

Vocabulary size and collocational knowledge of Saudi EFL university learners

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Abstract. *This study aims at examining the receptive vocabulary size and verb-noun collocational knowledge of Saudi EFL university learners. It also aims to investigate the relationship between their vocabulary size and their knowledge of collocations. The participants were 65 students who were enrolled in the first and final years of study at the English Department, College of Languages and Translation, AL-Imam Muhammad Ibn Saud Islamic University. Data was collected through a vocabulary size test and a receptive collocational knowledge test. The results showed that the average vocabulary size was 2,451 word families for first year students and 4,220 word families for fourth year students. It was also found that the receptive collocational knowledge of fourth year students was significantly higher than that of first-year students. Furthermore, the results showed a significant positive relationship between the learners' vocabulary size and their receptive knowledge of collocations.*

Key words: collocations, receptive vocabulary size, receptive knowledge, EFL university learners.

Background

Vocabulary is an indispensable aspect of knowledge that language learners need to acquire. It has been regarded, since the late 1970s and 1980s, as central to successful foreign/second language learning. The significant role that vocabulary plays in language learning and communication has been emphasized by many linguists and researchers. For example, Wilkins (1972) states, "Without grammar very little can be conveyed, without vocabulary nothing can be conveyed" (p. 111). Similarly, Widdowson (1989) considers vocabulary as an essential component of successful communication. More recently, Milton (2009) mentions that "words are the building blocks of language and without them there is no language" (p. 3). Thus, in order to be able to communicate effectively, EFL learners need to have a large vocabulary size. In other words, they need to have knowledge of the form, meaning, and use of a wide vocabulary. They also need, as Mutlu & Kaşlıoğlu (2016, p. 1232) state, to have knowledge of multi-word phrases which compose a large part of written and spoken discourse. According to Lewis (2000), collocations are the most common and most representative of English multi-word expressions. The important role that collocations play in learning vocabulary has been stressed by Kim (2009) who states, "Truly knowing a

word means not only knowing the meaning of the word but also knowing the words with which it frequently co-occurs” (p. 1).

A number of definitions have been proposed by different scholars for the term “collocation.” Although there still no fixed, non-controversial definition of what a collocation is, a broadly adopted definition of collocations among researchers (e.g., Al-Zahrani, 1998; Gitsaki, 1999; Nation, 2001; Hsu, 2002; Nesselhauf, 2003; Gyllstad, 2007; El-Dakhs, 2015) is the one in which a collocation is defined as the tendency of one word to co-occur with one or more other words in a particular context. This definition is also adopted in the present study.

Likewise, the literature includes different classification systems of collocations. One classification places word combinations on a continuum. At one extreme of the continuum lie *free combinations* and *idioms* at the other extreme, whereas different types of collocations come in between the two extremes (Hsu, 2002). Another broadly adopted classification of collocation among researchers is the one proposed by Benson et al. (1986) in which they classified English collocations into two major groups, *lexical collocations* and *grammatical collocations*. Lexical collocations consist of different combinations of nouns, verbs, adjectives, and adverbs (e.g., verb-noun, noun-verb, adjective-noun, verb-adverb, and adjective-noun collocations). Grammatical collocations include a noun, verb, or adjective combined with a preposition, infinitive, or *that* clause (e.g., noun-preposition, noun-infinitive, and preposition-noun). The present study adopted the classification proposed by Benson et al. (1986) and focused on one type of lexical collocations, verb-noun collocations. This type of collocations was chosen to be investigated in the present study because it is the most commonly used type of collocations (Mutlu & Kaşlioğlu, 2016; Nesselhauf, 2003; Shehata, 2008), and it has been found to be one of the most problematic collocation types for EFL students (Koya, 2005; Nesselhauf, 2003).

Collocations, which compose a large portion of native speakers’ linguistic competence, are important to language learners in many ways. First, many researchers (e.g., Nation, 2001; Wray, 2002; Jaén, 2007; Bergström, 2008.) have emphasized the importance of collocations to fluent and appropriate language use. For example, as Nation (2001) concludes, “all fluent and appropriate language use requires collocational knowledge” (p. 318).

Similarly, Jaén (2007, p. 130) states that the use of collocations is essential for the non-native speaker in order to use the language fluently and accurately. The same view is taken by Bergström (2008, p. 5) who considers the use of collocations as an important aspect of being fluent in a language. Second, collocational knowledge facilitates language comprehension and production because it reduces processing effort during language use and supports learners on the path of efficient comprehension and production (Cantos & Sanchez, 2001; Wiktorsson, 2003; Schmitt, 2004; El-Dakhs, 2015). Third, it is essential for EFL university learners to learn collocations since they are arbitrary, which means that the choice of the constituent words does not follow any logic, but is based on linguistic convention (El-Dakhs, 2015). In addition, they can hardly be paraphrased or substituted by a synonymous expression (Farghal & Obiedat, 1995).

The Problem

Despite the fact that knowledge of collocations plays an important role in enhancing learners' fluent and appropriate language use, previous research has shown that even high-level EFL learners experience difficulties in learning and using collocations. Likewise, in the Arabic context, many of the studies on collocations have reported that Arabic-speaking EFL learners lack collocational competence. Thus, the present study is an attempt to examine the receptive vocabulary size and verb-noun collocational knowledge of Saudi EFL university learners as well as the relationship between these two variables.

Literature review

During the last few decades, the notion of English collocations has received considerable attention in the field of foreign/second language learning. Even though a considerable amount of research has been conducted on collocations in various EFL contexts, few studies have been carried out to investigate the collocational knowledge of Arabic-speaking EFL learners (e.g., Farghal & Obiedat, 1995; Al-Zahrani, 1998; Shehata, 2008; Brashi, 2009; Alsakran, 2011; Alharbi, 2017). These studies will be discussed in detail below.

In a study that aimed at assessing the collocational knowledge of Jordanian EFL university learners, Farghal & Obiedat (1995) divided 57 English majors into two groups: A and B. The two groups were given separate tasks: a fill-in-the-blank test and an Arabic-English translation

test. Twenty-two common adjective-noun collocations were targeted in both tests. The blank-filling test, which consisted of 11 sentences testing collocation pairs, was administered to group A. In each item, one member of a collocation pair was provided, and the students were required to supply the missing one. The translation, an Arabic version of the blank-filling test that was supposed to be translated into English, was administered to group B.

The results revealed that the subjects' knowledge of collocations was weak; they supplied a correct collocation in 18% (group A) and 5% (group B) of the cases. In addition, in the absence of collocational knowledge, the subjects used 4 lexical simplification strategies: the use of synonyms, avoidance, relying on the L1, and paraphrasing. Farghal & Obiedat concluded that the students "can't cope with collocations, simply because they are not being made aware of collocations as a fundamental genre of multi-word units" (p. 326). They also claimed that the teaching of vocabulary as single lexical items leads to lexical incompetence on the part of L2 learners.

Al-Zahrani (1998) investigated the knowledge of verb-noun lexical collocations among four academic levels—juniors, seniors, freshmen, and sophomores—of 81 male English major Saudi students. He also studied the relationship between the learners' general language proficiency and their knowledge of lexical collocations. The collocational knowledge of the participants was measured using a 50-item fill-in-the-blank collocations test. Their general language proficiency was measured using an institutional version of the TOEFL exam and a TOEFL-like writing test. The results showed significant differences in students' knowledge of lexical collocations among the different academic years. They also showed a positive relationship between participants' knowledge of collocations and their general language proficiency.

The study conducted by Shehata (2008) examined the influence of the native language (Arabic) on the productive and receptive collocational knowledge of advanced Arabic-speaking English students. Shehata's study also explored the influence of the learning environment (ESL vs. EFL) on the learners' acquisition of collocations. In addition, the study examined the difference between the participants' performance on two types of collocations: verb-noun and adjective-noun collocations. The participants

were 35 Arabic-speaking English students at Ohio University and 62 students majoring in English at an Egyptian university. Two fill-in-the-blank tests were used to measure the participants' productive collocational knowledge, and an appropriateness judgment test was to measure their receptive collocational knowledge. Thirty-two collocations (16 adjective-noun and 16 verb-noun) were targeted in the productive collocations tests as well as the receptive one.

The analysis of the data revealed that the learners' L1 and their learning environment had a strong influence on their acquisition of English collocations. The ESL participants outperformed the EFL participants on the productive tests as well as the receptive one. The results also revealed that the receptive collocational knowledge of the learners was broader than their productive collocational knowledge. In addition, the participants did better on the verb-noun collocations test than on the adjective-noun one. Overall, Shehata's study showed that Arabic-speaking EFL learners have poor knowledge of collocations.

Brashi (2009) conducted a study that aimed at investigating the receptive and productive verb-noun collocational knowledge of EFL university learners. The participants were 20 senior undergraduates majoring in English at Umm Al-Qura University in Makkah, Saudi Arabia. A blank-filling test that consisted of 20 items was used to measure the productive collocational knowledge of the participants. Their receptive collocational knowledge was measured using a 20-item multiple-choice test that targeted the same 20 verb-noun collocations included in the blank-filling test. The results showed that the participants' ability to recognize accurate collocations (79% correct responses) was better than their ability to produce accurate ones (38% correct responses). Brashi concluded that EFL learners with different levels of proficiency face difficulties in combining words together.

Alsakran's (2011) study examined the productive and receptive knowledge of lexical and grammatical collocations among advanced Arabic-speaking learners of English. He also investigated the influence of language environment (ESL or EFL) on the acquisition of collocations. Furthermore, He investigated whether there were any significant differences among the participants' performance on three types of collocations: verb-noun, adjective-noun, and verb-preposition. The

participants in his study were 38 Saudi students at the Institute of Public Administration in Riyadh, Saudi Arabia, and 30 Arab students enrolled in the Intensive English Program at Colorado State University. The productive collocational knowledge of the participants was measured by three gap-filling tests. Their receptive collocational knowledge was measured by an appropriateness judgment test that required the participants to circle the number corresponding to the underlined part of a sentence that is judged unacceptable.

The results showed that ESL learners had significantly higher scores than EFL learners. Alsakran also found that the productive collocational knowledge of the participants lagged far behind their receptive collocational knowledge. Moreover, the results revealed that the participants performed far better on the verb-noun collocations test than on the adjective-noun and verb-preposition collocations tests. He concluded that Arabic-speaking learners of English demonstrated poor knowledge of collocations on the four tests.

Recently, Alharbi (2017) investigated the effects of three instructional approaches on Saudi EFL university students' learning of non-congruent collocations. The participants were 129 undergraduate learners who were assigned to three experimental groups and a control group. The first group was taught using a non-corpus assisted contrastive analysis and translation (CAT) approach, the second was taught using a corpus-assisted CAT approach, and the third was taught using a corpus-assisted non-CAT approach. The participants' immediate and delayed recall of the target collocations were measured through two tests that were administered immediately after the intervention stage and three weeks later. The results showed that the corpus-assisted CAT group significantly outperformed the other two groups on all the tests.

In summary, many of the studies reviewed above show that the collocational knowledge of Arabic-speaking EFL learners is poor, in spite of its importance to fluent and appropriate language use. However, many of these studies suffer from a number of limitations. Some studies were limited to the examination of a small number of collocations, and it is not clear how they were selected. In addition, some studies did not present any reliability measures of the instruments, which make it difficult to draw well-founded conclusions. Finally, none of the studies reviewed has

investigated the relationship between EFL learners' size of vocabulary and their knowledge of collocations.

Research objectives and questions

Taken into account the above limitations, this study was conducted with the aim of investigating the receptive collocational knowledge and vocabulary size of Saudi EFL university learners as well as the relationship between these two variables. More specifically, the study aims to investigate the performance of first and fourth year EFL learners in terms of their receptive knowledge of verb-noun collocations and in relation to their performance on a vocabulary size test. Furthermore, the study seeks to find out whether knowledge of collocations increases as a function of higher level of study; it aims to determine whether a significant difference exists between the receptive collocational knowledge of fourth year EFL university learners and that of first year learners. To achieve these aims, the study attempts to answer the following research questions:

1. What is the receptive vocabulary size of fourth and first year Saudi EFL university learners?
2. To what extent are these learners able to recognize collocations composed of highly frequent nouns and their most frequent verb collocates?
3. Is there a significant difference between the receptive collocational knowledge of fourth year learners and that of first year learners?
4. What is the relationship between the learners' vocabulary size and their receptive knowledge of collocations?

Methodology

Participants

The target population of the present study consists of English majors at AL-Imam Muhammad Ibn Saud Islamic University. The participants in the study were 65 male students who were enrolled in the English Department, College of Languages and Translation. The research sample included two groups. The first group consisted of 30 students who were enrolled in the fourth year of study at the department, and the second consisted of 35 students who were enrolled in the first year. They had already attended a number of compulsory courses that aimed at improving their general English proficiency.

Instruments

Two tests were used in this study: a vocabulary test and a collocation one. They were used to determine the receptive vocabulary and collocational knowledge of the participants. Following is a description of each test.

A. The Vocabulary Size Test

The Vocabulary Size Test is developed by Nation and Beglar (2007) to determine how much receptive vocabulary a learner knows (An online version of the test is available at <http://www.victoria.ac.nz/lals/staff/paul-nation.aspx>). The complete version of the test consists of 140 items, with 10 items from each 1000 word-family level. Thus, each test item represents 100 word families. The items in the test are organized according to Nation's (2006) fourteen 1000 British National Corpus (BNC) word lists. The BNC is a multi-purpose corpus consisting of approximately 100 million words that was constructed to reflect contemporary British English in its various social and generic uses (Meyer 2002). The Vocabulary Size Test begins with words from the 1st 1000 word-family level and ends with words from the 14th level. It uses a multiple-choice format in which each tested word is presented in a non-defining context that reflects its most frequent environments. The task of the test-taker is to choose the best definition of the word from four options that are written using restricted vocabulary. The Vocabulary Size Test was used in many studies (e.g. Lin & Morrison, 2010; Mizumoto, 2011; Mutlu & Kaşlıoğlu, 2016) to measure EFL learners' knowledge of vocabulary and was found to be highly reliable.

Nation and Beglar (2007, p. 11) suggest that learners need not to be tested in all the fourteen levels; however, they should sit a few levels beyond their present level. They also state that “undergraduate non-native speakers successfully coping with study at an English speaking university have a vocabulary of around 5,000-6,000 word families” (p. 12). Therefore, the researcher decided to use the first 80 items (1st 1000 to 8th 1000 levels) of the Vocabulary Size Test to measure the vocabulary knowledge of the participants. The final 40 items of the original test were not included in the test used in the present study as they consist of infrequent words that were considered too difficult for the participants.

B. The Receptive Collocational Knowledge Test (RCKT)

This test is constructed and used by the researcher to measure the participants' receptive knowledge of verb-noun collocations. It consists of 40 multiple-choice items that measure the participants' ability to recognize accurate verb-noun collocations (see Appendix A). Each item presents a simple, restrictive sentence that allowed only one correct answer. The node (noun) part of the collocation is included the stem while the verb (collocate) part is deleted. The participants were instructed to choose the verb that accurately completes the sentence from the three choices that follow.

Construction of the RCKT

The construction of the RCKT started with the selection of the verb-noun collocations to be included in the test. To this end, the researcher reviewed previous research on verb-noun collocations. This review revealed that Koya (2005), in a study of Japanese learners' acquisition of English collocations, provided a list of all the verb-noun collocations (1501 collocations) that appear in the BNC. This list was a valuable assist in selecting target collocations for the present study.

After marking the Vocabulary Size Test, the researcher found out the average vocabulary size of first year students was 2451 words; therefore, the researcher decided to include in the RCKT only collocations that are formed from verbs and nouns that appear in the first two 1,000 word levels of the BNC (L1 and L2). In addition, previous research (e.g., Altenberg & Granger 2001, Nesselhauf 2005) reported that collocations that are formed from delexical verbs (*make, take, do, give and have*) and nouns are particularly difficult for EFL/ESL learners, even at advanced levels. These verbs, as Gyllstad (2007, p. 58) states, occur frequently in English. Thus, the researcher decided that half of the selected collocations should be formed using delexical verb collocates. The procedure used in the selection of the verb-noun collocations to be included in the test was as follows:

At first, the complete list of collocation presented in Koya (2005) was copied into an Excel sheet. This list consists of 1501 verb-noun collocations. Then, all the collocations that are formed from nouns (nodes) and verbs (collocates) included in the L1-L2 in the BNC were extracted. This process resulted in a list of 677 collocations. The analysis of these collocations revealed that some nouns collocate with more than one verb. Therefore,

the next step was to make a list of the nouns and their most frequent verb collocates. This resulted in a list of 448 collocations, with 160 of them formed from delexical verbs and nouns. Following this, a sample of forty collocations was selected from this list to be included in the RCKT, which was considered large enough for assessing the collocational knowledge of the participants. In this step, the researcher relied on his teaching experience in selecting the collocations that are considered necessary for the students.

After selecting the target collocations for the test, the next step was to search for a simple context for each collocation that eliminates the effect of the subjects' reading comprehension skills on their performance on the test. In order to do this, the collocations were presented in sentential context, and the sentences that were selected and adapted from a number of dictionaries and websites including *Oxford Collocations Dictionary for Students of English (2002)*, *Cambridge Advanced learner's Dictionary on CD-ROM (2008)*, *Oxford Essential Dictionary CD-ROM (2012)*, and *Oxford Advanced learner's Compass on CD-ROM*.

The final step in the construction of the test was the selection of appropriate distractors. Great care was taken in this process in order to ensure that the test measures the learners' ability to recognize real collocations rather than their ability to reject pseudo-collocations. Thus, the researcher tried to choose distractors that, as Gyllstad (2005, p. 22) suggests, create tempting pseudo-collocations that would seem plausible as an alternative to real collocations. To do this, the distractors used in the test were either synonyms of the correct choice or a verb that might be tempting for the participants due to interference from their native language.

Test validity

To enhance the validity of the test, each collocation was presented, as mentioned before, in a simple sentence in order to eliminate the effect of the subjects' reading comprehension skills on their performance on the test. To confirm the test validity, it was presented to five experienced English language university professors; one of them is a native speaker of English. Based on the comments of the jury members, the distractors of four test items, which were judged as possible collocates, were changed in the final version.

Test reliability

To determine the reliability of the RCKT, Cronbach's Alpha was run on the performance scores of both first and fourth year students on the test. The results obtained from this statistical procedure indicated that the alpha coefficient for the test is .832, suggesting that the test has a relatively high reliability.

Procedure

A. Administration of the Tests

The Vocabulary Size Test was administered at first; two weeks later, the RCKT was administered. In both occasions, the students were told that the researcher is conducting a research on English vocabulary and that their scores on the tests would show them their level of knowledge of English vocabulary. They were also requested to pass over the items they are completely new to them. No time limit was set for either tests. While it took first year students an average of 30 minutes to complete the Vocabulary Size Test, fourth year students completed it in an average of 25 minutes. The RCKT was completed by first year students in an average of 15 minutes and in an average of 10 minutes by fourth year students.

B. Scoring the tests

The Vocabulary Size Test was marked so that each participant was given a score out of 80; each correct answer scored one point and each incorrect or no answer scored zero. As mentioned before, the participant's score on this test indicates, when multiplied by 100, his total vocabulary size up to the 8th 1000 word family level. Similarly, the RCKT was marked so that each participant was given a score out of 40; each correct answer scored one point and each incorrect answer scored zero.

Data analysis

After marking the two tests, the SPSS program for statistical procedures (Version 16) was used to calculate descriptive statistics of the collected data and carry out the necessary inferential statistics. The statistical procedures that were run to answer the research questions included, in addition to descriptive statistics, paired samples t-tests, independent-samples t-tests, and Pearson Product-Moment Correlation Test. For all statistical analyses, a .05 criterion of statistical significance was employed. The following section presents the results of these statistical analyses.

Results

This section presents the results obtained from the statistical analyses performed on the participants' scores on the Vocabulary Size Test and the RCKT. These results are presented following the order of the research questions.

Receptive Vocabulary knowledge

The first research question aims at investigating the receptive vocabulary knowledge of both first and fourth year Saudi EFL university learners. To answer this question, descriptive statistics for the participants' scores on the Vocabulary Size Test were computed. As can be seen in Table 1, the mean score of first year students on the test was 24.51 and that of fourth year students was 42.20. This demonstrates that the average vocabulary size of first year students was only 2,451 English word families, while the average vocabulary size of fourth year students was 4,220 word families.

Table 1

Descriptive Statistics for the Participants' Performance on the Vocabulary Size Test

Group	N	Minimum	Maximum	M	SD
4th year	30	17	62	42.20	12.46
1st year	35	15	41	24.51	7.39

To find out whether there was a significant difference between the average vocabulary size of fourth year students and that of first year students, an independent-samples t-test was performed using the scores of the two groups on the test. The results presented in Table 2 show that the difference between the two groups mean scores on the test was highly significant ($t=7.07$, $p<0.05$), in favor of fourth year students.

Table 2

Results of an Independent Samples t-Test on the Vocabulary Size Test

Group	M	SD	<i>t-test for Equality of Means</i>				
			<i>t</i>	<i>df</i>	<i>M</i> Difference	<i>Std.</i> <i>ED</i>	<i>p</i>
4th year	42.20	12.46	7.07	63	17.68	2.50	.00
1st year	24.51	4.44					

Receptive Knowledge of collocations

Both the second and third research questions deal with the receptive collocational knowledge of the participants. To answer the second

research question, which focuses on the participants' ability to recognize verb-noun collocations, descriptive statistics and percentage scores for the participants' scores on the RCKT were computed. These statistics indicate, as can be seen in Table 3, that fourth year students outperformed first year students on the test. While fourth year students received a mean score of 28.90 (72.25%) on the 40-item test, the mean score of first year students was only 20.34 (50.85%).

Table 3

Descriptive Statistics for the Participants' Total Scores on the RCKT

Group	N	Minimum	Maximum	M	SD	%
4th year	30	17	37	28.90	5.72	72.25
1st year	35	11	31	20.34	4.59	50.85
Total	65	11	37	24.29	6.67	60.73

In order to have a more detailed understanding of the receptive collocational knowledge of the participants, the RCKT was divided into two parts. The first part consists of the 20 items that test collocations formed from delexical verbs and nouns, and the second part consists of the other 20 items (collocations formed from "meaningful" verbs and nouns). Then, descriptive statistics for the participants' scores on each part were computed. The descriptive statistics shown in Table 4 indicate that both fourth and first year students performed better on the part testing collocations formed from delexical verbs and nouns than on the part testing collocations formed from "meaningful" verbs and nouns. More specifically, while the mean score of fourth year students on collocations including delexical verbs was 15.43 (77.15%), their mean score on collocations including "meaningful" verbs was 13.47 (67.35%). Similarly, first year students received a mean score of 11.11 (55.55%) on collocations including delexical verbs and a mean score of 9.23 (46.15%) on collocations including "meaningful" verbs.

Table 4

Descriptive Statistics for the Participants' Scores on the Two Parts of the RCKT

Group	Collocation Type	N	Minimum	Maximum	M	SD	%
4th year	Delexical Verb + Noun	30	11	20	15.43	2.81	77.15
	"Meaningful" Verb + Noun		6	19	13.47	3.38	67.35

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1st year	Delexical Verb + Noun	35	6	17	11.11	2.76	55.55
	“Meaningful” Verb + Noun		5	15	9.23	2.50	46.15

The third research question seeks to find out whether a significant difference exists between the receptive collocational knowledge of fourth year students and that of first year students. In order to answer this question, an independent-samples t-test was performed on the total scores of the two groups on the RCKT. Results of this t-test, as it is clear in Table 5, demonstrates that the difference between the mean score of fourth year students on the RCKT and that of first year students was significant ($t=6.69, p<0.05$).

Table 5

Results of an Independent Samples t-Test on the RCKT

Group	M	SD	<i>t-test for Equality of Means</i>				
			<i>t</i>	<i>df</i>	<i>M</i> Difference	<i>Std.</i> <i>ED</i>	<i>p</i>
4th year	28.90	5.72	6.69	63	8.56	1.28	.00
1st year	20.34	4.59					

Relationship between vocabulary size and collocational knowledge

The final research question is concerned with the relationship between the learners’ vocabulary size and their receptive knowledge of collocations. To determine whether there was a significant relationship between these two variables, Pearson Product-Moment Correlation Test was performed on the two groups’ total scores on the Vocabulary Size Test and the RCKT. The results of this test indicate, as it can be seen in Table 6, that there was a significant positive correlation between the vocabulary size of the participants and their receptive knowledge of collocations $r(65) = .755, p < 0.01$).

Table 6

Pearson Correlation Coefficient between Vocabulary Size and Knowledge of Collocations

		<i>Knowledge of Collocations</i>
<i>Vocabulary Size</i>	Pearson Correlation	.755**
	Sig. (2-tailed)	.000
	N	65

** . Correlation is significant at the 0.01 level (2-tailed).

In order to ensure that this finding holds true for fourth year as well as first year students, another two separate Pearson Product-Moment

Correlation Tests were conducted using the scores of each group on the Vocabulary Size Test and the RCKT. The results of these tests are shown in Table 7 and Table 8. With regard to fourth year students, the results shown in Table 7 demonstrate a highly significant positive correlation between their vocabulary size and their receptive knowledge of collocations ($r(30) = .769$, $p < 0.01$). As for first year students, the results presented in Table 8 reveal a positive, but insignificant, correlation between their vocabulary size and their receptive knowledge of collocations ($r(35) = .234$, $p = 0.176$).

Table 7

Pearson Correlation Coefficient between Vocabulary Size and Knowledge of Collocations of 4th Year Students

		<i>4th Year Knowledge of Collocations</i>
<i>4th Year Vocabulary Size</i>	Pearson Correlation	.769**
	Sig. (2-tailed)	.000
	N	30

** . Correlation is significant at the 0.01 level (2-tailed).

Table 8

Pearson Correlation Coefficient between Vocabulary Size and Knowledge of Collocations of 1st Year Students

		<i>1st Year Knowledge of Collocations</i>
<i>1st Year Vocabulary Size</i>	Pearson Correlation	.234
	Sig. (2-tailed)	.176
	N	35

Discussion

This section contains a general discussion of the findings presented in the previous sections in the order of the research questions.

Receptive Vocabulary knowledge

In this study, the receptive vocabulary knowledge of Saudi EFL university learners was measured using Nation and Beglar's (2007) Vocabulary Size Test. The results of the students' performance on the test indicated that fourth year students had an average vocabulary size of 4,220 word families, while first year students had an average of only 2,451 word families. Furthermore, the results of an independent-samples t-test showed a

statistically significant difference between the two groups' mean scores on the test.

These findings reveal that the vocabulary size of the participants in this study, both first and fourth year students, is below the size needed to deal with written and spoken English with minimum level of comprehension problems. According to Nation (2006), "a 8,000–9,000 word-family vocabulary is needed for dealing with written text, and 6,000–7,000 families for dealing with spoken text" (p. 79). Thus, it is most probable that Saudi EFL university students experience much difficulty in understanding various types of English written and spoken texts because of their limited vocabulary knowledge.

Furthermore, a comparison of these findings with the findings of previous studies, which used Nation and Beglar's (2007) test to measure the vocabulary size of the participants, also shows that the vocabulary size of Saudi EFL university students is very low. In a study that investigated the vocabulary knowledge of Japanese first year college students, Bungard-Nielsen et al. (2011) found that the participants had a mean vocabulary size of 6,452 word families. Another study was conducted by Mutlu and Kaşlıoğlu (2016) to determine the vocabulary knowledge of Turkish senior students in 5 different Anatolian high schools. The researchers found that the average vocabulary size of the participants was between 5,000 and 8,000 word families.

Receptive Knowledge of collocations

The receptive collocational knowledge of the participants was measured using the RCKT that targeted 40 basic verb-noun collocations (formed from nouns and verbs included in the L1 and L2 in the BNC). The results demonstrated that fourth year students were able to recognize the correct verb-noun collocations in 72.25% of the cases, and first year students could recognize them in only 50.85% of the cases. These findings imply that the receptive collocational knowledge of the students was poor, taken into consideration the fact that all the collocations targeted in the RCKT were basic ones. These findings are consistent with those of many previous studies (e.g., Farghal & Obiedant, 1995; Al-Zahrani, 1998; Shehata, 2008; Brashi, 2009; Alsakran, 2011) that reported poor knowledge of collocations for Arabic-speaking EFL learners.

Moreover, it was found that both fourth and first year students performed far better on verb-noun collocations that include delexical verbs (*make, take, do, give, and have*) than on collocations that include “meaningful” verbs. This contradicts the findings reported by Altenberg and Granger (2001) and Nesselhauf (2005) who found that collocations that are formed from delexical verbs and nouns are particularly difficult for EFL learners, even at advanced levels. This contradiction could also be attributed to the difference between the collocation targeted in the present study and those targeted in the studies of Altenberg and Granger (2001) and Nesselhauf (2005). As mentioned before, the collocations targeted in the RCKT were basic ones, which are formed from nouns and verbs included in the L1 and L2 in the BNC. Another possible explanation is that the participants in the present study could have repeatedly encountered the targeted verb-noun collocations that include delexical verbs much more than they have encountered the targeted collocations that include “meaningful” verbs.

Another objective of the present study was to examine whether knowledge of collocations increases as a function of higher level of study. Therefore, an independent-samples t-test was performed to find out whether a significant difference existed between the mean score of fourth year students and that of first year students on the RCKT. The results indicated a statistically significant difference between the mean scores of the two groups, in favor of fourth year students. This finding implies that the receptive collocational knowledge of the learners increases with a higher level of study. In other words, the length of classroom exposure to English is an important factor that influences the learners’ collocational knowledge, even though there may be other factors that influence it.

This finding is consistent with the findings of previous studies that examined the collocational knowledge of EFL learners in different learning settings (Al-Zahrani, 1998; Mochizuki, 2002; Gyllstad, 2007; Shehata, 2008; and Begagic, 2017). In his study of English major Saudi students’ knowledge of verb-noun collocations, Al-Zahrani (1998) found significant differences in knowledge of collocations among four academic levels—juniors, seniors, freshmen, and sophomores. In other words, the knowledge of collocations increased along with the subjects’ academic years. Mochizuki (2002) conducted a longitudinal study of the receptive

collocation of Japanese university students and found that the participants did perform better on a receptive collocation test over a period of nine months. Gyllstad (2007) investigated the receptive collocation knowledge of Swedish learners of English and found that second year university students performed significantly better than first year students on a receptive collocation test and that first year university students performed significantly better than upper-secondary school students. Shehata (2008) investigated, among other issues, the influence of the amount exposure to the target language on the acquisition of collocations by advanced ESL/EFL Arabic learners of English. She concluded that there was a moderate positive correlation between learners' knowledge of collocations and their amount of exposure to the language. Finally, Begagic (2014) studied the collocational knowledge of native speakers of the Bosnian/Croatian/Serbian (BCS) language who were enrolled in the Department of English language and literature in Zenica. The findings of Begagic's study also showed a significant difference in the collocational knowledge between fourth and first year students. In sum, the findings of the present study as well as those of the studies reviewed above revealed a significant development in the collocational knowledge of the participants with higher levels of study.

However, as Gyllstad (2007, p. 243) states, such finding should be treated with caution since the data collected in the present study was cross-sectional, not longitudinal. In other words, the observed difference between the scores of fourth and first year students on the RCKT might not be due to more years of classroom exposure to the target language, but rather that the difference in collocational knowledge was perhaps there already in the first place. Nonetheless, the results of this study suggest that more years of classroom exposure to the target language result in improving the receptive knowledge of English collocations of Saudi EFL university learners. However, a longitudinal study is needed to confirm this finding and investigate the other factors that influence the learners' knowledge of collocations.

Relationship between vocabulary size and collocational knowledge

The final objective of the present study is related to the relationship between the learners' vocabulary size and their receptive knowledge of collocations. It was found that the receptive vocabulary size of all the

participants significantly correlates with their receptive verb-noun collocational knowledge. It was also found that there was a highly significant positive correlation between fourth year students' receptive vocabulary size and their receptive knowledge of collocations as well as a positive, but insignificant, correlation between the receptive vocabulary size of first year students and their receptive knowledge of collocations. These results suggest that there is indeed a relationship between learners' vocabulary size and their knowledge of collocations. This relationship demonstrates that the broader students' vocabulary is, the more collocations they can recognize accurately.

This finding is consistent with the results of previous studies that were conducted in different research settings (e.g., Koya, 2005; Gyllstad, 2007; Bergström, 2008; Mutlu & Kaşlioğlu, 2016). In her study of Japanese EFL learners' acquisition of English collocations, Koya (2005) found a close correlation between learners' knowledge of vocabulary and their collocational knowledge. The studies of both Gyllstad (2007) and Bergström (2008) also revealed a positive correlation between the vocabulary size of Swedish EFL learners and their knowledge of collocations. Similarly, the study of Mutlu and Kaşlioğlu (2016) showed a significant positive correlation between the two variables with Turkish EFL students.

Conclusion

This study aimed to investigate the performance of first and fourth year Saudi EFL university learners in terms of their receptive knowledge of verb-noun collocations and in relation to their performance on a vocabulary size test. With regard to the receptive vocabulary size of the participants, the results obtained from the administration of Nation and Beglar's (2007) Vocabulary Size Test reveal that their vocabulary size is very low. More specifically, the results indicated that first year students had an average of only 2,451 word families and fourth year students had an average of 4,220 word families, which is below the size that EFL university learners need to deal with written and spoken English texts with minimum level of comprehension problems.

To measure the receptive collocational knowledge of the participants, the researcher constructed a multiple-choice test that targeted 40 basic verb-noun collocations. The analysis of the performance of the participants on

this test showed that fourth year students were able to recognize the correct verb-noun collocations in 72.25% of the cases, and first year students could recognize them in only 50.85% of the cases. Taken into consideration the fact that only basic verb-noun collocations were targeted in the test, these findings indicate, like most of the studies conducted on EFL Arabic-speaking EFL learners, that the receptive collocational knowledge of all the participants is limited. This lack of collocational knowledge is believed to be due to the teaching and learning of vocabulary as discrete units and neglecting the teaching of collocations as part of word knowledge, i.e., without paying attention to acceptable word combinations.

Another interesting finding of the present study was that both fourth and first year students performed far better on verb-noun collocations that include delexical verbs than on collocations that include “meaningful” verbs. The findings also suggest that the receptive collocational knowledge of the learners increases with a higher level of study. A statistically significant difference was found between the mean score of fourth year and that of first year students on the RCKT, in favor of fourth year.

Finally, the results of the study suggest that there is a close relationship between the learners’ vocabulary size and their receptive knowledge of collocations. A significant positive correlation was found between the participants’ scores on the Vocabulary Size Test and their scores on the RCKT. In addition, a highly significant positive correlation was found between the scores of fourth year students on the two test and a positive, but insignificant, correlation between the first year students’ scores on the tests.

Implications

The findings of this study indicate that both the receptive vocabulary knowledge of Saudi EFL university learners and their receptive collocational knowledge are limited, despite the fact that they increase along with higher levels of study. They also show a positive relationship between learners’ vocabulary size and their knowledge of collocations. These findings have important pedagogical implications.

First, it is important to expand the vocabulary size of the students. To achieve this objective, students should be provided with a wide range of activities that expose them to the various aspects of word knowledge and

provide them with enough opportunities for recycling vocabulary. In other word, new vocabulary items should not be presented as isolated words, but they should be presented with their frequently co-occurring words. This would not only expand the vocabulary size of the students but would also increase their knowledge of collocations at the same time, since a close relationship is found between vocabulary size and collocational knowledge.

Second, much attention should be given to the development of students' knowledge of collocation. Thus, textbook writers should repeatedly present the important collocations in authentic texts in order to promote the students' knowledge of these collocations. EFL instructors should at first raise students' awareness of the importance of English collocations as an important part of vocabulary knowledge. They should also draw the students' attention to the different collocations that the students encounter in reading texts. This should be accompanied with direct teaching of non-congruent collocations, which do not have equivalents in L1, since they are found to be more difficult for EFL learners to acquire.

Future research

The present study was a cross-sectional one in which the performance of students from only two university levels of was compared. It would also be interesting to replicate this study on participants from all four years of study at the English department in different universities. In addition, a longitudinal study is needed to confirm the findings of this study and investigate the development of students' knowledge of verb-noun collocations as well as the factors that influence their knowledge of collocations.

The verb-noun collocations targeted in the present study were limited to basic ones; therefore, further research could consider testing students' knowledge of collocations that are included in higher levels of the BNC (e.g., L1 to L4). Further research could also be conducted on other lexical and grammatical types of collocations in order to determine what types present particular difficulty for EFL university learners and to get a more comprehensive view of their receptive and productive knowledge of collocations.

Finally, further studies could investigate EFL students' use of collocations in spoken and written discourse. Such research could

compare between the use of collocations by EFL students with varying levels of EFL proficiency.

References

- Alharbi, R. M. (2017). *Acquisition of lexical collocations: A corpus-assisted contrastive analysis and translation approach* (unpublished doctoral dissertation). Newcastle University, Newcastle.
- Alsakran, R. A. (2011). *The productive and receptive knowledge of collocations by advanced Arabic-speaking ESL/EFL learners* (Unpublished master's thesis). Colorado State University, Colorado.
- Altenberg, B. & Granger, S. (2001). The Grammatical and Lexical Patterning of make in Native and Non-native Student Writing. *Applied Linguistics*, 22(2), 173-195.
- Al-Zahrani, M.S. (1998). *Knowledge of English lexical collocations among male Saudi college students majoring in English at a Saudi university* (Published doctoral dissertation). Indiana University of Pennsylvania, Pennsylvania,
- Begagić, M. (2014). English language students' productive and receptive knowledge of collocations. *Explorations in English Language and Linguistics*, 2(1), 46-67.
- Bergström, K. (2008). *Vocabulary and receptive knowledge of English collocations among Swedish upper secondary school students* (Unpublished master's thesis). Stockholm University, Stockholm, Switzerland.
- Brashi, A. (2009). Collocability as a problem in L2 production. *Reflection on English Language Teaching*, 8(1), 21-34.
- Bundgaard-Nielsen, R. L., Best, C. T., & Tyler, M. D. (2011). Vocabulary size is associated with second-language vowel perception performance in adult learners. *Studies in Second Language Acquisition*, 33(3), 433–461.
- Cantos, P. & Sánchez, A. (2001). Lexical constellations: What collocates fail to tell. *International Journal of Corpus Linguistics*, 6(2), 199–228.
- El-Dakhs, D. (2015), Collocational competence in English language teaching: An overview. *Arab World English Journal*, 6(1), 68-82
- Farghal, M. & Obiedat, H. (1995). Collocations: A neglected variable in EFL writings. *IRAL: International Review of Applied Linguistics in Language Teaching*, 33, 315-331.
- Gitsaki, C. (1999). *Second language lexical acquisition: A study of the development of collocational knowledge*. Maryland: International Scholars Publications.
- Gyllstad, H. (2007). *Testing English collocations: Developing receptive tests for use with advanced Swedish learners* (Published doctoral dissertation). Lund University, Stockholm, Switzerland.

- Hsu, J. (2002). *Development in collocational proficiency in a workshop on English for general business purposes for Taiwanese college students* (Unpublished doctoral dissertation). Indiana University of Pennsylvania, Pennsylvania.
- Jaén, M. M. (2007). A Corpus-driven design of a test for assessing the ESL collocational competence of university students. *IJES*, 7(2), 127-147.
- Kim, D. H. (2009). *A study on the use of lexical collocations of Korean heritage learners: identifying the sources of errors* (Unpublished master's thesis). University of Southern California, California.
- Koya, T. (2005). *The acquisition of basic collocations by Japanese learners of English* (Unpublished Doctoral Dissertation). Waseda University, Japan.
- Lewis, M. (2000). *Teaching Collocation: Further Development in the Lexical Approach*. Hove, Brighton: Language Teaching Publications
- Lin, L. H., & Morrison, B. (2010). The impact of the medium of instruction in Hong Kong secondary schools on tertiary students' vocabulary. *Journal of English for Academic Purposes*, 9(4), 255–266.
- Meyer, C. F. (2002). *English corpus linguistics*. Cambridge: Cambridge University Press.
- Milton, J. (2009) *Measuring second language vocabulary acquisition*. Bristol, UK: Multilingual Matters.
- Mizumoto, A. (2012). Exploring the effects of self-efficacy on vocabulary learning strategies. *Studies in Self-Access Learning Journal*, 3(4), 423-437.
- Mutlu, G. & Kaşlıoğlu, Ö. (2016). Vocabulary size and collocational knowledge of Turkish EFL learners. *Journal of Theory and Practice in Education*, 12(6), 1231-1252.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University press.
- Nation, I. S. P. (2006). How large a vocabulary is needed for reading and listening? *Canadian Modern Language Review*, 63(1), 59-82.
- Nation, I.S.P., & Beglar, D. (2007). A vocabulary size test. *The Language Teacher*, 31(7), 9-13. Available at <http://www.victoria.ac.nz/lals/staff/paul-nation.aspx>
- Nesselhauf, N. (2003). The use of collocations by advanced learners of English and some implications for teaching. *Applied Linguistics*, 24(2), 223-242.
- Nesselhauf, N. (2005). *Collocations in a learner corpus*. Amsterdam: John Benjamins.
- Schmitt, N. (2004). *Formulaic sequences: Acquisition, processing and use*. Amsterdam: John Benjamins.

- Shehata, A. (2008). *L1 Influence on the reception and production of collocations by advanced ESL/EFL Arabic learners of English* (Published Master's Thesis). The College of Arts and Sciences of Ohio University, Ohio.
- Wiktorsson, M. (2003). *Learning idiomaticity: A Corpus-based study of idiomatic expressions in learners' written production*. Lund, Sweden: Lund University.
- Wilkins, D. A. (1972). *Linguistics in language teaching*. London: Edward Arnold.
- Wray, A. (2002). *Formulaic language and the lexicon*. Cambridge: Cambridge University Press.

Appendix "A"

Receptive Collocational Knowledge Test

Instruction: Choose the **verb** that accurately completes the sentence.

1. You will have to work hard to ——— your aim.
a) get b) achieve c) do
2. Let me know if you ——— any difficulties.
a) have b) reach c) show
3. I can't ——— any conclusions from what she said.
a) find b) draw c) decide
4. I'd like to ——— an appointment to see the doctor, please.
a) make b) do c) apply
5. She started to ——— a diary when she was thirteen.
a) run b) keep c) record
6. He doesn't usually ——— part in the class activities.
a) make b) take c) provide
7. The fire didn't ——— much damage.
a) run b) make c) cause
8. They usually ——— useful contributions to the discussion.
a) give b) do c) make
9. This course helps students to ——— good progress in English.
a) make b) take c) gain
10. These small shops ——— many purposes.
a) earn b) do c) serve
11. He left his job to ——— care of his sick wife.
a) take b) have c) make
12. They agreed to ——— a meeting next month.
a) carry b) do c) hold
13. He likes to ——— friends with many students in his class.
a) create b) make c) gain
14. He didn't ——— an opinion on the subject.
a) raise b) express c) present
15. I need to ——— some work on my essay.
a) do b) make c) set
16. Please ——— an account of your day to my secretary.
a) tell b) do c) give
17. The leaders failed to ——— an agreement.
a) reach b) catch c) achieve

18. It wouldn't _____ you any harm to eat less.
a) take b) do c) make
19. The course is designed to _____ the needs of young learners.
a) face b) hold c) meet
20. He didn't _____ any reason for leaving his job.
a) express b) give c) make
21. The teacher asked him to _____ some tasks on the computer.
a) make b) perform c) conduct
22. I hope this decision will _____ an impact on primary schools.
a) cause b) have c) do
23. She decided to _____ the truth.
a) give b) say c) tell
24. We need to _____ the image of our company.
a) improve b) raise c) develop
25. Your advice will _____ no effect on them.
a) make b) have c) do
26. The economy is beginning to _____ signs of improvement.
a) show b) provide c) offer
27. At least _____ him the opportunity to explain what happened.
a) make b) do c) give
28. Big changes can _____ stress.
a) cause b) do c) achieve
29. The government must _____ measures to reduce crime.
a) make b) do c) take
30. We should _____ a survey to find out what our customers want.
a) perform b) run c) conduct
31. He didn't _____ the courage to say no.
a) keep b) hold c) have
32. She always _____ very good grades in her exams.
a) gets b) takes c) shows
33. My secretary will _____ the arrangements for the trip.
a) provide b) do c) make
34. My sister expects to _____ birth to a baby boy next month.
a) have b) give c) do
35. This article will _____ the basis for our discussion.
a) form b) make c) give
36. The final match will _____ place next week.
a) do b) catch c) take
37. He tried to _____ his influence to help the family.
a) apply b) use c) perform
38. She is going to _____ a reward to anyone who finds her dog.

- a) offer b) set c) make
39. We need somebody to ——— charge of the meeting.
a) run b) take c) keep
40. ——— this path for about 100 metres, and it's on your right.
a) Follow b) Walk c) Go