with *improve*. Therefore, the data from corpus is very useful as it suggests that each synonym tends to co-occur with a particular synonym, and that dictionaries alone do not provide such information.

Table 4.2.6 Senses and Feelings

	Senses and Feelings	
	<i>Improve</i>	<i>Enhance</i>
Shared Collocates	-	
Different Collocates	mood	experience
	-	flavor
	-	awareness
	-	self-esteem
	-	motivation
	-	perception

According to Table 4.2.6, there is no common noun collocate shared by *improve* and *enhance*. Mood is a noun collocate that tends to co-occur with *improve*.

‘Mood’ is categorized into this theme since *mood*, described by The LDOCE Online’ refers to “*the way you feel at a particular time*”.

(mood) “Participating in music lessons has been shown to reduce stress and ***improve mood***”.

“USA Today reported that a workout can ***improve mood*** for up to 12 hours!”.

It is evident that *enhance* is used more extensively in the context of senses and feelings as *enhance* co-occurs with a number of noun collocates such as *experience*, *flavor*, *awareness*, *self-esteem*, *motivation*, and *perception*. Noun collocates such as *experience*, *perception*, *flavor* also indicate that *enhance* can be used in the context of impression, and conveying feelings and ideas.

‘Experience’ can be regarded as senses and feelings since *experience*, as indicated by The LDOCE Online, can be associated with “*a process of seeing, and feeling things. Those things can have an effect on what you feel or think*”.

(experience) “Smartphones will deliver multifunctional capabilities that ***enhance experiences***”.

“We continue to evolve into a more modern airline and explore ways to ***enhance*** the travel ***experience***”.

‘Perception’ has been assigned to the theme of senses and feelings. According to the LDOCE, *perception* can be defined as “*the way people think about something and idea of what is like. Perception also refers to how things are noticed with a sense of sight, hearing, etc*”.

(perception) “Four skylights provide natural illumination and meanwhile enhance the visitors' perception of the existence of the chimney”.

“When students receive positive verbal messages from the teacher and other students, those enhance perception of their self-worth”.

‘Flavor’ is classified as senses and feelings because *flavor*, according to The LDOCE Online, is associated with “*a sense of taste which is the sensory system that is responsible for the perception of taste or flavor*”.

(flavor) “Salt enhances flavor, salt preserves from decay”.

“I use a few spices to enhance the flavors of food, and less is often more”.

‘Self-esteem’ is grouped into this theme since The LDOCE Online describes *self-esteem* as “*the feeling of being satisfied with your own abilities, and that you deserve to be liked or respected*”.

(self-esteem) “It's enhancing their self-esteem, enhancing their sense of femininity, kind of rescuing them sometimes from a very distraught outlook that they might have about themselves”.

“Positive self-identity helps eliminate the stigma and enhance self-esteem among boys especially those who are demonstrating gaps in literacy”.

As for this finding, additional noun collocates that co-occur only with *enhance* are *awareness* and *motivation*. According to the dictionary of the Corpus of Contemporary American English (COCA), the definition of *improve* is “*to make something better*”, whilst the definition of *enhance* is “(1) *to increase* (2) *to make better*”. Hence, the two synonymous verbs share the overlapping sense of ‘making something better’, but the verb *improve* does not denote ‘increasing’ as the verb *enhance* does.

‘Awareness’ is discussed in this theme because *awareness*, defined by The LDOCE Online, is “*the ability to notice something using your senses*”.

- (awareness)** “This is an informational seminar designed to increase awareness about bullying”.
- “One of the principal objectives of global education is enhancing awareness of diversity of ideas and practices in human societies around the world”.
- (motivation)** “The camp was designed to provide an enjoyable running environment and to increase motivation to run”.
- “There are many books and articles available to provide teachers with ideas about ways to enhance motivation for learning”.

The different senses of meaning between *improve* and *enhance* relate to Jariyanupong’s (2018) study of the synonymous verbs *reveal*, *disclose* and *divulge*. With regard to the senses of meaning among three synonyms, Jariyanupong (2018) determined that these synonyms have slightly different meanings which, as a result, leads each synonym to co-occur with different noun collocates. *Reveal* means to make known or show something that is hidden or surprising. Noun collocates and adjective collocates that co-occur only with *reveal* are *truth*, *hidden*, *opened*, and *underneath*. Since *disclose* denotes a sense of giving information to the public, noun collocates and adjective collocates that tend to appear with *disclose* are *information*, *document*, *details*, *amount*, *finance*, *identity*, and *confidential*. As *divulge* is to make something private, sensitive, or secret known, noun collocates and adjective collocates that are used frequently with *divulge* are *secrets*, *refused*, *whereabouts*, *names*, *allowed*, *intimate*, *reluctant*, and *password*.

Therefore, the findings of the previous study conducted by Jariyanupong (2018) lend credence to the notion that difference in the senses of meaning, even in slight details, can lead each synonym to co-occur with different noun collocates. This, as a result, indicates that the synonyms cannot be used interchangeably in every context. Similarly, a similar notion applies to *improve* and *enhance*. Since *improve* does not denote an increase as the word *enhance* does, the two synonyms have different noun collocates and ultimately cannot be substituted for all contexts.

Table 4.2.7 Image

	Image	
	<i>Improve</i>	<i>Enhance</i>
Shared Collocates	-	
Different Collocates	-	reputation
	-	status
	-	logo
	-	prestige

As regards ‘image’, Table 4.2.7. shows that *enhance* is used more frequently in the context of image since the synonym co-occurs with a wider range of noun collocates such as *reputation*, *status*, *logo*, and *prestige*.

‘Reputation’ is categorized into this group as *reputation*, according to The LDOCE Online, refers to “*the opinion that people have about someone or something because of what has happened in the past*”.

(reputation) “He may help sick people in need, but is his main purpose to help people, or to ***enhance*** his *reputation*? He is advertising a brand (himself) - that is his main focus”.

“I’m a publicity expert and a former newspaper editor who teaches people how to use the media to establish their credibility, ***enhance*** their *reputation*, position themselves as experts, sell more products and services, and promote a favorite cause or issue”.

‘Status’ is grouped into this theme as *status* is defined by The LDOCE as “*respect and importance that someone or something is given*”.

(status) “A higher price paid for a commodity can ***enhance*** *status*”.

“Most nations believe that international *status* is ***enhanced*** through accumulating Olympic medals”.

‘Prestige’ is classified into this theme because The LDOCE Online describes *prestige* as “*the respect and admiration that someone or something gets because of their success or important position in society*”.

(prestige) “People who buy new cars choose cars to enhance their own prestige”.

“Airlines found the big planes enhanced their prestige but often wrecked their earnings statements”.

‘Logo’ is put in this group as *logo*, according to The LDOCE Online refers to “*a design or way of writing its name that a company or organization uses as its official sign on its products, advertising, etc*”.

(logo) “I disagree with some of the comments that the supporting media only serves to enhance this logo's value”.

“CHANEL logos enhance every product”.

With regards to the category of ‘image’, it is clear that *enhance* is used frequently in this theme since noun collocates in this group tend to co-occur more with *enhance*, and less likely with *improve*.

This finding can be discussed in light of Wongrat’s (2018) study of the two synonymous verbs *predict* and *forecast*. In this case, *predict* denotes a sense of *saying that something will happen or declare or indicate in advance*, while *forecast* is defined as *for calculate or predict what is likely to happen in the future*. Despite the fact that both synonyms share the same core meaning, the research found that *predict* can be used in a more diverse range of contexts when the word was analyzed under several themes. At this point, noun collocates that co-occur with *predict* can be categorized into eight contexts: (1) group categorized in terms of their levels, (2) economy and business, (3) medical, (4) engineering and construction, (5) science and experiments, (6) weather, (7) law, and (8) politics. In contrast, the use of *forecast* is quite limited to the context of weather and disasters. Hence, the top noun collocates that co-occur with *forecast* are (1) *storm*, (2) *temperature(s)*, (3) *day(s)*, (4) *earthquake*, (5) *snow*, (6) *weather*, (7) *hurricane*, (8) *rain*, and (9) *growth*.

A case in point is that although *predict* can be used in more general contexts, which in this case is eight categories, when it comes to the context of weather and disasters, *forecast* is much preferred. This idea of collocational preference is consistent with *enhance* in the context of image. Whilst *forecast* is used more frequently than *predict* in the context of weather and disaster, *enhance* is preferred over *improve* in the category of image.

Table 4.2.8 Economic and Political Issues

	Economic and Political Issues	
	<i>Improve</i>	<i>Enhance</i>
Shared Collocates	-	
Different Collocates	economy	-
	relation	-
	U.S.	-
	America	-

Unlike the category of ‘image’, it is evident that *improve* is more likely to co-occur with noun collocates in the category of economic and political issues. Table 4.2.8 presents four noun collocates of *improve*, none of which seems to collocate with *enhance*.

- (economy)** “While the economy here has ***improved***, it is not moving fast enough to create a significant number of jobs”.
- “If the election were a referendum on the need to ***improve*** the economy, the result would be a landslide”.
- “Government does not create wealth, and government does not ***improve*** the economy”.
- (relation)** “Thai-U.S. relations appeared to ***improve*** slightly in the final years of Mr. Obama's administration”.
- “Will North Korea insist that relations need to ***improve***, that there needs to be peace on the peninsula before denuclearization?”.
- (U.S.)** “Investors are pretty happy to see reports suggesting the U.S. economy continues to ***improve***”.
- “The U.S. clearly needs to ***improve*** its understanding of the Middle East, starting with the basic chore of bringing on more national-security personnel who can speak Arabic”.
- (America)** “The president yesterday was lectured by a murdering communist dictator in Cuba, Raul Castro, on how America needs to ***improve***”.

“I cannot see one thing he has done, ever, to improve America”.

“I think Democrats have had a much stronger idea of how America can be improved economically and educationally”.

Although *improve* and *enhance* share the same core meaning, it is evident that *improve* is used more frequently and more extensively than *enhance* in the context of economic and political issues.

Firstly, this finding seems to accord with Wongwatnitkajon (2018), whose study of the synonymous verbs *fight* and *battle* showed that proper nouns which were nationalities (*Germans*, *Russians*, and *Soviets*) collocated with the word *fight*, rather than with *battle*. In this case, table 4.2.8 indicates that proper nouns such as *U.S.* and *America* collocate with *improve*, and less so with *enhance*.

This category of economic and political factors can be further discussed in view of Ruengrong’s (2014) analysis of the synonyms *ruin*, *demolish*, and *destroy*, whose findings have something in common with *improve* and *enhance*, that is one synonym from *ruin*, *demolish*, and *destroy* tends to be used in economic and political contexts. Whilst noun collocates that co-occur with *ruin* are associated with life and personal values such as *life*, *career*, *reputation*, and *happiness*, noun collocates that tend to be used with *demolish* are associated with objects such as *buildings*, *houses*, and *homes*. Meanwhile, *destroy* co-occurs with noun collocates associated with the wars and countries, such as *weapons*, *country*, *government*, and *Iraq*.

These two previous studies of Wongwatnitkajon (2018) and Ruengrong (2014) showed similar results in that a certain synonym is particularly used in economic and political contexts that deal with a certain country and government. *Fight* is used more frequently than *battle* in the context of war between countries. Unlike *ruin* and *demolish*, *destroy* is particularly used in economic and political contexts.

As for *improve* and *enhance*, it can be noticed that although both *improve* and *enhance* can be used in many of the same contexts and scenarios, when it comes to economic and political contexts, *improve* is used more often than *enhance*.

4.3 DEGREES OF FORMALITY

As for degrees of formality, this COCA corpus was consulted in this study. Apart from comprising collocations with authentic texts, COCA also contains data distributed across eight genres namely, academic texts, newspaper, popular magazines, spoken, fiction, TV and movies, blogs, and webpages. One of the reasons to use COCA, supported by Phoocharoensil (2020), is that dictionaries alone do not provide sufficient data for English learners about which words are to be used in appropriate contexts. Phoocharoensil's (2020) research on how the synonyms *consequence*, *result*, and *outcome* are distributed across different genres lends credence to the notion that synonyms can be differentiated by formal and informal contexts.

Hence, this study also investigated degrees of formality to differentiate the two synonyms since one word in a set of synonyms is used in formal contexts, whilst the other is not. At this point, the frequency of the two target synonyms is illustrated in eight genres.

Table 4.3 Overall frequency and distribution of *improve* and *enhance* across eight genres.

Improve			Enhance		
Genre	Frequency	Per Million	Genre	Frequency	Per Million
Academic texts	15,835	132.19	Academic texts	7,513	62.72
Magazines	9,640	76.45	Magazines	2,679	21.25
Blog	9,340	72.62	Web	2,012	16.19
Web	9,027	72.65	Blog	1,700	13.22
News	8,630	70.89	News	1,391	11.43
Spoken	3,808	30.19	Spoken	604	4.79
Fiction	1,093	9.24	TV and Movies	351	2.74
TV and Movies	1,013	7.91	Fiction	219	1.85
All	58,386		All	16,469	

Table 4.3 illustrates that the verb *improve* has the higher frequency of occurrence than the verb *enhance* across all genres. The number of occurrences of *improve* (58,386 tokens) is over three times higher than that of *enhance* (16,469 tokens). Firstly, it is noticeable that the two synonyms have high degrees of formality as their occurrences are highest in number in academic texts (15,835 tokens/13.19 per

million and 7,513 tokens/ 62.72 per million respectively). As for informal contexts, both synonyms occur with the lowest frequency in the last three genres, as follows: spoken, fiction, and TV & movies (3,808 tokens, 1,093 tokens, and 1,013 tokens of *improve*; 604 tokens, 219 tokens, and 351 tokens of *enhance*, respectively).

As for webpages and blogs, both *improve* and *enhance* are frequently used in blogs and webpages (9,340 and 9,027 of *improve*) and (1,700 and 2,012 of *enhance*). Overall, whilst *improve* and *enhance* follow a similar pattern whereby the two synonymous verbs have high degrees of formality as both appear most frequently in written texts (academic texts, magazines, blogs, webpages, and news), *improve* and *enhance* are different in terms of frequency. *Improve* is used noticeably more frequently than *enhance* in all genres.

Another aspect found in examining the degrees of formality between *improve* and *enhance* is that although *improve* and *enhance* differ greatly in terms of frequency in the seven genres, namely newspapers, popular magazine, spoken, fiction, TV and movie, blogs, and webpages, and the differences in frequency between the two synonyms are quite large, it nonetheless appears that the gap between *improve* and *enhance* in academic texts is not very significant. As a result, it can be assumed that the verb *enhance* occurs particularly in academic contexts.

The findings correspond with Phoocharoensil's (2020) genre analysis of *consequence*, *result*, and *outcome*. Although the three synonyms do not have the same distribution pattern of collocation, the study suggests that all three synonyms have high degrees of formality, with the highest number of occurrences in academic texts.

However, the results pertaining to the degree of formality of *improve* and *enhance* are inconsistent with Thamratana's (2013) study of five synonymous verbs: *reduce*, *decrease*, *diminish*, *dwindle* and *decline*. The research indicated that not only did each of the five synonymous verbs differ in terms of the senses of meaning in detail, as well as collocations, but the degrees of formality among the synonyms also vary. Whilst, *reduce*, *decrease*, *diminish*, and *decline* occur most often in academic texts, *dwindle* is used most frequently in magazines. The ratio was calculated by percentage, revealing that the four synonymous verbs occur most frequently in academic texts (*decrease*: 70%, *reduce*: 40%, *diminish*: 36%, and *decline* 40%, respectively), whilst *dwindle* appears less frequently in academic texts at just 12%.

Further discussion can take place regarding the framework of noun collocates. Unlike the synonymous verbs *improve* and *enhance* in which both have high degrees of formality, Ruengrong (2014) determined that the three synonymous verbs *ruin*, *demolish*, and *destroy* have different degrees of formality. The research found that *destroy* and *demolish* appear most frequently in newspapers. Conversely, *ruin* is used most frequently in both spoken texts and fiction. However, it is evident that different noun collocates correlate with different degrees of formality. In this case, since noun collocates of *destroy*, as mentioned earlier, are nouns that are associated with economic and political contexts such as *weapons*, *country*, *government*, and *Iraq*, it is unsurprising that *destroy* is found quite frequently in newspapers where written texts regarding wars and politics suggest a higher degree of formality. Meanwhile, *ruin* co-occurs with noun collocates associated with life and personal values such as *life*, *career*, *reputation*, and *happiness*. It is likely that *ruin* would be found more often in spoken texts. With regards to *improve* and *enhance*, not only can the two synonyms be used in the same themes and categories, but the number of same noun collocates that *improve* and *enhance* share indicate a high probability that the two synonymous verbs have the same degrees of formality.

Further discussion is made within the framework of the senses of meaning. Srithanyarat (2016) investigated the two synonyms *to be sorry* and *to apologize*, with the findings revealing that *to apologize* has a higher degree of formality than *to be sorry*. Although the two synonyms are used to make an apology or ask for forgiveness, *apologize* is associated with only one sense, which is *being sorry for having done something that has caused problems or unhappiness for someone*. In contrast, *to be sorry* can denote other meanings such as “*saying no*”, “*sad*”, “*sorry*”, “*politely asking someone to do something*”, “*politely interrupting someone*”. Whilst *apologize* is used as a formal admission of wrongdoing with a sense of responsibility, *to be sorry* refers to personal feelings or regret without taking responsibility. What can be learnt from this is that degrees of formality among synonyms cannot solely be analyzed based on the numerical results or figures but rather determined by the different noun collocates that co-occur with a particular synonym, and by the senses of meaning that determine which words are used in particular context.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

This chapter presents (5.1) summary of the study, (5.2) summary of the findings, (5.3) conclusions (5.4) pedagogical implications, (5.5) recommendations for further research.

5.1 SUMMARY OF THE STUDY

5.1.1 Objectives of the Study

The study aimed to investigate two synonymous verbs — *improve* and *enhance* — in terms of their senses of meaning, noun collocations and degrees of formality.

5.1.2 Target Synonyms, Data Collection, and Analysis Procedures

The target synonyms were selected based on word frequency in written and spoken English, as suggested by the Longman Communication 3000. The Longman Dictionary of Contemporary English Online and the Corpus of Contemporary American English (COCA) were used as the databases.

As for the procedures, COCA was mainly employed for the analysis of noun collocates and degrees of formality. A total of 200 noun collocates were manually rechecked for the validity of the information in terms of lemmatization issues and relations to wrong collocates. The top 30 noun collocates for each synonym were selected based on MI score ≥ 3 . The top 30 noun collocates were tabulated, ranked by the frequency of occurrences, and finally categorized into different themes. The similar noun collocates and different noun collocates were presented in tables. During the process of thematization, the dictionary was consulted when further definitions of noun collocates were required. Example sentences obtained from COCA were also provided in this procedure.

5.2 SUMMARY OF THE FINDINGS

5.2.1 *Improve* and *Enhance* share the same core senses of meaning.

Regarding the senses of meanings of *improve* and *enhance*, the findings revealed that the two synonymous verbs share the core meaning in the senses of ‘make something better’ or ‘to improve something’. However, *enhance*, according to The Corpus of Contemporary American English (COCA), also denotes a sense of increase, while the verb *improve* does not.

	Meanings	
Synonyms	Longman Dictionary of Contemporary English Online	The Corpus of Contemporary American English (COCA)
<i>Improve</i>	To make something better, or to become better.	To make better
<i>Enhance</i>	To improve something	(1) To make better (2) To increase

According to the dictionary of the Corpus of Contemporary American English (COCA), the definition of *improve* is “to make something better”, whilst the definition of *enhance* is “(1) to increase (2) to make better”. Although the two synonymous verbs share the overlapping sense of ‘making something better’, the verb *improve* does not denote ‘increasing’ as the verb *enhance* does.

5.2.2 Noun collocates of *Improve* and *Enhance*

The top 30 noun collocates of each synonymous verb are various noun collocates which were categorized into different themes.

Regarding (1) Attributes and Quality, (3) Ability, and (4) Education, both *improve* and *enhance* shared almost the same amount of noun collocates. This

indicates that the two synonyms can be substituted interchangeably in almost all the above contexts.

However, for (2) Production and Result, although both synonyms co-occur with same noun collocates, it seems *improve* can be used with a wider range of contexts. Secondly, whilst *improve* tends to appear with noun collocates that have a state of tangibility and accountability, *enhance* is quite restricted to noun collocates that represent the state of being abstract. As for (5) Health and Well-being, the results indicate that both synonymous verbs share some noun collocates. However, in the context of Health and Well-being, it was found that *improve* co-occurs with more noun collocates which also means that *improve* tends to be used more frequently when it comes to Health and Well-being.

With regards to (6) Senses and Feelings, the results showed that there is no common noun collocate that is shared by both synonyms. In this case, *enhance* co-occurs with more noun collocates. It is worth mentioning that *enhance* is used frequently in scenarios conveying impressions, personal feelings, and ideas. As for (7) Images, it is evident that *enhance* occurs more often in the context of image since the verb appears with more noun collocates in a diverse range of contexts. In regard to (8) Economic and Political Issues, *improve* has a tendency to co-occur in this group since nationalities and political ideology appear only with *improve*.

5.2.3 *Improve* and *Enhance* with degrees of formality

It can be seen that both *improve* and *enhance* show high degrees of formality since both synonyms are used most frequently in academic texts. However, it is worth mentioning that whilst *improve* also shows a high frequency in spoken language, *enhance* tends to appear especially in academic texts.

5.3 CONCLUSIONS

5.3.1 *Improve* and *enhance* share the same core meanings in the sense of ‘making something better’. However, *enhance* also denotes a sense of ‘increase’.

5.3.2 *Improve* and *enhance* co-occur with similar noun collocates and different noun collocates. Each synonymous verb shows a tendency to occur with particular noun collocates.

5.3.3 *Improve* and *enhance* can be used in many shared contexts. However, there are certain contexts where *improve* is preferred, and particular contexts where *enhance* is more likely to occur.

5.3.4 *Improve* and *enhance* have high degrees of formality. However, *enhance* tends to be used more frequently in formal contexts.

5.4 PEDAGOGICAL IMPLICATIONS

As far as the pedagogical implications are concerned, the results of this study will contribute to clarification with regard to the authentic use of the English synonymous verbs *improve* and *enhance*, for all L2 learners. With regard to ELT, this study could be beneficial to teachers who teach English as second or foreign language when explaining to students how these words are used in authentic scenarios. Those who are interested in corpus-based research can refer to this study as a guideline to differentiate synonyms.

5.5 RECOMMENDATIONS FOR FURTHER RESEARCH

The present study relied on the COCA database only, which is the current American English database. However, it is recommended that further research collect data from other corpora such as BNC (British National Corpus), which is a huge current British English database. More concordance lines and example sentences obtained from other sources should enhance the generalizability and improve the reliability of the findings on each verb.

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