



RECEPTIVE AND PRODUCTIVE KNOWLEDGE OF LEXICAL COLLOCATIONS IN THAI UNIVERSITY LEARNERS OF ENGLISH

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Abstract:

The present study investigates lexical collocations in first- and fourth-year Thai university learners' and examines the relationship between receptive and productive knowledge of lexical collocations. A total of 148 students (75 first-year students and 73 fourth-year students) were tested on their lexical collocations, both receptively and productively, using two measures. Descriptive and inferential statistics were used to analyze the quantitative data, and correlational analysis determined the relationship between receptive and productive knowledge. Overall, the results showed that Thai university learners achieved significantly higher performance on tests of receptive knowledge of lexical collocations than on tests of productive knowledge. The data analysis also indicated that the fourth-year learners outperformed the first-year learners on both receptive and productive measures of lexical collocations. Furthermore, the correlational analysis revealed that receptive and productive knowledge of lexical collocations were interrelated. Together, the current findings indicate that Thai university learners' productive knowledge of lexical collocations is built on receptive knowledge, and lexical collocations result from incremental learning.

Keywords: lexical collocations, receptive knowledge, productive knowledge

1. Introduction

Collocational knowledge is considered the most critical factor in vocabulary acquisition and development (e.g., Phoocharoensil, 2013; Phythian-Sence & Wagner, 2007). Indeed, collocations have always been at the center of vocabulary knowledge regardless of the mother tongue (L1) or second language (L2) acquisition (e.g., Jeensuk & Apisak, 2021a, 2021b; Hosseini, 2007; Nesselhauf, 2005; Schmitt 2010; Hill, 2000; Webb & Kagimoto, 2011; Nation, 2013; Anna, 2015; McCarthy, 2017; Lian, 2017). According to McCarthy & O' Dell

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(2017), collocations refer to a group of words that frequently occur together. Interestingly, even reasonably advanced learners struggled with using collocations properly (Henriksen, 2013; Nesselhauf, 2003, 2005; Laufer & Waldman, 2011) and, despite much research, learners of English as a Foreign Language (EFL) have difficulties acquiring L2 collocations. L2 learners' lack of collocation knowledge has been well-documented. For example, L2 learners know fewer collocations and are often unfamiliar with the many types of collocations, including more deviant forms (Howarth, 1998; Levitzky-Aviad, & Laufer, 2013; Lewis, 2000; Muhammad Raji & Hussein, 2003; Nesselhauf, 2003, 2005).

A plethora of studies in recent years have identified the significance of English collocation in language acquisition in a Thai EFL context (Jeensuk & Sukying, 2021a; Jeensuk & Sukying, 2021b; Mallikamas & Pongpairroj, 2005; Suwitchanphan & Phoocharoensil, 2014). Such studies have found that learning a word starts from recognizing the word itself to the ability to use it in context, and this process is long and incremental (Nontasee & Sukying 2021). However, while learners generally have poor collocational knowledge, their receptive knowledge of collocations is typically better than their productive knowledge. Indeed, it has been previously shown that Thai EFL learners acquire receptive collocation knowledge before productive collocation knowledge (Jeensuk & Sukying, 2021a). These results are generally following previous studies which claimed that learners struggle to use collocations, especially in productive knowledge, and suggested teachers should focus on teaching productive skills with collocations (Bueraheng & Laohawiriyon, 2014; Chorbwhan & McLellan, 2016; Jeensuk & Sukying, 2021a; Jeensuk & Sukying, 2021b).

While many studies have been conducted on the vocabulary acquisition of EFL learners, our understanding of this area is not still comprehensive. Most studies examine one specific year of learners' collocational knowledge and many are focused on grammatical collocations. Also, little effort has been made to examine lexical collocations in a Thai EFL context, especially at a university level. Therefore, the current study fills these gaps by measuring receptive and productive knowledge of six types of lexical collocations in two different years of English major students (first- and fourth-year university learners) and determining the relationship between receptive and productive collocational knowledge.

The present study will highlight the role of English collocations in vocabulary development and raise awareness of such knowledge. Understanding learners' current collocational knowledge, receptively and productively, will yield fruitful information for teachers, practitioners, and researchers. Specifically, the present study investigated the first-year and the fourth-year English majors' lexical knowledge of collocations in Thailand. Two research questions were formulated to guide the study:

- 1) What is the level of receptive and productive knowledge of lexical collocations in Thai university learners?
- 2) What are the relationships between Thai university learners' receptive and productive knowledge of lexical collocations?

2. Literature review

2.1 Construction of collocations

Firth (1957) first introduced the term collocations as habitual collocation or association in language sentences. This idea of collocations has been recognized and followed by Halliday (1966), Sinclair (1991), Nation (2001), Stubbs (2001), and Partington (2004), who analyzed collocations from the point of lexis, and regarded collocations as habitual co-occurrence among lexical terms. Sinclair and Halliday (1966) considered collocations from the perspective of lexical items. They found that two lexical items can occur independently of sentence structures grammatical types. Examples are “he argued strongly”, “the strength of his argument”, and “his argument was strengthened”, all of which indicate a stable collocational relationship between the two lexical words. More recently, O’Dell and McCarthy (2017a) stated that collocations are two or more words associated with each other in a language that often occur together. For example, ride and bike are often associated together, and high and low are associated with the score, price, etc.

Collocations can be classified into two main categories: grammatical collocations and lexical collocations (Benson, Benson & Ilson 2010). A grammatical collocation is a phrase composed of a dominant word (adjective, noun, verb) and a preposition or a grammatical structure such as a clause or an infinitive. According to Benson et al. (2010), there are eight types of grammatical collocations, which are respectively called G1 to G8 (noun + preposition, noun + to-infinitive, noun + that clause, preposition + noun, adjective + preposition, adjective + to-infinitive, adjective + that clause), and 19 verb patterns. By contrast, lexical collocations do not commonly contain prepositions, infinitives, or clauses. Instead, a typical lexical collocation consists of content words (nouns, adjectives, verbs, adverbs). Six major types of lexical collocations have been described L1 to L6 (Benson, Benson & Ilson, 2010). Possible combinations of these four-word classes are verb + noun, adj.+ noun, noun + verb, verb + adv., noun + noun and adj. + adv. Specific examples of lexical collocations are shown in Table 1.

Table 1: Types of lexical collocations

	Type	Form	Example
Lexical Collocations	L1	v. + n.	<i>ride a bike</i> <i>take a break</i>
	L2	adj. + n.	<i>a beautiful girl</i> <i>sweet cakes</i>
	L3	n. + v.	<i>The building locates...</i> <i>The meal tastes...</i>
	L4	v. + adv.	<i>walk fast</i> <i>listen carefully</i>
	L5	adv. + adj.	<i>rather tall</i> <i>very good</i>
	L6	n. + n.	<i>apple trees</i> <i>school uniform</i>

Vocabulary knowledge has also been divided into two categories: receptive knowledge and productive knowledge. Receptive vocabulary knowledge refers to the ability to recognize a form-meaning link of a word, whereas productive vocabulary knowledge involves the ability to retrieve or recall a word and use it in the appropriate context (Schmitt & Meara, 1997; Schmitt & Zimmerman, 2002; Sukying, 2017, 2018a, 2018b, 2020).

2.2 The roles of collocations in vocabulary acquisition

Knowing a word is not just knowing its form, use, and meaning. Indeed, vocabulary knowledge also involves other subcomponents of a word, including collocations. The importance of collocations for L2 learners has been widely acknowledged (Anna, 2015; Hill, 2000; Nation, 2001, 2013; Jeensuk & Sukying, 2021a, 2021b; Webb & Kagimoto, 2011). For example, collocations provide contextual knowledge that can enhance learners' understanding of word knowledge in specific communication situations. As such, collocation is often introduced as a part of word knowledge (Nation, 2013). For example, contextual information is important for language users to distinguish different meanings of a polysemous word. Take the phrase *I watch TV*; here, the word *watch* means to look. While in the collocation *watch out*, the meaning of *watch* is to be careful. According to Hill (2000), the lexicon for learners is "not arbitrary". That is, during the process of speaking or writing, vocabularies are not arbitrarily selected by language users. For example, the verb *measure* usually collocates with nouns or phrases that refer to the size, length, and amount. By contrast, the verb *make* has many nouns that collocate with it (make a conclusion, make a decision, make a cake), but the choice is limited (e.g., make a sleep is not acceptable).

McCarthy (1990) also noted that "*in vocabulary teaching, there is a high importance of collocation, the relationship of collocation is fundamental in the study of vocabulary, and collocation is an important organizing principle in the vocabulary of any language*" (McCarthy, 1990, pp. 12). Later, Sarikas (2006) argued that collocation is an essential combination of words, and collocational knowledge is essential because it affects the appropriateness of a word. For example, although *beautiful* and *handsome* have similar meanings, it is inappropriate to say a *beautiful man* or a *handsome woman* (Radhi, 2013). English collocations are not only crucial in L1 acquisition but also in learning L2 (Moudraia, 2001) and are a key part of written and spoken fluency (Hill, 2000).

To conclude, collocational knowledge is a critical part of language learning. It can facilitate learners' understanding of a singular word, helping them ascertain the specific meaning of a collocation. Collocational knowledge also reduces the pressure for learners both in the process of production and the process of reception. Therefore, when introducing new vocabulary, EFL teachers should emphasize active collocations.

2.3 Previous research on English collocations

Several studies on English collocation in language acquisition have been conducted in a Thai EFL context (Phoocharoensil, 2014; Mallikamas, 2005; Jeensuk & Sukying, 2021a; Jeensuk & Sukying, 2021b). This research has indicated that there is a positive correlation

between participants' receptive and productive knowledge of lexical and grammatical collocations (Jeensuk & Sukying, 2021a). This result is consistent with previous studies and provided a model for high school English learners in Thailand to learn English collocations (Jeensuk & Sukying, 2021b).

In 2006, Koosha and Jafarpour also studied the proficiency of preposition collocation in different EFL proficiency levels, as well as the effect of L1 on EFL learners' preposition collocation ability. Two collocations were used in this study. The results showed that the performance of EFL learners in the collocation test was positively correlated with their general language ability, and learners transferred their L1 collocation patterns to their L2 production. Similarly, Phoocharoensil (2013) investigated the influence of L1 on the English acquisition of 90 Thai EFL learners at Thammasat University in Thailand. The findings showed that collocational learning was a primary learning strategy on which participants relied, and high proficiency learners relied heavily on their L1. These studies are consistent with Zhuo's (2019) claim that L1 transfer affects learners' vocabulary collocation ability. As such, it has been suggested that teachers provide students with a list of common and frequent English collocations that do not match their L1 counterparts to increase learners' awareness of the mismatch between L1 and L2 collocations (Zhuo, 2019).

Furthermore, Chorbwhan & McLellan (2016) studied English collocation knowledge in Thai English learners of two different mother tongues: Patani Malay and Southern Thai. The results found that students performed significantly better in the receptive tests than in the productive tests. The English collocation errors made by the two groups of learners were caused by cross-linguistic influence and learner errors. Interestingly, the influence of their L1 on their acquisition of English collocations was both positive and negative. Furthermore, learners were particularly weak in lexical collocations, suggesting that curriculum developers should emphasize a lexical approach to learning English collocations (Chorbwhan & McLellan, 2016).

Indeed, previous research has also revealed that learners find lexical collocations more challenging than grammatical collocations (Boonyasaquan, 2006; Mallikamas & Pongpairoj, 2005; Ying, 2009) and produce more lexical than grammatical miscollocations (Phoocharoensil, 2013). Sridhanyarat (2018) investigated which grammar and lexical collocations present difficulties for English learners in Thailand and whether learners at different levels exhibit the same order of acquisition. It was found that only the high proficiency group had easy access to verb + preposition collocations in productive and receptive tasks. The study suggested that teachers train students to use groups of words, instead of single words, using meaningful material that includes difficult combinations. Overall, collocational knowledge is an important aspect of EFL Learning, and classroom activities should focus on frequent collocations to promote collocations (Nizonkiza et al., 2013; Talakoob & Koosha, 2017; Sridhanyarat, 2018). Understanding how to acquire collocational knowledge will provide key information for teachers in the design of vocabulary teaching plans, courses, diagnostic tests, and methods to ascertain the state of learners' vocabulary knowledge

3. Research methods

3.1 Participants

The participants were 148 Thai university learners, including 75 first-year learners and 73 fourth-year learners majoring in English. All participants in the study had learned English as Foreign Language (EFL) for approximately ten years. Participants in the first- and fourth-year were selected to observe the progressive development of lexical collocational knowledge across tertiary education. The participants' English proficiencies were mixed and their ages ranged between 18 to 24 of age at the time of data collection.

Participants had four English courses a week, both with Thai EFL teachers and English native teachers. Each class typically lasted three hours, yielding 12 hours of English classes per week. In addition to learning in the classroom, the reading and writing courses usually required the students to complete several readings and writing tasks outside the class. However, the participants had not received any specific instruction in the receptive and productive knowledge of English collocations. As a result, they had little awareness of collocational competence as a dimension of second language knowledge and competence.

3.2 Research instruments

Two tests were used to assess participants' lexical collocations, both receptively and productively. The contents of the tests were assessed by four experts with more than ten years of experience in the field of vocabulary acquisition. The validity and reliability of tests were established and a score of 0.893 on Cronbach's Alpha indicated that the tests were acceptable.

The Receptive Lexical Collocations Test (RLCT) was used to assess receptive knowledge of lexical collocations. The specific version of the test used in the current study was based on Brashi (2009) and used a multiple-choice format to test the learners' ability to perform an English vocabulary matching task. The RLCT used in this study includes six types of lexical collocations, verb + noun, adjective + noun, noun + verb, noun + noun, adverb + adjective, and verb + adverb. The words were chosen from the frequency word list of English and British National Corpus with lexical features of lexical collocation. The test included 72 items at different levels. The test required learners to read the sentence and choose the most appropriate answer. Examples are given below:

1. There is within us all an urge to C order out of seeming chaos.
A. tell;
B. put;
C. give;
D. make.
2. The A generation is the nation's hope for building a happy future.
A. growing;

- B. increased;
- C. raised;
- D. incremental.

The Productive Lexical Collocations Test (PLCT) was a productive knowledge of lexical collocations test. The test used in the current study employed a gap-filling format and was developed based on Laufer and Nation (1999). The PLCT used the same types of lexical collocations as the RLCT, including verb + noun, adjective + noun, noun + verb, noun + noun, adverb + adjective, and verb + adverb. Sentences containing these collocations were selected from the Oxford Collocation Dictionary and BNC with minor modifications to better suit the participants. The test included 72 items in total. The participants were required to read the sentence and fill in the appropriate words on the line. Examples are provided below:

1. Academic qualifications are commonly felt to give a person the best chance of success in life.
2. He is a heavy smoker and always buys many packets of cigarettes each day.

3.3 Data collection procedure

Due to the COVID-19 pandemic, the tests were conducted online via Google Forms. The participants were given one hour to complete the PLCT and 40 minutes for the RLCT. To ensure that participants do not transfer knowledge from the receptive tests to the productive tests, the productive knowledge tests were given to all participants before the tests of receptive knowledge (Laufer & Goldstein, 2004). Participants were required to complete the tests independently without using a dictionary, searching the Internet, or discussing with their classmates.

3.4 Data analysis

The scores on the vocabulary tests were analyzed using the Statistical Package for the Social Sciences (SPSS) (Larson-Hall, 2019). Descriptive statistics were calculated, and t-tests were then used to determine whether test scores were statistically significant (Hayes, 2020). Cronbach's alpha coefficient and Pearson's correlations were calculated to assess the relationship between performance on the different tests. Cohen's guidelines (1988) were used to estimate the effect size: small, $r = 0.1$ to 0.29 ; medium, $r = 0.30$ to 0.49 ; large, $r = 0.50$ to 1.0 .

4. Results and Discussion

The results obtained for each of the research questions are presented in the following sections. Overall, the findings from the current study provide a more thorough

understanding of the roles of collocational knowledge in vocabulary acquisition in the EFL context, particularly in the Thai EFL context.

4.1 Thai university learners' receptive and productive knowledge of lexical collocations

The descriptive statistics of the performances on each test among two different grades of learners are shown in Table 2. Descriptive statistics were calculated, including the mean score, percentage, and standard deviation (SD). The average receptive knowledge score for the first-year learners was 42.4% (SD=7.78), and the average productive knowledge score was 13.5% (SD=7.62). The mean receptive knowledge score for the fourth-year learners was 58.6% (SD=13.99), and the mean productive knowledge score was 25.3% (SD=12.71).

Table 2: Descriptive statistics of the first- and fourth-year university learners' knowledge of lexical collocations

Test	First year (n=75)		Fourth year (n=73)	
	Mean	SD	Mean	SD
PLCT P	9.79 (13.5%)	7.62	18.22 (25.3%)	12.71
RLCT R	30.59 (42.4%)	7.78	42.21 (58.6%)	13.99

Note: R=receptive knowledge, P=productive knowledge

For both grades, the results revealed that the fourth-year learners have more advanced lexical collocation knowledge than first-year students and suggested that the educational environment plays an important role during the process of learning collocations. The fourth-year learners have been more exposed to collocations through more lectures or exercises inside and outside the classroom. The analysis also showed that performance on lexical tests was significantly different. The comparison between Thai university Learners' receptive and productive knowledge of lexical collocations for the first- and fourth-year university learners is illustrated in Table 3.

Table 3: Comparison between Thai university learners' receptive and productive knowledge of lexical collocations

Grade	Test	Mean	SD	t-value	Sig. (two-tailed)
1st year	RLCT R	30.59	7.10	17.80	.000
	PLCT P	9.79	7.96		
4th year	RLCT R	42.21	13.99	23.98	.000
	PLCT P	18.22	12.71		

Note: R=receptive knowledge, P=productive knowledge

A paired-samples t-test was then used to detect any significant differences between performance on the RLCT and PLCT. As Table 3 shows, the first-year learners' t-value of receptive and productive lexical collocational knowledge was (t=17.80, p<0.05, Sig. 2-tailed=.000), and the t-value of receptive and productive lexical collocational knowledge for the fourth-year learners was (t=23.98, p<0.005, Sig. 2-tailed=.000). It concluded

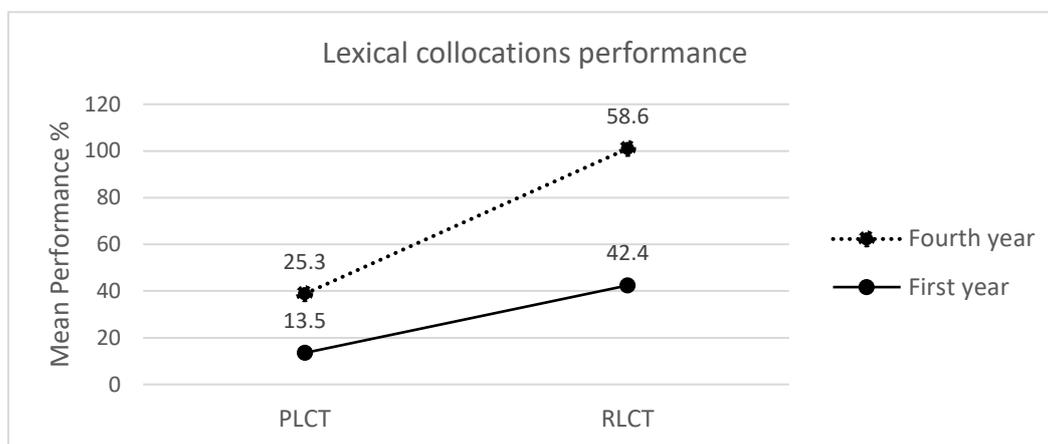
that the fourth-year students performed significantly better than first-year students on both the receptive and productive knowledge measures. The paired samples t-test indicated a significant difference between the first- and fourth-year learners' productive and receptive knowledge on lexical collocations. Moreover, the findings showed that the first-year learners who gain 30.59 (SD=7.10) in receptive knowledge and 9.79 (SD=7.96) in productive knowledge, while the fourth-year learners achieve 42.41 (SD=18.22) in receptive knowledge and 13.99 (SD=12.71) in productive knowledge. The findings showed that the fourth-year learners performed slightly better than the first-year learners in all tests. Furthermore, the statistical analysis also revealed that first-year and fourth-year learners performed significantly better on the receptive collocational knowledge task (RLCT) than the productive collocational task (PLCT), such as scores on the RLCT were significantly higher than scores on the PLCT.

The results indicate that participants performed better on the receptive test than on the productive test. The results are also consistent with Shehata (2008), who found that the participants were able to judge the correctness of the target collocations in the receptive test (74%); however, they had difficulties producing the target collocations in the productive test (42%). This was true for both first and fourth-year university students. Moreover, the fourth-year university learners appeared to score higher than the first-year university learners on each test. This is perhaps because the fourth-year learners have more experience in learning vocabulary knowledge, which is consistent with previous findings suggesting that understanding the aspects of vocabulary knowledge requires sufficient language experience (e.g., Hayashi & Murphy, 2011; Schmitt & Zimmerman, 2002, Nontasee & Sukying, 2021a). Diao (2004) also found that senior students showed better collocation competence than freshmen students, likely due to the senior students having more exposure to English, and other studies have also reported that students' knowledge of collocations improves through their academic years (Al-Zahrani 1998; Ebrahimi-Bazzaz et al., 2014; Gitsaki, 1999). The results also indicate that, overall, collocational competence for both first- and fourth-year students is unsatisfactory and students showed poor collocational knowledge in general. A summary of receptive and productive knowledge of lexical collocations for the first and fourth-year learners is illustrated in Figure 1.

In summary, the current findings indicate that receptive collocations might be easier than productive collocations. This is consistent with previous reports (e.g., Fan, 2000; Jeensuk & Sukying, 2021a; Laufer, 1998; Laufer & Paribakht, 1998), as well as with the common perception among researchers that a learner's receptive knowledge is larger than their productive knowledge (e.g., Nontasee & Sukying, 2021b; Webb, 2007). In receptive tests, the participants have the opportunity to guess the meaning of the collocations from context. Therefore, various contextual clues may help the students in the RLCT. However, when collocations are produced in productive tests, the participants must rely on their knowledge. These findings also provide additional support to the claim that vocabulary learning is incremental. Indeed, the mastery of a word is a gradual process and the learner needs to be exposed to the word many times (Henriksen, 1999;

Hunt & Beglar, 2005; Joe, 2010; Nagy & Scott, 2000; Nation, 2001; Schmitt, 2010; Stahl, 2009).

Figure 1: Lexical collocations performance for the first- and fourth-year learners



Finally, the results revealed that, overall, Thai university learners have relatively low performance on collocational knowledge, which is consistent with previous studies showing that learners do not have sufficient collocational knowledge (e.g., Begagić, 2014; Dokchandra, 2019; González-Fernández & Schmitt, 2019; Nguyen & Webb, 2016; Jeenksuk & Sukying, 2021a, 2021b). This suggests that EFL teachers should design courses to improve students' productive collocational knowledge, such as conversation and essay writing activities (Begagić, 2014; Bueraheng & Laohawiriyanon, 2014; Chorbwhan & McLellan, 2016).

4.2 Relationship between receptive and productive collocational knowledge

As shown in Table 4, a correlational analysis was conducted to examine the relationship between performance on the two tests. Specifically, Pearson correlations were calculated to examine the strength and the direction (positive and negative) of the relationship between the participants' receptive and productive knowledge of lexical collocations.

Table 4: Correlation between receptive and productive knowledge of lexical collocations (Pearson correlations, r)

Test	PLCT	RLCT
PLCT P	1	.435**
RLCT R	.435**	1

Note: R=receptive knowledge, P=productive knowledge
** Correlation is significant at 0.01 level (2-tailed)

The results of this analysis revealed that the receptive and productive knowledge of lexical collocations were positively correlated. There was a significant large positive correlation between performance on the RLCT and the PLCT, which measure receptive

and productive knowledge of lexical collocations, respectively ($r = .435$). Importantly, a correlational analysis restricted to only first or fourth-year participants indicated that the relationship between receptive and productive performance was positively correlated for both groups of participants ($r=.384$; $r=.392$, respectively; see Tables 5 and 6).

Table 5: Correlation coefficients for lexical collocations performance among the first-year learners (Pearson correlations, r)

Test	PLCT	RLCT
PLCT P	1	.384
RLCT R	.384	1
Note: R=receptive knowledge, P=productive knowledge * Correlation is significant at 0.01 level (2-tailed)		

This result is consistent with previous studies showing that receptive and productive English collocational performance is positively correlated (Detdamrongpreecha, 2014; Jeensuk & Sukying; 2021a, 2021b; Kamarudin et al., 2020; Torabian, 2014). Specifically, as the receptive knowledge of lexical collocations increases, the productive knowledge of lexical collocations also increases. These findings suggest that when learners recognize the meaning of lexical collocations (receptive ability), they tend to produce the appropriate lexical collocations (productive ability). That is, receptive knowledge can promote productive knowledge in learning collocational knowledge. As such, these results indicate that it is necessary to promote receptive and productive knowledge of collocations in a Thai context.

Table 6: Correlation coefficients for lexical collocations performance among the fourth-year learners (Pearson correlations, r)

Test	PLCT	RLCT
PLCT P	1	.392**
RLCT R	.392**	1
Note: R=receptive knowledge, P=productive knowledge * Correlation is significant at 0.01 level (2-tailed)		

The results of this study are also consistent with the view that lexical collocation proficiency can be examined at different proficiency levels in EFL learners. Specifically, these results support the findings of Koosha and Jafarpour (2006), who examined whether the collocational proficiency of prepositions could be discussed at the different levels of EFL learners' proficiency. They revealed that learners' performance in the test of collocation preposition was positively related to their level of language proficiency. Furthermore, the results show that learners' performance in collocation tests is positively correlated with their language proficiency (Koosha & Jafarpour, 2006). Also, the finding is consistent with Al-Zahrani (1998) & Martyska (2004), who claimed that exposure to the target language and academic maturity might directly influence the acquisition of collocations.

5. Recommendations

As mentioned above, collocation plays a vital role in many aspects of vocabulary learning. While the current study focused on testing English collocations, more research needs to be conducted in other related fields, such as L1 interference, collocations acquisition, the instructions that can help to develop collocational knowledge, the effect of explicit and implicit approaches on the learning of collocations, and analyzing collocational knowledge in English books or tests. Another recommendation is to broaden the scope of this study to see if there is a relationship between collocation competence and gender. Also, future research may assess collocation knowledge at different education levels, such as primary, junior, senior high levels. Future studies should also consider using a translation task in addition to the present study to obtain a comparison between the free production and the cued production of collocations. Furthermore, while the present study assessed knowledge of lexical collocations, other studies may wish to focus on grammatical collocations to better understand English collocational knowledge. Finally, this study assessed knowledge of lexical collocations among English majors, and future studies should include students from different grades and different majors at the tertiary level. Other tests may also be used and developed to measure both lexical and grammatical collocations among Thai EFL Learners.

6. Conclusion

This study was conducted to investigate Thai university learners' receptive and productive knowledge of lexical collocations. The current results showed a difference in the collocation proficiency of Thai university learners at different grades. The results showed that receptive knowledge is easier to acquire than productive knowledge for both first- and fourth-year learners. Moreover, the results revealed that fourth-year students showed more advanced collocational competence than first-year students on both receptive and productive tests. This suggests that the growth of collocational knowledge depends on the number of encounters with the target words in context, which further supports the effect of multiple exposures in the incremental process of vocabulary learning.

Lexical collocations can be arbitrary and complex. However, inspired by the current research findings, students can gradually improve their collocational ability by improving their awareness of collocations and forming good vocabulary learning habits. In the process of vocabulary learning, teachers should warn students not to blindly grasp the meaning of words. Instead, they may combine chunks of words and notice their common combinations. In addition, teachers need to emphasize awareness of collocations to students during vocabulary teaching. For example, when teachers teach "heavy", in addition to explaining the meaning of "heavy", they also need to note other important word collocations, such as "heavy rain, heavy smoker". Taken together, these results indicate that more effort should be made towards developing learners'

collocational competence, taking into consideration their importance in the process of language acquisition.

Conflict of Interest Statement

The authors declare no conflicts of interest for this study.

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Appendix A: Examples of Productive Lexical Collocations Test (PLCT)

Directions: Please read the following sentences, and fill in the blanks with an appropriate English word according to its context and grammar. For each item, the context of a meaningful sentence is presented and the first letters of the target item are provided. All the items include six types of lexical collocations: verb + noun, adjective + noun, noun + verb, noun + noun, adverb + adjective, and verb + adverb. Please complete all items within 1 hour.

Examples:

1. The pirates buried the treasure on a desert island.
2. He was riding a bicycle.

1. He doesn't like to tell people what to do or g___orders.
2. Aca___qualifications are commonly felt to give a person the best chance of success in life.
3. The proposals des___support as they give priority to the needs of children.
4. The Secretary of State for Environment has the power to cap councils which spend exc___.
5. The day was ext___hot with no breeze, and she was grateful for the air-conditioning.

Appendix B: Examples of Receptive Lexical Collocations Test (RLCT)

Directions: Please read the following sentences and choose the most appropriate answer based on the meaning and context of the sentence. All the items include six types of lexical collocations: verb + noun, adjective + noun, noun + verb, noun + noun, adverb + adjective, and verb + adverb. Please complete all items within 40 minutes.

Examples:

1. I can C an example.
A. supply;
B. offer;
C. give;
D. issue.

2. The forecaster predicted A rain and strong winds during the afternoon storm.
A. heavy;
B. big;
C. high;
D. huge.

3. I said that my wife would never pass the driving test and when she did, she made me B my word.

- A. take;
- B. eat;
- C. throw;
- D. give.

4. It is known that he is 66 and was once a D smoker.

- A. hardy;
- B. weighty;
- C. mighty;
- D. heavy.

3. We should do moderate exercise and be happy to keep our blood A smoothly.

- A. circulate;
- B. cycle;
- C. loop;
- D. round.

4. Most people naively imagine they will stop D when they jam on the brakes.

- A. suddenly;
- B. presently;
- C. shortly;
- D. immediately.

5. The plan to replace the local library with a pizza restaurant was C controversial.

- A. bitterly,
- B. perfectly,
- C. entirely,
- D. importantly.

Note: For further information regarding the tests, please contact Xulong Zhang at 736718334@qq.com

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