

**THE RELATIONSHIP BETWEEN 4TH YEAR
ELT STUDENTS' VOCABULARY SIZE AND
RECEPTIVE AND PRODUCTIVE KNOWLEDGE
OF COLLOCATIONS IN L2**

Yüksek Lisans Tezi

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Sehla Betül DURCEYLAN'ın "The Relationship between 4th year ELT Students' Vocabulary Size and Receptive and Productive Knowledge of Collocations in L2" başlıklı tezi 05.07.2019 tarihinde, aşağıda belirtilen jüri üyeleri tarafından "Anadolu Üniversitesi Lisansüstü Eğitim-Öğretim ve Sınav Yönetmeliği"nin ilgili maddeleri uyarınca, Yabancı Diller Eğitimi Anabilim Dalı İngilizce Öğretmenliği Programında, Yüksek Lisans tezi olarak kabul edilmiştir.

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ÖZET

İNGİLİZCE ÖĞRETMENLİĞİ DÖRDÜNCÜ SINIF ÖĞRENCİLERİNİN YABANCI DİLDEKİ KELİME BİLGİLERİ İLE ÜRETİMSEL VE ALGISAL EŞDİZİM BİLGİLERİ ARASINDAKİ İLİŞKİ

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Bu çalışma katılımcıların algısal ve üretimsel eşdizimlilik bilgileri arasındaki farkı araştırmak, kelime bilgileriyle algısal ve üretimsel eşdizimlilik bilgileri arasında bir ilişki olup olmadığını incelemek ve bazı değişkenler (anadile benzerlik, sıklık ve sözcük türleri) arasından algısal ve üretimsel eşdizimlilik bilgisinin en iyi belirleyicilerini bulmaktır. Bu konuları araştırmak üzere çalışmaya Anadolu Üniversitesi İngilizce Öğretmenliği bölümünde okuyan 102 Türk 4. sınıf öğrencisi katılmıştır. Çalışma için anadile benzerliklerine göre gruplandırılmış sıfat-isim ve fiil-isimden oluşan eşdizimli sözcükler seçilmiştir. Veriler, algısal kelime bilgisi testi, üretimsel ve algısal eşdizimlilik testleriyle toplanmıştır. Veri analizleri, öğrencilerin algısal eşdizimlilik bilgilerinin üretimsel eşdizimlilik bilgilerinden daha iyi olduğunu göstermektedir. Diğer bir bulgu ise, dil yeterlik sınavı olarak kullanılan algısal kelime bilgisi testi sonucunun hem algısal hem de üretimsel eşdizimlilik test sonuçları ile oldukça ilişkili olduğu yönündedir. Son bulguya gelince, anadile uyumluluk ve sözcük türlerinin algısal ve üretimsel eşdizimlilik kelime bilgisinde etkili olduğu ortaya çıkmıştır. Öte yandan, eşdizimli sözcüklerin derlemdeki sıklıklarıyla öğrencilerin algısal ve üretimsel eşdizimlilik bilgileri arasında bir ilişki bulunamamıştır.

Anahtar sözcükler: Kelime bilgisi, Eşdizimlilik, Ana dile benzerlik, Derlem sıklığı, Eşdizimli sözcük türü.

ABSTRACT

THE RELATIONSHIP BETWEEN 4TH YEAR ELT STUDENTS' VOCABULARY SIZE AND RECEPTIVE AND PRODUCTIVE KNOWLEDGE OF COLLOCATIONS IN L2

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The current study was undertaken in pursuit of investigating the difference between participants' receptive and productive collocational competence and their correlations with receptive vocabulary size and finding the best predictor/s of receptive and productive collocational knowledge among some variables (congruence, corpus frequency, collocational pattern). To address those issues, 102 Turkish 4th grade ELT students, studying at Anadolu University, took part in the study. Moreover, adjective-noun and verb-noun collocational combinations, which were categorized based on their congruence, were chosen for the study. The data were gathered by means of a vocabulary size test, a productive and a receptive collocation test. The data analyses displayed that students' receptive collocational knowledge were better than their productive collocational knowledge. Another finding was that the result of the receptive vocabulary size test, which was utilized as a language proficiency test in the study, was highly correlated with both their receptive and productive collocation tests' scores. As for the last finding, it was revealed that congruence with L1 and collocational patterns were influential predictors of receptive and productive collocational knowledge. On the other hand, it was revealed that corpus frequency did not correlate to the participants' receptive or productive collocational knowledge.

Key words: Vocabulary size, Collocations, Congruence, Corpus frequency,
Collocational patterns.

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Eskişehir 2019

12/07/2019

ETİK İLKE VE KURALLARA UYGUNLUK BEYANNAMESİ

Bu tezin bana ait, özgün bir çalışma olduğunu; çalışmamın hazırlık, veri toplama, analiz ve bilgilerin sunumu olmak üzere tüm aşamalarında bilimsel etik ilke ve kurallara uygun davrandığımı; bu çalışma kapsamında elde edilen tüm veri ve bilgiler için kaynak gösterdiğimi ve bu kaynaklara kaynakçada yer verdiğimi; bu çalışmamın Anadolu Üniversitesi tarafından kullanılan “bilimsel intihal tespit programı Turnitin” ile tarandığını ve hiçbir şekilde “intihal içermediğini” beyan ederim. Herhangi bir zamanda, çalışmamla ilgili yaptığım bu beyana aykırı bir durumun saptanması durumunda, ortaya çıkacak tüm ahlaki ve hukuki sonuçları kabul ettiğimi bildiririm.

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STATEMENT OF COMPLIANCE WITH ETHICAL PRINCIPLES AND RULES

I hereby truthfully declare that this thesis is an original work prepared by me; that I have behaved in accordance with the scientific ethical principles and rules throughout the stages of preparation, data collection, analysis and presentation of my work; that I have cited the sources of all the data and information that could be obtained within the scope of this study, and included these sources in the references section; and that this study has been scanned for plagiarism with “Turnitin program” used by Anadolu University, and that “it does not have any plagiarism” whatsoever. I also declare that, if a case contrary to my declaration is detected in my work at any time, I hereby express my consent to all the ethical and legal consequences that are involved.

Sehla Betül DURCEYLAN YİĞİT

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LIST OF ABBREVIATIONS

- EFL : English as a Foreign Language
ELT : English Language Teaching
ESL : English as a Second Language
L1 : First Language (in this study, it is Turkish)
L2 : Second Language (in this study, it is English)
MI : Mutual Information
BNC : British National Corpus
COCA: Contemporary Corpus of American English
TNC : Turkish National Corpus
ADJ : Adjective
V : Verb
AN : Adjective+ Noun
VN : Verb+ Noun

CHAPTER 1

INTRODUCTION

English is the major language of science, technology, politics, internet, communication, tourism and commerce. In fact, English language is the global language of the world, in other words, it is a *lingua franca*. As English language has become more of an issue and become a world language, linguists and scholars dealing with English language field start to adopt novel approaches and methods to teach English in the best and easiest ways.

In language teaching both grammar and vocabulary are indispensable facets of language. Linguists explain their relationship in a metaphorical way by defining grammar as the “bones” of a language, and the vocabulary as the “flesh” of the language (Cai, 2017). However, formerly, grammar was the limelight of teaching English and was believed that it should be learned mostly and firstly.

The significance of vocabulary in communication was underestimated, however, as highlighted by Wilkins (1972) “without grammar little can be conveyed, without vocabulary nothing can be conveyed” (p.111). In a similar vein, Schmitt (2010) also lays stress on the significance of vocabulary for language learning by saying “learners carry around dictionaries and not grammar books” (p. 4). It is perhaps such insights that induce to an increasing awareness of the importance of the vocabulary in foreign language teaching and learning studies over the past few decades after a long duration of oversight (Meara,1980).

It only stands to reason that having the knowledge of many words provides an advantage for language learners. Nevertheless, according to the claim by Gyllstad (2007), knowing single vocabulary items alone is not adequate for some students like especially for advanced level students, university students, student teachers, and other professionals who need to gain native like mastery of L2 language. Wray (2002) points out this matter by saying that a learner must have the knowledge of not only single words but also the combinations where they fit together in order to command a language. Therefore, so as to operate successfully in a language, knowing a good number of vocabulary items as well as knowing co-existing potential of those words with regard to other vocabulary items in the language are necessary.

Farghal and Obiedat (1995) point out that learning and teaching vocabulary items

mainly as single words will spark off lexical inadequacy for L2 learners. At this point, Morgan Lewis (2000) suggests that to enhance learners' competence in language, their collocational competence should also be raised. He goes on to argue that many students cannot make any noticeable advancement just because they have not been instructed to note which words accompany with which. He states that learners may know many single words as well as many grammatical issues about them, but they are inadequate to employ those words in a range of word combinations, such as collocations, which widen the meaning of their intended messages.

Schmitt (2010) claims that vocabulary instruction mostly refers to the instruction of single words; nevertheless, it has become obvious that formulaic language is a vital part of language learning and teaching. Schmitt (2010) asserts that formulaic language, which is used as an umbrella term for collocations, idioms, proverbs, fixed expressions, free combinations, etc., is very prevalent in language production and it has significant functions in communication. Schmitt (2010) goes on to say that the formulaic language offers a processing advantage over creatively produced language as native or non-native advance language users are likely to store and recall them as chunks, which enables them to be more fluent. Moreover, the corpus data prove that formulaic language exists very frequently both in spoken and written language and it is a vital element of language processing.

Embracing the importance of frequently used word combinations in the first and second language use, this study will mainly focus on "collocations" which compose a large proportion of language production among aforementioned types of a formulaic language.

The significance of learning and teaching collocations is embraced by many researchers (Gitsaki, 1999; Gyllstad, 2007; Fan, 2009; Fernández and Schmitt, 2015; Zareva and Shehata, 2015; Nguyen and Webb, 2017). In addition to them, Palmer (1981 cited in Cai, 2017) asserts that language is not learnt word by word, but it is learnt collocation by collocation. In a similar vein, Morgan Lewis (2000) claims that to create and understand all the naturally occurring text, collocation has the most influential power. He claims that lack of collocational competence cause students to state their opinions with longer and wordier sentences involving some grammatical errors. Along the same line with them, Nesselhauf (2003) suggests that so as to sound accurate and fluent and to attain high proficiency in the L2, collocations have a vital role.

Although many researchers are all of one mind about the undeniable importance of collocations, they do not agree on the definitions of collocations. Collocations can mostly be defined as recurring word units. However, as stated before, there is no exact and a single definition for collocations in the literature (Vural, 2010). This situation may result from the fact that researchers have adopted mainly two different approaches to identify collocations. They are the phraseological approach and the frequency-based approach. That is to say, the definition of collocation is shaped based on the different perspectives taken by the aforementioned approaches. To begin with the phraseological approach, a collocation is delineated by being semantically transparent and being semantically restrictive. Nguyen and Webb (2017) exemplify this approach's viewpoint by the example "good fortune". They claim "good fortune" is a collocation because the word "fortune" collocates with good but not with its synonymous words such as nice, wonderful because of its restrictiveness. As far as this approach is concerned, collocations stand between free combinations and pure idioms (Wolter and Gyllstad, 2011). As for the second approach, it is frequency-based approach. This approach delineates collocations as word combinations which co-exist more frequently than could be anticipated by chance (Nguyen and Webb, 2017). The frequency-based approach makes use of statistical measures indicating frequency occurrences of collocations such as Mutual information scores, T scores to define collocations based on the searches in a large corpus. In fact, corpus-based studies focusing on the frequency of the word combinations set examples for this approach. Nguyen and Webb (2017) exemplify this approach's viewpoint by the examples "take care, take comfort, take notice". They are called collocations as they all have high MI scores (higher than 3) and T scores (higher than 2). The meanings of T-scores and MI scores will be illustrated in detail in the literature review part (2.9.3.).

The current study follows the frequency- based approach and defines collocations as frequently co-occurring two word combinations that have a frequency value of at least $MI=3$ and $t\text{-score}=2$ with reference to suggestion by Schmitt, 2010. That is to say, the present study does not take the level of compositionality and semantic transparency into consideration.

The advantage of using the above chance co-occurrence as the main criterion is that collocations can be rapidly recognized without involving subjective elements such as intuitions of the researchers or native speakers, which may induce changing commentaries about what is a collocation (Nguyen and Webb, 2017). In a similar vein,

Boers and Webb (2015) maintain that the criteria opaqueness and transparency show alterations among native and non-native language users. Another advantage of frequency-based approach is to refrain from choosing collocations from low-frequency level, which may not be less useful items for L2 teaching. Moreover, the last motivation to make use of frequency-based approach is that the present study will examine the effect of frequency on collocational performance via statistical frequency measures (raw collocational frequency, t-score and MI score, which will be explained in detail later).

Due to the fundamental role of collocation for language learners, as mentioned above, the current study aims to investigate the controlled productive and receptive collocational knowledge of Turkish 4th grade students majoring at English Language Teaching Department at Anadolu University concerning the lexical categories of adjective-noun and verb-noun, the influence of L1 congruency, frequency and their relation with the receptive vocabulary size.

The study has five main chapters. The first chapter introduces the scope of the study. It involves the introduction, the statement of the problem, aim of the study and research questions, which emphasize the need to implement the present research, significance and limitations of the study and definitions of the terms referred frequently in the study. The second chapter is the review of literature part. It involves the parts; the role of vocabulary in the history of language teaching, knowing a word, definitions and studies about vocabulary size, the relationship between vocabulary size and general proficiency, definitions of collocation, classification of collocation, significance of collocations in EFL classrooms, previous studies about the influence of collocational patterns, congruence with L1, frequency, vocabulary size and previous studies about collocations conducted in Turkish context. The third chapter is the methodology of the study and in this chapter, research design, participants and setting, instruments, item development, pilot studies, data collection procedure, data scoring and analysis procedure are explained. As for the fourth chapter, it is the result part in which findings of the vocabulary size and collocation tests are offered based on statistical analyses. When it comes to the fifth chapter, in other words; the discussion and conclusion part, findings of the study are discussed to clarify what the numbers may indicate and to give a detailed answer to research questions. Moreover, the overall conclusion, the writer's suggestions for further research and implications are given.

1.1. Statement of the Problem

The number of the studies aspiring to improve and expedite the learning of English has increased due to the increase in the use of English to communicate and convey the information among people all over the world. To comprehend and operate in the target language effectively, it is a well-known fact that L2 learners should know thousands of words. For that reason, language teachers have very crucial duty to cope with learners' vocabulary problems and make the most of the most suitable and effective language teaching techniques and methods.

In fact, many teachers may be cognizant of the fact that much time should be allocated to teach vocabulary, but as is believed, vocabulary teaching occurs in isolation in Turkish classes on the whole. As a result, the unavoidable result is students' unnatural and deviant usages in oral and written works. The problem can be rooted in lack of awareness that knowing a word denotes much more than just having the knowledge of word definitions. Students need to know many aspects of a word such as how, where to use it, co-occurring word next to it, etc. (Nation, 2001).

Collocation teaching can play an important role at this point because, as claimed by Ramadhan (2017), studies have disclosed the fact that not being able to produce decent collocations pose a big obstacle for language learners to operate successfully at English. Ramadhan (2017) goes on supporting his claim by saying that learners memorize many words but still they cannot produce proper collocations satisfactorily. Along the same line with him, Altenberg and Granger, 2001; Nesselhauf, 2003; Laufer and Waldman, 2011 claim that producing appropriate collocations is a trouble even for advanced level learners. They all assert that the collocational knowledge and development of L2 learners are limited and inclined to be slow. In this vein, Li and Schmitt (2010) probed the development of collocational knowledge used in academic writing by MA degree students over a year. The result of the study displayed that even the knowledge of the students in a master program involved deviant usages of collocations and their knowledge did not change noticeably after one year, which backed the claims of previous studies that the collocational acquisition tends to limited and slow. However, in the Turkish context, the studies gauging the pre-service teachers' collocational knowledge or students at university level are lacking, so it is also important to have an idea about the competence of them. Otherwise, it would be illogical to expect students, who will be taught by them, to have a good command of collocations.

In fact, the observations of the researcher, as an ELT teacher herself, also enforce the mentioned claims. It is very common to hear the question not only among students but also among teachers that “Is it possible to use this word with this word?”. According to observations of the researcher, it is evident that there is a lack of collocational awareness and knowledge even among EFL teachers and they have L1 transfer tendency for their lack of knowledge. Also, the investigation of L1 effect on collocations in the Turkish context seems lacking. That is, the issue seems to be comparatively under-investigated regarding the Turkish context since collocation studies are limited in respect of number. (Mutlu, 2015). On examining the studies implemented in the Turkish context, it is revealed that the influence of congruence with L1, frequency, vocabulary size of students and the impact of collocational patterns and typology, which means the difference between the syntactic structures of verb-noun and adjective-noun, and the studies gauging the knowledge of ELT students have been areas of under-investigated by researchers. For that reason, to examine the collocational knowledge of the to be teachers and at the same time students at the end of their educational life will be of great significance.

To begin with, two different collocational patterns are examined in the present study. They are verb-noun and adjective-noun combinations. In fact, all types of collocations are vital to produce native-like language, but as it is proven by many former studies, some of them are more frequent and probable than others (Kurosaki, 2012). The underlying reason for selecting these types of collocations is that they have high frequency in English language production. Frequency is considered as the best predictor of usefulness. (Nation, 2001; Schmitt, 2010; Kurosaki, 2012; Fernández and Schmitt, 2015). The other reason to choose these two syntactic categories is that, as far as Nesselhauf (2005) is concerned, among lexical collocations, verb–noun and adjective–noun collocations have been found to be particularly challenging to acquire. This claim is also supported by a research conducted by Yan (2010). The results of his study revealed that verb–noun and adjective–noun collocations were at the root of most of the lexical collocation errors. To be more precise, it was stated that 50% percent of lexical errors stemmed from verb-noun and 25% percent of lexical errors sprang from adjective–noun collocations and the remaining part was attributed to various other factors.

Apart from the stated reasons for choosing both adjective-noun and verb-noun collocations, the other inducement is to see the effect of different typological structure of

verb-noun collocations between English and Turkish, and similar typological structure of adjective-noun collocations between two languages.

The other concern of the study is to see the effect of corpus frequency on collocational competence. In fact, the influence of the frequency of collocational occurrence in a corpus is a bit controversial issue. To put it differently, previous studies have displayed varying results depending on the context of the study, and there is no consensus on the influence of corpus frequency. Durrant (2014) suggests learners from different language backgrounds and educational systems can be affected from the frequency aspect in a different way, so it is important to examine this factor with the participants different from previous studies to see the effect of frequency. Durrant (2014) goes on his words by saying while frequency may be an influential factor for collocational knowledge, it cannot predict learners' knowledge per se. In fact, it is also maintained by Ellis and Larsen-Freeman (2006) that language learning is the output of an elaborate process and a separate factor which hardly unfolds more than 16-25% of the difference in knowledge of language, so Durrant suggests that it is better to take other factors into consideration. He asserts that at least L1 influence should be taken into consideration and investigated.

His claim that learners' mother language may have a powerful impact on the acquisition of collocations is embraced by other researchers. (Phoocharoensil, 2013; Lee, 2016; Kim and Chon, 2017; Wolter and Yamashita, 2018). That is to say, the similarities and dissimilarities between L1 and L2 may have facilitating and inhibitory influence on the acquisition of collocations. For that reason, empirical studies should be implemented to disclose the cross-linguistic influence of native and target language.

Collocations are not so absolutely restricted as idioms. Each language may employ different word combinations for collocations to denote the same meaning. To illustrate, the collocation "white coffee" is translated into Turkish as "sütlü kahve" (coffee with milk), yet the real meaning of "white" is "beyaz" (a colour name) not "sütlü" (with milk) in Turkish.

According to Wolter and Gllystad (2011), no semantic explanation accounts for the reason to use different words to compose collocations, so any transfer from mother language to the target language is possible. As a consequence of this flexibility, students may not be cognizant of the fact collocations are multi-word units and students may use an array of words to constitute collocations even if they are mis-collocations (Yamashita

and Jiang, 2010). The distinction between natives and L2 learners in respect of mental lexicon, which refers to “dynamic and systematic organization of words in language learners’ minds (Cangir, 2018)”, may affect collocational learning. It stems from the fact that natives and L2 learners undergo distinctive experience in the language learning. More precisely, lexical units existing in both languages and having already been processed in learners’ mental lexicon facilitates learning. Similarly, collocations are primarily described based on their existence in both L1 and L2. That is to say, collocations having the same real meanings and word by word translations in both languages are called congruent collocations while collocations containing different words and not having word by word translations are called incongruent collocations. To exemplify, “rich history” can be translated with the same words from English into Turkish “zengin tarih”, so it exemplifies congruent collocations, on the other hand, “soft drink” is translated into Turkish as “alkolsüz içecek” not as “yumuşak içecek”, so it is considered as incongruent collocations.

The effect of congruency was studied in foreign contexts, but the participants of the current study are senior Turkish EFL students majoring at ELT department. They differ from other participants taking part in the previous studies regarding cultural background. This is important since, as far as Baker (1992) and Huang (2001) are concerned, cultural background and native language have an influence on the competence of L2 collocations (as cited in Hama, 2010). To illustrate, in Turkish, “drinking soup” while in English “eating soup” is uttered on account of the different cultural aspects regarding food culture.

Another under- investigated issue in the Turkish context is the relationship between vocabulary size and collocational knowledge. Therefore, the current study was set out to investigate if collocational knowledge has any correlations with the extent of L2 mental lexicon. Kadlecova (2014) supports students’ insufficient collocational knowledge may stem from their low L2 proficiency. The current study shares the postulation that students with large vocabulary size are more competent at a huge variety of language skills (Meara, 1996). In this regard, Kadlecova suggests that learners’ vocabulary size and their collocation knowledge may also positively be correlated. He further believes that as the mental lexicon enlarges, the possibility to embody larger network of word associations increases and that possible increase facilitates the acquisition of collocations.

Briefly, the importance of the collocations has been pointed out widely by many researchers, but it is also of vital importance to demarcate students’ collocational

knowledge based on the features of collocations such as different collocational patterns, congruency with L2 learners' native language, frequency of occurrence in corpus and the correlation with vocabulary size. As claimed by Ramadhan (2017) features of collocations are one of the determining factors influencing language learners' collocational knowledge improvement. Therefore, investigating collocation characteristics from its diverse aspects and having better insights about the mentioned features may contribute to language learners to raise language learners' collocational competence and improvement to produce native-like language. Therefore, the current study aimed to take up the slack in the literature with its focus on the indicators and factors affecting collocational knowledge.

All in all, the purpose of the study is to reveal the most efficient indicators and factors affecting the acquisition of collocations and as the participants are senior ELT students, to know prospective teachers' collocational competence is of paramount importance. Moreover, it will be probable to raise awareness of the readers about the importance of collocations.

1.2. Aim of the Study and Research Questions

The current study aims to investigate the receptive and productive collocational competence of Turkish 4th grade ELT students, the relationship with vocabulary size and collocational knowledge and the factors affecting their collocational knowledge.

According to these aims, research questions addressed in the present study are as follows:

- 1) Is there a significant difference between 4th grade ELT students' productive and receptive collocational scores?
- 2) Is there a relationship between their overall vocabulary size scores and receptive/ productive collocational scores?
- 3) Does
 - (a) Congruence
 - (b) Collocational frequency (MI score, t score and raw collocational frequency)
 - (c) Collocational patterns (AN and VN)

affect their productive and receptive collocational knowledge?

In accordance with those purposes, a vocabulary size test (Beglar and Nation, 2007)

will be conducted with the students as a proficiency test since there have been some studies (Beglar and Hunt 1999; Stæhr, 2008; Milton, 2010; Schmitt, 2010; Kadlecova; 2014; Cellat and D. Köse, 2017; Miralpeix and Muñoz, 2018) showing a positive correlation between language proficiency and vocabulary size battery scores in the literature (the reason for using vocabulary size test instead of a proficiency test will be clarified in more detailed way in the section 3.4.1). Then, a gap – filling test will be implemented to gauge the controlled productive collocational knowledge of the participants on verb+ noun and adjective+ noun types of lexical collocations according to their being congruent or incongruent with L1 (Turkish). The last and third instrument will be carried out to measure participants' receptive collocational knowledge.

Briefly, the study was undertaken to examine the possible indicator/s of collocational knowledge among some variables (congruence, collocational patterns and frequency) and the relationship between vocabulary size and productive/ receptive collocational knowledge. As a secondary and pedagogical aim, the study intends to find whether students have any weaknesses. If so, determine the insufficiencies of the students to give a deeper insight to curriculum designers and language practitioners to design a syllabus, coursebooks, materials. Moreover, the ultimate purpose of this study is to create awareness of the readers about the importance and ubiquity of collocations in vocabulary teaching, to investigate probable pedagogical implications on teaching collocations to L2 learners and to provide an in-depth analysis of the collocational knowledge of prospective English Language teachers at university level.

1.3. Significance of the Study

Some reasons for the necessity of involving collocations in the vocabulary teaching are proposed by Smith (2005). First of all, He maintains that collocations still cause problems when L2 learners attempt to choose the proper combinations of the word even if they have the knowledge of individual words. Secondly, it is claimed by him that collocational knowledge enables learners to go beyond the intermediate plateau. The third reason is that collocational knowledge not only enhances vocabulary knowledge and fluency but also decreases stress in communication. Another reason suggests that collocational errors are more detrimental to the communication skills than the grammatical errors as they bring about generating uncommon and odd expressions.

Considering the benefits of collocations in language learning and teaching, the

current study examines not only the knowledge of pre-service teachers but also the factors affecting their collocational knowledge and their relationship between vocabulary size.

In accordance with these purposes, the present study investigates both verb-noun and adjective- noun collocations with the intent of seeing the influence of different parts of speech and uncovering the effect of different typology of Turkish and English. That is, adjective- noun collocations have the same typology in both English and Turkish, namely they are in the same order. However, verb-noun collocation types are of different typology. More precisely, in Turkish, its syntactic order is noun+ verb while in English its order is verb+ noun.

In addition to different collocational patterns, the effect of congruence will also be examined as it is assumed that it may have effect on the procession and acquisitions of collocations. These factors can give some ideas about the selections of collocation to teach and learn.

The present study aims to throw some light on the L1 influence on the acquisition of L2 collocations in Turkish context as the studies to measure the L1 influence are very limited in Turkish context (Cangır, 2018). In a similar line with Cangır (2018), Wolter and Gyllstad (2011) also suggest that studies probing the psychological reality of L2 collocations and influence of L1 on collocation learning are scarce. For that reason, the current study may make a contribution to the pedagogy concerning the acquisition of target language collocations in Turkish context, for instance, by raising awareness of instructors and learners about cross-linguistic differences.

The results of the study may make a contribution to the overall picture of prospective ELT teachers' vocabulary knowledge by measuring both vocabulary depth and breath.

According to Nation (2001), vocabulary knowledge embraces two dimensions; breadth (refers to knowledge of single words) and depth (refers to an array of word knowledge aspects such as collocations). The current study will test both dimensions. The collocational tests will be used as a tool to measure vocabulary depth while Vocabulary Size Test (Nation and Beglar, 2007) will be utilized so as to gauge vocabulary breadth of the learners (Vocabulary breadth and depth will be explained in detail in Chapter 2.3).

Another main classification in vocabulary studies is that receptive and productive aspect of a knowing a word (Nation, 2001), so involving both receptive and productive measures may enable us to gain different impressions of vocabulary knowledge.

(Gyllstad, 2007; 2009; Nguyen and Webb, 2017).

The importance of exploring collocation features and their affinity with EFL learners' collocational competence can be realised in several aspects. First of all, collocational features under the investigation may get through to understand students' errors and weakness in generating appropriate collocations (Ramadhan, 2017). Another significance suggested by Ha (2013) is that being cognizant of some collocational features (congruency, collocational patterns and frequency) and their influence on the learners' competence may create awareness among language practitioners and curriculum designers in respect of different kinds of obstacles students have or errors they conduct. In this way, they may gain insights about how to merge them into curriculum to enhance collocational competence and use. Moreover, it may provide some insights about which collocations worth spending time on as it is not probable to teach all words or word combinations. All in all, appreciating collocational features from its various aspects may help to expedite learners' collocational competence to operate native like in L2.

1.4. Limitations of the Study

As has been stated previously, the current study was undertaken in pursuit of examining the receptive and productive collocational competence of Turkish 4th grade ELT students and having a better insight into important factors which underlie L2 collocational performance. In spite of the fact that the study came up with promising results, it has some limitations. To begin with, the participants of study were restricted with one university. The results would have been more generalizable if the participants had been chosen based on random sampling from diverse universities.

Secondly, the study made use of one receptive and one productive collocation test. If more tests had been implemented, a broader picture of the collocational knowledge of the participants could have been provided. Moreover, instead of restrictive productive test, free productive test might have been preferred.

Another limitation of the study is that the study applied frequency- based approach to define collocations and measure collocational knowledge for the sake of being more objective. However, hybrid approach, namely both phraseological and frequency based approaches, would have been utilized to see the effect of transparency and compositionality of the collocations.

The other limitation is that the current study focused on two collocational

combinations; adjective-noun and verb- noun collocations to scrutinize the influence of different typologies between English and Turkish. For that reason, other collocational patterns suggested by Benson (1997) such as grammatical patterns (noun- preposition, verb- preposition, etc.) or other lexical patterns (adverb- adjective, noun- noun, etc.) were ignored. Although that made interpretation of the scores and comparison of collocational patterns easier, it restricted the generalizability of the participants' collocational knowledge.

Another limitation of the study is that the study only presented quantitative data and lacked qualitative data. However, combining two methods would have presented both broad and in-depth analyses of the research questions.

In spite of those limitations, the present study presents beneficial insights into the indicators of collocational knowledge and provides us detailed information about the collocational knowledge of prospective teachers.

1.5. Definition of the Terms

The definitions of the frequently referred terms in the study are offered below so as to elucidate the senses they are used in the study.

Formulaic Language: It is used as an umbrella term for collocations, idioms, proverbs, fixed expressions, free combinations (Schmitt, 2010).

Frequency-based approach: It defines collocations based on quantitative data about word co-existences in a corpus (Gablasova et al., 2017).

Collocation: Collocations are frequently co-occurring two word combinations that have a frequency value of at least MI=3 and t-score=2 with reference to suggestion by Schmitt, 2010 (Cangır et al., 2017).

Node: It is one of the words composing collocation and the word under examination. To illustrate, for the collocations “strong demand” and “gather evidence”, the words “demand” and “evidence” are nodes (Sinclair, 1991).

Collocate: It is one of the words composing collocation and the word occurring to the left and right of the node. To illustrate, for the collocations “strong demand” and “gather evidence”, the words “strong” and “gather” are collocates (Sinclair, 1991).

Span: The number of words on either side of the node is called span. 4:4 span is adopted in this study (Sinclair, 1991).

Congruent collocation: It refers to those collocations using the same lexical items in

both mother language and target foreign language e.g: “naked eye” (çıplak göz). (Yamashita and Jiang, 2010).

Non-congruent or Incongruent collocation: It refers to those collocations using different lexical items in L1 and L2 e.g: “false tooth” (takma diş). (Yamashita and Jiang, 2010).

Corpus: It is a large and representative collection of a written or spoken language, which is used as a reference in language studies (Corpus, 2019).

Mutual information score (MI score): It is a measure indicating how strong the relationship exists between two words in a corpus by indicating the ratio between the frequency of the collocation and the frequency of incidental co-existence of the items in the collocation. The MI score is set $MI \geq 3$ in this study (Gablasova et al., 2017).

T score: It is a measure that merges frequency and significance of collocations. It is measured by considering the seen and anticipated frequencies of the collocational items along with the size of the corpus. The t score is set $t \geq 2$ in this study (Durrant and Doherty, 2010).

Typology: It refers to the syntactic order based differences and similarities between English and Turkish (i.e. V+N vs. N+V collocations) in the study (Cangır, 2018).

Receptive Knowledge: The ability to comprehend a lexical item in its spoken or written form (Pignot-Shahov, 2012).

Productive Knowledge: The ability to use a lexical item appropriately in a written or spoken form (Pignot-Shahov, 2012).

Word family: It is the string of words which have close spellings and meanings (learn, learns, learnt, learner, learnable).

Vocabulary size or breath: It denotes the total number of words which is known by a person (Schmitt, 2014).

Vocabulary depth: It refers to the knowledge of connections between words and knowledge of word associations, collocation or word functions (Milton, 2009).

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

The current study aims at finding the difference between the participants' productive and receptive collocational knowledge, the correlation between vocabulary size and productive/ receptive collocational knowledge and possible predictors of the collocational knowledge by investigating the several factors. This part will be devoted to describe the brief history of vocabulary teaching, the comprehensive definition of word knowledge, vocabulary size and its relationship with general proficiency. Then, the definitions, classifications and significance of the collocations will be covered. After that, previous studies, which are categorized based on the variables of the study, will be surveyed and scrutinized. More precisely, studies about the influences of collocational patterns, L1 congruence, frequency, vocabulary size will be addressed. Finally, previous studies conducted in Turkey about collocations will be reviewed.

2.2. The Role of Vocabulary in Learning a Foreign Language

Many scholars (Wilkins, 1972; Lewis, 1993; Read 2000) have underscored the significance of vocabulary in foreign language teaching and learning. To begin with, Lewis (1993) highlights the importance of vocabulary by stating that "lexis is the core or heart of language" (p. 89). In the same line with Lewis, Read (2000) proposes that "words are the basic building blocks of language, the units of meaning from which larger structures like sentences, paragraphs and whole texts are formed" (p.1).

The researchers cited above want to point out the central place of vocabulary in English language teaching and its necessity for the mastery of foreign language. Without adequate vocabulary knowledge, one cannot comprehend others and express his thoughts. However, as Richards (1976) states teaching and learning of vocabulary could not always get the interest that it deserved in the same degree as other issues such as grammar, reading, or writing, which drew a remarkable interest from scholars.

In an attempt to present a better insights of historical trends in vocabulary teaching, the following paragraphs will try to clarify the teaching approaches dominant in the nineteenth and twentieth century.

The Grammar Translation Method was the most predominant language-teaching methodology at the start of the 19th century. As is evident for its name, it lay heavy on explicit grammar and accuracy while little attention was paid to vocabulary. As Schmitt (2000) claims vocabulary choice was merely based on the reading texts, and by means of bilingual word lists some vocabulary items were presented to learners. Namely, the function of vocabulary was just to depict grammar rules and to comprehend the texts which were composed of dusty vocabulary items.

On account of the shortcomings of the Grammar Translation Method, another method called the Direct Method emerged by the end of the nineteenth century. In direct method, heavy emphasis was placed on the listening skill and oral exposure to the foreign language. As for vocabulary teaching, it was believed that vocabulary items are learned via in-class interactions and naturally. Zimmerman (1997; cited in Koç, 2006) expresses that some vocabulary was taught either by means of demonstration or associating ideas with one another. The most important deficiency in this method was that it disregarded productive vocabulary skills. Another one was that practitioners of this method were of the opinion that if vocabulary had thought intensively, students would have supposed that language was just comprised of vocabulary piles.

When another method called Audio-lingualism arose, vocabulary started to be considered as crucial part of language learning. In this method, language was seen as habits which were reinforced by drills and memorization. It mainly dealt with structures and it was assumed that vocabulary knowledge would increase with the increase of complexity in drills. The method underestimated the explicit vocabulary teaching. Vocabulary teaching was restricted in respect of dealing only with words which were related to topic under the discussion. As a result of restricted vocabulary instruction students could not understand the language occurring naturally and had bad writing abilities (Koç, 2006).

At the early start of 1970s, Audio-lingual method started to lose favour with language practitioners. On the introduction of the term “communicative competence” by Hymes, the focus shifted from accuracy to the appropriateness of the language. The new method was going to be called Communicative Language Teaching. As cited in Koç (2006), Widdowson (1978) asserts that native speakers of the target language can comprehend ungrammatical utterances better with accurate vocabulary compared to the precisely accurate grammatical utterances and inaccurate vocabulary. To illustrate, on

hearing the sentence “* do you can give me a pencil”, the interlocutor possibly understand what is requested. On the other hand, if the sentence is said with inaccurate vocabulary items, but in a grammatically accurate way, “e.g. Can you borrow me an eraser” instead of “pencil” and “give”, there will be misunderstandings and the target interaction is not going to really take place between the speakers.

Alsakran (2011) claims that although Communicative Language teaching was a meaning-based method, vocabulary teaching again had a secondary place in language teaching because vocabulary knowledge was just seen as an aid to functional language use. It underestimated sociolinguistic and pragmatic aspects. It was also proposed that communicative language teaching did not give enough clear instructions regarding how to cope with vocabulary items. It just assumed target language’s vocabulary items would be acquired, like the acquisition of L1’s vocabulary items (Schmitt, 2000).

The natural approach, which was developed in the late 1970s, holds a novel perspective regarding vocabulary teaching compared to previous approaches. A great emphasis was put on the key term “comprehensible input” over grammatically correct output. In this approach, the primary goal was to communicate the messages, so grammar had a secondary role. Vocabulary learning was believed to occur by reading texts extensively, so it was claimed that there was no need for explicit vocabulary instruction so long as there was successful comprehension. Related to the significance of vocabulary knowledge in language learning, one of the most known pioneers of Natural approach Krashen expresses that (cited in Öztuna,2009) lexical items are indispensable parts of communication. To take part in the communicative acts, to comprehend and to send messages, one needs to understand the key lexical items. Therefore, he criticizes the methods that restrain vocabulary learning until grammar and syntax are learnt.

After 1980s, thanks to the advances in computer technology and computer based corpus researches, the prominence of vocabulary teaching in language education increased. Moreover, with these computer-based studies, one facet of vocabulary, namely collocations, started to raise concerns.

Richards and Rodgers (2001) highlight the fact that 3 corpora, the COBUILD Bank of English Corpus, the Cambridge International Corpus and the British National Corpus, came to existence during that period. They have served for a source of formulaic language and collocation studies. Another virtue of computer-based researches stated by Richards

and Rodgers (2001) is that they have an immense impact on the development of Lexical Approach.

In Lexical Approach, which was pioneered by Michael Lewis at the beginning of 1990s, lexical units are considered as the be-all and end-all of language learning. Lexical approach perspective- taking, grammar has a subordinate role in language teaching. Lewis (2000, p.137) clarifies the assert by saying “Language consists of grammaticalized lexis, not lexicalized grammar”.

In fact, Lexical approach suggests that vocabulary acquisition and collocations assume a leading role in second language acquisition. Lewis (1997) maintains that vocabulary items ought not be thought in isolation because of the fact that language is comprised of ready-made word units. He underscores that these pre-fabricated units bring out coherent texts and the most significant pre-fabricated units are collocations. To emphasize the importance of collocations, Lewis (1997) goes on to say that: “Instead of words, we consciously try to think of collocations and to present these in expressions. Rather than trying to break things into smaller pieces, there is a conscious effort to see things in larger, more holistic ways (p.204).”

All in all, vocabulary has been placed in diverse positions by the chief methods and approaches throughout its different stages up to the present day. In fact, vocabulary has been undervalued in the field of foreign language teaching until recently since other language areas such as grammar, reading, pronunciation were attached more importance. However, at the beginning of 1980s, the natural approach gave a fillip to understanding and redefining the role of vocabulary in language teaching better. Vocabulary has been esteemed as a fundamental part of foreign language learning since then. Additionally, with the corpus based studies and lexical approach, the importance of collocations and formulaic language was recognized in language teaching.

In the next part, what word knowledge involves will be evaluated.

2.3. Knowing a Word

Nation (2001) states that words are not isolated elements of a language, rather they are elements of various interlaced systems and levels. As a result, knowing a word amounts to know multifaceted things about a specific word, so a good many degrees and aspects of knowing occur. Therefore, it is necessary for students to learn these aspects

and degrees for using words efficiently and suitably. This part will discuss what is included in knowing a word.

A great many researchers (Read, 2000; Schmitt, 2008; Aydoğan, 2016; Nguyen and Webb, 2017) assert that knowing a word has two main classifications; they are depth and breadth of vocabulary knowledge. The aspect “breadth”, which also refers to vocabulary size, denotes the quantity of vocabulary, whereas “the depth” denotes to the quality of vocabulary knowledge. More precisely, the breadth of vocabulary knowledge refers to the number of words known by a learner. As for the depth of vocabulary knowledge, it refers to the knowledge of connections between words and the knowledge of word associations, collocations or word functions (Milton, 2009).

Another conventional classification of word knowledge is to differentiate between receptive and productive word knowledge. Receptive vocabulary knowledge indicates identification of words on hearing or reading them. The skills reading and listening can be examples of receptive knowledge. On the other hand, productive vocabulary knowledge embodies the competence of utilizing the words. Writing and speaking skills set examples for productive word knowledge. However, those two mentioned classifications of word knowledge can be insufficient for identifying the intricacy of word knowledge because sometimes the concepts overlap and it poses a challenge to measure the learners’ word knowledge. Milton (2009) clarifies this by saying it may be difficult to distinguish the receptive and productive word knowledge because of the fact that possessing good receptive skills may allow students to actively predict the words that they will come across. Mutlu (2015) illustrates this point by saying learners can perform their productive knowledge during listening or reading.

However, generally speaking, it is assumed that receptive and productive vocabulary knowledge’s relationship is something like a continuum. That is, it starts from no knowledge, and moves to receptive and then productive knowledge. That is why, receptive knowledge comes before productive knowledge. (Schmitt, 2010)

More inclusive and complete framework of word knowledge summarizing the multifaceted dimensions of word knowledge is suggested by Nation (2001). The table 2.1 illustrates what involves a word knowledge.

Table 2. 1 *What is involved in knowing a word (Nation, 2007, p. 27)*

Form	Spoken	R	What does the word sound like?
		P	How is the word pronounced?
	Written	R	What does the word look like?
Meaning	Word Parts	P	How is the word written and spelled?
		R	What parts are recognizable in this word?
	Form and Meaning	P	What word parts are needed to express this meaning?
		R	What meaning does this word form signal?
	Concept and Referents	P	What word form can be used to express this meaning?
		R	What is included in the concept?
	Associations	P	What items can the concept refer to?
		R	What other words does this make us think of?
	Use	P	What other words could we use instead of this one?
		R	In what patterns does the word occur?
Use	Grammatical Functions	P	In what patterns must we use this word?
	Collocations	R	What words or types of words occur with this one?
		P	What words or types of words must we use with this one?
		R	Where, when and how often would we expect to meet this word?
		P	Where, when and how often can we use this word?

(Note: R = receptive knowledge, P = productive knowledge)

As shown in the table 2.1, knowing a word includes three main facets: form, meaning and use. While illustrating these 3 aspects, Nation (2001) includes 18 subcategories of word knowledge which are framed as questions. He also suggests receptive and productive dimensions for each of the 18 question-formed subcategories of word knowledge.

According to framework, the form of a word denotes pronunciation, spelling and the parts constituting the word (root, prefixes, suffixes, etc.).

As can be seen in table 2.1, receptive skills regarding the “knowledge of form” are recognizing the appropriate sounds, spellings and the suffixes and prefixes of the word. As to the productive skills concerning productive dimension of “knowledge of form”, they are competences of pronouncing the word, spelling the word correctly and adding prefixes or suffixes to express different meanings of the word.

As for the “meaning of the word”, it is made up of the form-meaning relation, the concept and the word reference and its mental connections arising in mind.

With respect to receptive skills of “knowledge of meaning”, they are knowledge of L1 equivalents, knowing what is involved in the concepts, and what type of other information the words can accommodate, knowing its different meanings, on the other hand, the ability to use the proper word to state the intended meaning, knowledge of what items the

concepts can refer to, and what other words can be utilized to give the intended meaning are regarded as the productive aspects of knowledge of meaning.

When it comes to “the use of the word” it is comprised of grammatical functions of the words, its collocations and constraints on the usage.

Receptive skills regarding the “knowledge of use” are knowing to which parts of speech the words belong, which words occur with a particular word, knowing when, where and the degree of possibility to come across with a word, whereas knowing in which pattern it should be used, the ability to use the correct word occurring correctly with another word and the competence of using the word by knowing the register of the word and the limitations about the usages of a word according to differences in functions and situations and how frequently to use it are considered as productive skills of the knowledge of use.

Regarding knowing a word, Morgan Lewis (2000) asserts that it is a complicated process. He further claims that while learning new things, students are required to rearrange their interlanguage. That is, it is implied that learning does not only mean adding on new things on their existed knowledge. Lewis exemplifies this point by the examples “injury” and “wound”. He states that learners may know the dictionary definition of the word injury, but when they come across the word wound, it will not be enough just to know their dictionary meanings because they may have difficulty in differentiating between their appropriate usages. More precisely, their differences lie in the collocate words they co-occur. Lewis suggests that it is said “stab wound” instead of “stab injury*” or it is possible to use “internal injuries”, but not possible to use “internal wounds*”. Therefore, it can be inferred that knowing a word comes to mean knowing its collocate words. It enables students to enlarge and deepen their previous knowledge about the meanings of words and most importantly it gives students better insight into how words are used appropriately in a context. For that reason, as Conzett (2000) highlights, it is the duty of teachers to notify learners that knowing a word requires them to know how it occurs and functions with other words and contexts in the language.

Beyond dispute, the above-mentioned facets of word knowledge are of capital significance to foreign language teaching and learning. However, the current study particularly addresses the facet “collocation” in respect of productive and receptive dimensions. The study also investigates the relationship between the participants’

collocational knowledge and vocabulary size, which will be mentioned in the next section.

2.4. Vocabulary Size

Schmitt (2014) defines vocabulary size as the total number of words which is known by a person. To put it in a different way, all of the words recognized and understood by a person compose the person's overall vocabulary size. Some researchers (Hu and Nation, 2000; Nation, 2006) have tried to identify learners' vocabulary size via instruments, which is required to operate well in English. These vocabulary size instruments are mostly hinged on word families. A word family is the string of words which have close spellings and meanings. According to Pignot-Shahov (2012), word families are among the most widely utilized lexical items in vocabulary size batteries. Word families resemble to lemmas. However, unlike lemmas, word families involve all the words pertaining to the headword irrespective of their word class. To illustrate, learn, learns, learnt, but also learner, learnable are the member of the same word family. Namely, it embraces inflectional and derivational forms of the base word. Schmitt (2010) states that having the knowledge of one member of the word family, also having an average level of command of word building process enable a person to figure out the meaning even if he has not come across that word before.

The measurement of vocabulary size is significant for several reasons. In this regard, Pignot-Shahov (2012) gives a rundown on the advantages of a vocabulary size test. Pignot-Shahov (2012) claims that thanks to vocabulary size tests, it is probable to gain valuable insights about the learners' vocabulary breadth and setting learning goals. Additionally, vocabulary size tests make it possible to estimate roughly the quantity of vocabulary growth acquired throughout a course of instruction and also to give the chance of comparing language learners individually or in groups in respect of the quantity of words acquired, even in different countries. In the same line, Yusuf (2018) asserts that vocabulary size batteries are useful for separating learners with a large spectrum of proficiencies.

Meara (1996) alleges that given the significance of vocabulary breadth to language learning, there is an increasing request for measuring language learners' vocabulary breadth so as to implement appropriate types of language tasks. In this regard, there have

been several attempts in order to estimate the quantity of lexical items needed by a learner to comprehend a spoken or written discourse well.

Hu and Nation (2000) state that knowing 98% or 99% of the lexical items in a written text is entailed to stay away from comprehension problems stemming from unknown vocabulary items. Moreover, there have been also some suggested ways to estimate how many words needed by a foreign language learner to figure out written and spoken language. One way is to calculate how many words exist in English and aim at that as a learning object (Nation, 2006). In literature, there are some researches adopting that method and they reveal that there are approximately 114.000 word families as reported by Goulden, Nation, and Read (1990) and according to Nagy and Anderson (1984), there are 88,500 word families (cited in Nation, 2006). However, it sounds quite unrealistic to anticipate learners to learn them all as even native speakers of English are not furnished with all the words in English. As for the second way suggested by Nation (2006), it is the estimation about the quantity of vocabulary native speakers know and use that as a learning objective. The second method is realized via sampling from corpus studies. In corpus studies, sampling means arranging the words based on the frequency-based groups. For example, the most frequent 1K words, the second most frequent 1K words, and sampling from each frequency band (Nation, 2001). As proposed by Nation (2006), in literature, there are also some other research adopting that method and they reveal that a well-educated native speaker roughly has 20.000 word families and a year in his life corresponds to 1.000 word-families until the age of 20 or so.

Nation (2006) goes on to argue that a person with advanced degree for using English has 8.000-9.000 word families to operate successfully in English. More precisely, He proposes that 8000-9000 word families are required to cope with written language; as to spoken language, it is suggested to have some 6000-7000 or 2.000–3.000 word families for performing language at 98% or 95% coverage rate, respectively without any assistance. Nation's (2006) indicates that having the knowledge of 6.000 word families for successful listening comes to mean having the knowledge of 28.015 individual words. On the other hand, knowing 8.000 word families for effective reading amounts to knowledge of 34.660 different word forms.

Concerning to issue about the required amount of vocabulary size, Adolphs and Schmitt (2003) maintain that knowing the most frequent 2,000-3,000 word families plus proper nouns are necessary so as to take part in essential everyday oral communication.

Laufer and Ravenhorst-Kalovski (2010) reappraise the threshold for mean vocabulary size to comprehend written text adequately. They assert 8,000-word families are required for an optimum threshold, and 4,000–5,000-word families for a minimum threshold which correspond to 98% and 95% coverage, respectively.

Another suggestion is proposed by Renandya (2018). He remarks that estimation about the required vocabulary size varies, but a learner needs 3.000-5.000 words to have the ability of reading un-simplified texts with adequate comprehension.

Beyond these, Hazenberg and Hulstijn (1996) suggest that if a language learner wants to function well in diverse contexts, then 10.000 word families should be targeted as extensive vocabulary (cited in Chacón-Beltrán, et al., 2010).

It should be highlighted that above mentioned requirements are hinged on individual words, so it means that phrasal lexical items are not taken into consideration. Hence, it means that learners should have broader vocabulary size than the indicated figures when phrasal lexical items also come to the stage.

However, some research present that vocabulary size of the students does not meet the requirements of aforementioned figures on the whole. To illustrate, Milton and Meara (1998) investigated 197 students, who were between 14 and 15 years old and from Britain, Germany and Greece, to estimate their vocabulary knowledge by means of computerized version of Meara's (1995) LLEX Lingua Vocabulary test. However, 54 students of them were British and their French vocabulary knowledge was measured, so their results was excluded. The findings showed that 63 Greek participants had approximately 1.680 word families and 80 German participants had some 1200 word families.

Nurweni and Read (1999) investigated 314 Indonesian first-year students' vocabulary breadth and depth via a translation test, a word associates test and an interview. The findings displayed that the participants knew some 1226 English words on average, which failed to satisfy the word range 3000–5000 that is required for reading of un-simplified texts without any help.

Bundgaard-Nielsen, Best and Tyler (2011) carried out a study with 31 native speakers of Japanese who were studying English as a foreign language at an English university in Sydney. Nation and Beglar's (2007) vocabulary size test was used to investigate the vocabulary knowledge and the result showed that the informants had a mean vocabulary size of 6,452 word families.

In the same context, McLean, et al. (2014) also probed the mean vocabulary sizes

of 3,449 Japanese university students from different universities and departments by using Nation and Beglar's VST. In fact, the research also investigated the effect of university's department standardized rank scores on the mean of vocabulary breadth. That is why, a cross-sectional design was used. The results displayed an average score of 3,715.20 word families.

Tan and Goh (2017) conducted a research with 53 Malaysian second-year students who were majoring in Mass Communication at a private university. After carrying out a vocabulary size test, the researchers enclosed that the mean vocabulary size of the participants was just over 6000 word families which is inadequate for an effective reading comprehension.

Sudarman and Chinokul (2018) implemented a study aiming to interrogate the average vocabulary size and mastery level of 33 first-year students majoring in English education department at Kutai Kartanegara University by means the Vocabulary Levels Test (VLT). The results disclosed that the students only had the knowledge about 1,273 word families. The results also showed that the informants had a very low mastery level.

Ibrahim, et al. (2016) explored the vocabulary level of 129 pre-university students studying an intensive English language programme at a state university in Malaysia via the Vocabulary Levels Tests (Nation, 1990). The results displayed that 89.17% percentage of the students reached the mastery of 2000-word level; 79.87% of them was at 3000-word level whereas participants' achievement for 5,000-word level was only 54.30%, which did not meet the mastery level performance.

Danilović and Grujić (2014) probed the vocabulary size of 66 Serbian 1st year students majoring in English language and literature program at the Faculty of Philology and Arts in Kragujevac, Serbia. As an instrument Vocabulary Levels Test by Nation (1990) was used. According to results, students had the mastery of 4350 word families.

Richards (2008) maintains that the failure in attaining the target vocabulary size partly stems from a limited awareness of collocational usage. In this vein, Schmitt (2010) also asserts that instructions' focusing on individual words rather than collocations results in deficit in vocabulary knowledge. There is an assumption that if a person knows more words, he has a larger vocabulary knowledge, yet as has been mentioned before, vocabulary knowledge denotes more than merely knowing the meaning of a word per se; rather it means how much a person knows the combinatory options of that item.

As far as Hill (2000) is concerned, collocations constitute nearly 70 % of everything

which can be comprehended by reading, writing, speaking or listening. Therefore, he claims that a student who has 2000 words of vocabulary knowledge produce language in a rather limited way, but a different student having 2000 words of vocabulary knowledge and being competent with those words' combinatory options at the same time will be much more communicatively proficient.

Additionally, another virtue of collocation regarding vocabulary knowledge is that it serves as a memory aid. Hatami (2015) claims that memorizing a new word in a network of associations is more practical as language chunks help learners to store information. In the same line, Lewis (1993, p.118) supports his claim saying "If you want to forget something, put it in a list". He wants to emphasize that when words are taught and memorized as single items, they generally cannot be retained.

Another advantage of presenting new vocabulary items with their frequently co-occurring words is that it culminates in expanding of vocabulary knowledge as asserted by Hill (2000). Also in Turkish context, there are some studies investigating the influences of collocational instruction on vocabulary knowledge and retention (Altınok, 2000; Ördem, 2005; Avcı, 2006; Balçı, 2006; Koç, 2006). They all propose that instruction of vocabulary via collocations end up with a better learning of the words than introducing them utilizing classical techniques and it improves retention of new vocabulary items.

Also in some contexts, there are some studies maintaining collocational knowledge as a sign of vocabulary size or vice versa (Gitsaki, 1999; Taeko, 2005; Gyllstad, 2007; Bergström, 2008; Kadlecova, 2014; Mutlu, 2015; Nugroho, 2018). It means they have reciprocal relations. In their studies, they all came up with the result that there was a significant increase in collocational knowledge as their vocabulary knowledge grew. The findings of these studies which were administered in different contexts signify the existence of positive correlation between learners' vocabulary breadth and collocational knowledge. These studies will be treated in a more detailed way in section 2.9.4.

Those results were anticipated because foreign language students who has larger vocabulary size tend to be more competent in numerous language skills (Meara, 1996). The next part will evaluate the relationship between vocabulary size and general proficiency.

2.4.1. The relationship between vocabulary size and general proficiency

In literature, there are some studies (Beglar and Hunt 1999; Stæhr, 2008; Milton, 2010; Schmitt, 2010; Kadlecova; 2014; Cellat and D. Köse, 2017; Miralpeix and Muñoz, 2018) showing a positive correlation between language proficiency and vocabulary size battery scores.

To begin with, Stæhr (2008) conducted a study to examine the language proficiency and vocabulary size of 88 Danish students. The results displayed that students' writing and reading skills were strongly correlated with the vocabulary size test (VST). As for their listening abilities, it was enclosed that there was a moderate association between their results in VST and language proficiency.

In a more recent study probing the relationship between language proficiency and vocabulary size, Miralpeix and Muñoz (2018) revealed that there was a strong relationship between participants' writing skills and vocabulary size and a moderate correlation existed between reading, listening and speaking. Moreover, they asserted that the relationship was more salient with students from low proficiency compared to higher level students. However, their study displayed that the relationship existed even for students with vocabulary size more than 5K.

Another recent study by Cellat and Köse (2017) displayed a positive correlation between vocabulary size of the students and their competence at four main language skills; reading, writing, speaking and listening. The results revealed that vocabulary size was the strongest predictor of speaking skill in their study and it was moderately correlated with reading, writing and listening competences.

In fact, relatively updated studies showed similar results to Meara's (1996). She supports that learners who have larger vocabulary are commonly more competent in a wide array of language skills. In the same line, Milton (2010) also conducted a study showing the relationship vocabulary size scores and their corresponding level according to CEFR (Common European Framework for Reference for Languages) levels. Schmitt (2010) arranges the result of the systematic investigation of the correlation between proficiency test DIALANG and several vocabulary tests scores by Aldersan et al. (2005). The table 2.2 displays the correlation.

Table 2. 2.*The relationship between vocabulary and language competences (Alderson, 2005 extracted from Schmitt, 2010, p.5)*

	Vocabulary Checklist	Vocabulary test battery				
	Test	Meaning ^b	Collocation ^b	Gap-fill ^c	Word formation ^c	Total
Reading	.64					
-Identifying main idea	.5					
-Understanding specific detail	.47					
-Lexical inferencing	.58					
Listening	.61	.44	.43	.56	.5	.65
-Identifying main idea	.6					
-Understanding specific detail	.44					
-Lexical inferencing	.56					
Writing	.7	.62	.63	.66	.71	.79
-Accuracy	.7					
-Register	.57					
-Textual organization	.51					
Grammar	.64					

Note: b: receptive test; c: productive test.

As is seen in the table 2.2, vocabulary size strongly correlates with learners' reading, listening, writing skills and grammar. When these correlations are squared, it is found that vocabulary per se interpreted between 37% and 62% of the variance in the

different proficiency scores. This table displays that vocabulary is the be-all and end-all of language use.

The next part will present an extensive definition of collocation.

2.5. Definitions of Collocations

Collocations, whose importance has become prominent to a greater extent during the last years, are restricted word units which are arranged together without any reason such as “gather evidence” or “white lie” (Nesselhauf, 2005). She highlights that this group of utterances has been labelled as “prefabricated units, prefabs, phraseological units, (lexical) chunks, multi-word units, or formulaic sequences” in the literature (Nesselhauf, 2005, p.1).

Palmer (1933) was the first person to take up the term “collocation” in regard to language learning. Then, the term was presented by Firth (1957) to the area of theoretical linguistics (Hsu, 2007). Firth defines the term collocation as the habitual company of words. He illustrates the importance of collocation by saying “you shall know a word by the company it keeps”. (Firth, 1957 cited in Men, 2015, p.17).

Since the introduction of the term in language teaching, there have been different definitions with diverse theoretical sets of ideas for the term collocations; thence there has been no precise definition. In fact, researchers have given different definitions for collocations regarding the aim of the conducted study and approaches having been adopted in the study (Nesselhauf, 2004).

On the whole, there have been two approaches frequently-adopted in the studies. One is frequency- based approach; the other one is phraseological approach.

To start with the “frequency-based” approach, it defines collocations based on quantitative data about word co-existences in a corpus (Gablasova et al., 2017). Hama (2010) delineates the term as the co- existence of lexical items in an exact distance of each other in spoken or written language.

Sinclair (1991), who is also one of the main figures of this approach, delineates collocations as “the occurrences of two or more words within a short space of each other in a text” (p.170). Sinclair (1991) introduces three terms to define a collocation. The first one is “node” which refers to the word under examination. The second one is “collocate” which means the word coming next to the left side or right side of the node. As for the last one, it is “span”. Span means the number of words allowed to exist on any sides of

the node. For example, in the sentence “Forensic experts gather evidence in the scenes of crime” the node word is evidence”, namely, it is the word under investigation. The collocate words is “gather”. In the example sentence the collocate word occurs to the left of the node. As for the span, there are one span between collocate and node.

In accordance with the frequency-based approach, a collocation is identified hinged on the statistical strength of the co-existence of word combinations or how frequently a definite word combination coexists in corpora (Sinclair, 1991; Wolter and Gyllstad, 2013; Gyllstad and Wolter, 2016; Nguyen and Webb, 2017).

Ramadhan (2017) summarizes some basic elements of frequency-based approach. The first element is co-existence of the constituents, words accompanying each other. The second element is the reappearance of the combination. As for the third element, it is the space limit between the node and its collocate. As to span length, Durrant (2014) argues that giving too narrow span for collocational investigation cause to lose substantial amount of real collocations, or giving too broad span leads to increase in the possibility of involving non- collocational items into the search. For that reason, it is better to strike a balance between two extremes. Sinclair (1991) suggests “the 4:4 span” which means 4 words can come between collocate and node word. The last element is that meaning of words is generally grasped by means of the accompanied words. This element points out the significance of lexical context for identifying the meaning of words.

Nonetheless, some of the researchers are of the opinion that frequent co-occurrence cannot be the only criteria for being a collocation since, according to the frequency-based approach, “close the window”, “prepare the dinner” can be defined as a collocation but they are not according to some researchers. Hama (2010) asserts those kinds of combinations get together just because they have semantic or grammatical affinities. Hama (2010) further believes that collocations are word combinations which exist frequently together, but their high frequency of co- existence does not stem from just semantic or syntactic affinities. To illustrate, in collocations “common sense, heavy fog or take a photo”, the collocates “common, heavy and take” don’t have just a semantic or syntactic relations with their nodes. For that reason, Hama contends that it may be delusive to believe frequently coexisting words, whose high frequency stem from semantic or syntactic associations, can always be collocations. Briefly, a frequency-based approach explains collocations based on their frequencies. Corpus-based studies focusing on the frequency of the collocations set an example for this approach. That is, frequency

remains one of the vital key features in describing collocation. Nevertheless, it appears that depending merely on frequency as a definite feature in collocational investigations and analyses does not appear to be adequate for some linguists.

Another frequently used approach to collocation is the “phraseological” approach. Nesselhauf (2004) states that phraseological approach regards collocations as a specific kind of phraseological unit and as a combination of words which is somewhat fixed.

An earlier definition by Cowie (1994), who is one of the most well-known figures deserving attention in phraseological approach, describes collocations in terms of transparency and substitutability. Transparency delineates to whether the constituents of the word string or the string itself bear a real or non-literal connotation. As for the substitutability, it delineates to whether commutability of the constituents of the word string is restricted or not. To illustrate, the collocation “hard copy” can be examined. The collocate “hard” is used in non-transparent way as it does not denote something stiff or difficult. It refers to the printed paper. Additionally, the synonymous words such as *solid, *strong, *stiff, *firm cannot substitute for “hard” as the node “copy” is restricted to the collocate “hard” not to other alternatives.

Mel’cuk (1998), is another important figure in the phraseological approach. He argues that collocations are composed of two members “A” + “B”. A can be arbitrarily selected depending on its meaning, but the choice of B is restricted by A, in other words, the choice of B is bound up with A. For example, in collocations “make friends” and “fresh fruit”, the selection of “make” and “fresh” are determined by the words “friends” and “fruits” because we cannot substitute them by “recent, new” (for fresh fruit) or “gain, create” (for make friends).

Gablosova et al. (2017) maintains that phraseological approach mainly concentrates on setting semantic associations between two or more lexical items and the extent of non-compositionality of their meaning.

Cangir (2018) states that word units can be considered as a real collocation only when at least one of the constituents of the word units is applied in a semantically non-transparent sense such as “white coffee”. He further suggests that if all of the words in the combination are transparent, namely, used in their real senses, they are categorised as free combinations such as “write a poem”. He points out that it is common to come across with free combinations as the components of them are likely to co-exist freely with the greatest variety of other words. On the other hand, idioms are said to occupy a relatively

smaller amount of word units. Their component words are used in a figurative, in other words non-literal, sense such as “kick the bucket”. As for collocations, he states collocations are word combinations standing between idioms and free combinations in the sense that the word combinations denote the meaning of component words and they are relatively restricted, though not totally. Cangir exemplifies this with the example “commit a murder”. He says in that string, perpetrate can be used instead of commit but the commit is the most frequent alternative.

Ramadhan (2017) suggests that the phrasal definition of collocations is composed of several elements. To begin with the first element, it is the syntactic structure of collocations. Only particular grammatical categories possessing particular syntactic relations are regarded as collocations. As for the second element, it is semantic transparency which requires that the meaning of a collocation be understood from the constituent parts of the combination. Nonetheless, one of the collocational constituents may be used in its non-literal meaning. The semantic transparency of the word combination should take up the space between purely transparent and purely opaque ones. As to the last element, it is commutability or substitutability. It is restrictedly probable that replacing collocational constituents without influencing the whole meaning of the word combination. Degree of restrictedness demarcates the lines between free combinations and pure idioms.

However, the phraseological approach has been criticised on account of the fact that it does not put emphasis on the real frequency of the collocational occurrences. As a result, it can give rise to include collocations of low frequency into learning materials. Moreover, students hardly come across those infrequently used collocations during their educations like “judicial organ” or “ruggedly handsome” (Henriksen, 2013).

In fact, both frequency- based and phraseological approaches have been criticised for ignoring the crux which is adopted by another approach. Consequently, to cover up the deficiencies and to pick up the slack in each approach, a hybrid approach is put forward. The third and relatively new approach, which is called “phrasal frequency based approach”, tries to reconcile and combine two previous approach to provide more extensive insights into collocations by involving frequency, semantic, and syntactic features altogether in defining collocations (Alternberg and Granger, 2001; Shehata, 2008; Wolter and Gyllstad, 2011; Kurosaki, 2012; Gyllstad and Wolter, 2016; Ramadhan, 2017; Cangir, 2018).

When it comes to the current study, it follows the frequency- based approach and defines collocations as frequently co-occurring two- word combinations that have a frequency value of at least $MI \geq 3$ and $t\text{-score} \geq 2$ with reference to suggestion by Schmitt, 2010. That is, the current study does not pay regard to compositionality and semantic transparency. The reason to adopt frequency based approach is, as stated before, recognizing collocations rapidly without involving subjective elements such as intuitions of the researchers or native speakers, which may induce changing commentaries about what is a collocation (Nguyen and Webb, 2017). That is why, some of the word combinations accepted as collocations in this study can be referred as free combinations or as idioms in another study adopting a different approach for defining collocations. Moreover, the study deals with the frequency aspect of the collocation and its influence on learning, so it is thought the frequency- based approach will serve the purpose better and more objectively. The last advantage of frequency- based approach is to refrain from choosing collocations from low- frequency level, which may be less useful items for L2 teaching.

2.6. Classification of Collocations

Collocations have been classified into different types and patterns depending on the researchers' point of views and the criteria for classifying collocations such as figurativeness, syntactic structure, restrictedness and frequency. The aim of this section is to highlight the various categorizations by various researchers.

2.6.1. Upward and downward collocations

Sinclair (1991) proposes two types of collocation; “upward” and “downward”. He makes use of two terms to categorize collocations as upward and downward. The first one is the term “node” which denotes to the word being examined; and the other one is the term “collocate” which denotes to any word appearing in a certain proximity to a node. Accordingly, if A is a node, B is a collocate.

When it comes to the definition of a “downward collocation”, it is a collocation where the collocate words generally are used less frequently than the node. On the other hand, an “upward collocation” is a collocation where the collocate words are generally used more commonly than the node. That is, the differentiating feature of two types of collocations is something about the frequency of the elements composing the word string.

To illustrate, if the word “back” is combined with “arrive”, the collocation is called downward as “back” (707450 times in COCA) is more frequently used than “arrive” (14335 times in COCA). In contrast, when the word “back” collocates with “to” (5472780 times in COCA), it is called an upward collocation because it is a more commonly used word compared to “back”.

Sinclair (1991) underlines that in upward collocations, collocates are tend to be grammatical constituents such as prepositions, conjunctions and pronouns. On the other hand, in downward collocations, collocates are incline to be semantic words such as nouns and verbs.

2.6.2. Strong and frequent collocations

Lewis (1997) proposes that collocations can be sorted as strong, weak, frequent and infrequent. Tightness and flexibility differentiate weak and strong collocations from each other. The strong collocations act as if they were single word such as “death penalty”. When it comes to weak collocations, each component of the collocation can often occur with other words such as “bad habit” or “student card”. On the other hand, frequency of occurrence in corpus demarcates the differences between frequent and infrequent collocations. For example, the collocation “take place” occurs 11003 times in COCA, while “blow a nose” appears in COCA for 181 times.

2.6.3. Open and restricted collocations

Cowie and Howarth (1996 as cited in Qader, 2018) categorize collocations as “open” and “restricted” collocations. To begin with open collocations, their components can freely be combined and they are used in their literal sense such as “close the door”. Open collocations sometimes are named after “free collocations”. Namely, two or more words, which do not have any specific relations, gather to denote a single meaning.

As for the restricted collocations, in other expression fixed collocations, some substitution is possible and one of the components of the combination is used with literal meaning, and the other is used in nonliteral sense, such as “perform a task” (Nesselhauf, 2005).

2.6.4. Grammatical and lexical collocations

Collocations are classified into two main groups as grammatical and lexical by Benson et al. (1997). Grammatical collocations are composed of a verb, a noun, or an adjective collocating with a preposition or a grammatical structure such as an infinitive or a clause such as “consistent with, “contribute to”, e.g. As to lexical collocations, they are made up of nouns, adjectives, verbs and adverbs such as deliver a speech, hard evidence, naked eye, e.g. Benson et al. (1997) further divides “verb+ noun” collocation into CA collocations (collocations involving a verb connoting creation/activation with a noun) and EN collocations (collocations involving a verb connoting eradication/nullification with a noun). The table 2.3 illustrates main 7 kinds of grammatical categories and all lexical categories with their examples.

Table 2. 3. *Types and examples of grammatical and lexical collocations (compiled from Benson et al., 1997, p 7-26)*

TYPE	PATTERN	EXAMPLE
GRAMMATICAL COLLOCATIONS(G)		
G1	noun + preposition	apathy towards
G2	noun + to + infinitive	a compulsion to do it
G3	noun + that clause	an oath that he...
G4	preposition+ noun	in advance
G5	adjective + preposition	be deaf to the pleas
G6	predicative adjective. + to + infinitive	It was stupid of him to go
G7	adjective. + that clause	it was imperative that I be there...
LEXICAL COLLOCATIONS (L)		
L1	verb + noun (creation or activation)	reach a verdict (creation), set an alarm(activation)
L2	verb + noun (eradication or nullification)	reject an appeal

Table 2.3. (Continuing) *types and examples of grammatical and lexical collocations*
(Compiled from Benson et al., 1997, p 7-26)

L3	adjective + noun	a rough estimate
L4	noun + verb (naming an action)	blood circulates
L5	noun1 of noun2	a pack of dogs
L6	adverb + adjective	sound asleep
L7	verb + adverb	argue heatedly

In their book, Benson et al (1997) mentions one more category as G8 including verb patterns which was further divided into 19 groups. They were not illustrated in the table because most of the linguists do not consider them as collocational categories (Hatami, 2015).

2.7. Free Combinations, Restricted Combinations, Figurative Idioms and Pure Idioms

Howarth (1998) makes the definition of collocations on the basis of restrictedness, semantic transparency, and commutability of the constituents. He proposes four combination types. He also suggests further categorization of this classification like lexical and grammatical categories based on the word class of the constituents.

The first type is “free combinations” where the elements of the combination are employed in their real senses and constituents can be replaced with other words belonging the same semantic field. As for the second type of the combinations, it is “restricted collocations” in which one constituent is used with its real meaning while the other is used with non-literal meaning. It is possible to commute one of the constituents of the combination in this kind of combinations, but somehow, it is restricted. Figurative idioms are the third kinds of combination. The elements of the combination may preserve their real senses, but the combination itself refers to figurative meaning, and it is not quite possible to substitute the elements by another one. The last kind of combinations is pure idioms where the meaning of the combination cannot be deduced from the constituents’ real meanings. What is more, it is not allowed to substitute any items of the combination with another one. The categorization by Howarth (1998) is illustrated with examples in table 2.4.

Table 2. 4. *Collocation continuum (Howarth, 1998, p.28)*

	Free Combinations	Restricted Combinations	Figurative Idioms	Pure Idioms
Lexical				
Composites (verb+ noun)	Blow a trumpet	Blow a fuse	Blow your own trumpet	Blow the gaff
Grammatical				
Composites (preposition+ noun)	Under the table	Under attack	Under microscope	Under the weather

The present study will not deal with semantic features of collocations such as restrictedness, transparency, compositionality etc. As stated before, it will adopt a frequency-based approach. Collocations will be distinguished from free combinations by the criteria $MI \geq 3$ and $T\text{-score} \geq 2$ (Schmitt, 2010). Moreover, the study makes use of Benson et al.'s (1997) categorization. That is, out of lexical types of collocations, verb+ noun and adjective+ noun combinations will be scrutinized.

2.8. Significance of Collocations in EFL Classrooms

The purpose of this part is to introduce the viewpoints of the researchers about the significance of learning and instructing collocations.

Collocation is a challenging feature of L2 learning and a crucial factor for communicative ability. During the last years, many researchers have underscored the importance of collocations for the improvement of communicative competence, and to this end, an increasing body of studies have been conducted. The researchers suggest these word units are of paramount importance for EFL students to enhance their performance at language learning.

To begin with, Benson et al. (1997) argues that collocations' nature of being arbitrary and inconsistent makes it complicated for non-native speakers to deal with them. Language learners are inclined to learn the vocabulary items with their separate and dictionary meaning per se and do not employ them in chunks. At this point, Hatami (2015) claims that memorizing a new word with chunks is more practical as ready-made chunks aid students to store information more effectively. She goes on to suggest learners can

realize specific lexical restrictions thanks to learning of collocations. She (2015) exemplifies this point by the collocations with “convenient”. Hatami states that if learners are aware of the collocations like “a convenient setting”, “a convenient day” or “convenient time”, they can necessarily recognize that the adjective “convenient” cannot be used with people. More precisely, it is suggested that having the knowledge of collocations improves guessing strategy.

Carter and McCarthy (1988) maintain that language learners need collocations for comprehending and producing English. They declare that collocations enable learners to gain insights about what can come after what has already come. Learners do not need to embark on regenerating the language every time when they want to express something, rather they can make the most of the word units as “pre-packaged building blocks”.

In a similar vein, Lewis (2000) maintains that collocational knowledge helps students comprehend the language better especially when listening or reading. To be more precise, students may not catch all the words well while they are listening, but they can make the most of their collocational knowledge stored in the networks of associations in their mental lexicon, and complete the missing parts especially upon coming across a strong collocation. Thus, learners do not need to attend every word to comprehend the meaning. In that vein, Koç (2006) concurs with Lewis (2000). She claims for the sake of immediate recognition of prefabricated word units, students’ reading and listening competence can improve and they can be more capable of producing language. For the writing ability, Zhang (1993) proposes that having a better collocational performance contributes to better writing competence. In his study, he disclosed that collocational knowledge enabled students to be more fluent in writing. In a similar vein, Hsu and Chiu (2008) came up with the result that students better at speaking have larger amount of collocational knowledge. As is seen, having good knowledge of collocations enhances students’ language competences and overall proficiency (Wray, 2002).

Lewis (2000) goes on to support that lack of collocational knowledge gives rise to more grammatical errors because students have to form longer, more awkward sentences, which increases the possibility of making more errors.

Gass and Selinker (1994 as cited in Koç, 2006) allege that a sentence involving a grammatical mistake does not necessarily bring on misinterpretations but a sentence involving a lexical error may seriously interfere with the intended message outside the classroom environment. Correspondingly, the intended message cannot be delivered

successfully and misunderstandings can occur on account of selecting wrong word for the target collocation. Koç (2006) illustrates this with the example of misuse for “have or make breakfast”. She contends that students want to express that “they eat something for breakfast”, but with the influence of L1 they may say “I make breakfast”, which causes misinterpretation of their message as they do not intent to say “they prepare breakfast”. She goes on to exemplify that forming a sentence like “I have breakfast 2 hours ago*” does not cause any misunderstanding.

As for Wray (2002), he puts emphasize on the fact that ready-made chunks enable learners to have sense of belonging to a certain linguistic group speaking their L2 natively. In other words, these chunks meet the wish of “sounding like others”. The utilization of native-like prefabricated units enhance comprehension and non-native-like word units can confuse the recipients and can cause them to stray away from the message.

According to Hill (2000), the major distinction between native and non-native speakers is that native speakers have been exposed to much more English and for that reason they can notice and produce prefabs more easily. This enables them to think at faster rate and communicate more efficiently. Kuiper (2004) clarifies this by asserting that native speakers prefer to use prefabs in their mental lexicon instead of trying to produce new word units from scratch. This enables them to be more fluent by concentrating on communicative acts more deeply as it is cognitively less demanding to process ready-made word units.

As to cognitive burden, Ellis (2001) also supports that employing prefabricated word units lessens the cognitive burden. To point out the facilitating feature of ready-made lexical word units or formulaic language, Cangır (2018) draws a comparison between ready-made word units and numbers. He suggests that people are inclined to store numbers in the memory by groups for cognitive reasons such as “536-854-72-15”. Thus, it is asserted that they use the short term memory more effectively and it aids to diminish the cognitive burden by making the recall process easier. With the same line Ellis (2001), Cangır (2018) claims that a similar logic can run for collocations. By decreasing the burden on the short term memory, fluency can be increased and processing durations can be decreased by virtue of collocations.

All in all, studies mentioned above underlines the importance of collocations to language teaching and learning. As is seen, formulaic language contributes to fluency, memorization, guessing strategy, general proficiency, appropriateness and accuracy,

sound like natives and it has possibility to decrease cognitive burden.

The next part will cover the previous studies implemented in Turkish and foreign contexts.

2.9. Previous Studies on Collocation

In this part, former studies will be classified based on their topics. Firstly, adjective-noun and verb-noun collocations will be addressed. Secondly, studies scrutinizing the L1 interference and some concepts like congruency/ non- congruency will be covered. After that, research examining the influence of frequency and some statistical measures such as t-score, MI score will be examined. Then, studies investigating the relationship between vocabulary size and collocational knowledge will be reviewed. Moreover, each heading will cover some important terms or information pertaining patterns of collocations, congruency, frequency and vocabulary size. In the last part, studies carried out in Turkey will be handled and what is lacking in those studies will be clarified.

2.9.1. Studies about the influence of different collocational patterns

Many studies have been carried out about the influence of the different patterns on collocational knowledge and these studies have revealed that there is an important relationship between the patterns of the collocations and collocational knowledge. That is to say, according to the implemented studies, it is evident that some patterns of collocations pose more difficulty for students compared to others. As a consequence, students have a good command of some collocational patterns prior to others. One of the aims of the study is to find if there is a correlation between the collocational patterns and collocational knowledge of Turkish ELT students.

To begin with the first category of the current study, it is verb-noun collocations. Altenberg (1993) argues that verb-noun collocations are both difficult to learn and are ubiquitous and indispensable parts of language. Gyllstad (2009) suggests that the underlying reason for the difficulty may emanate from the fact that the collocate word, namely the verb in verb- noun collocations, does not contribute much to meaning of the whole phrase. To illustrate, Gyllstad (2009) gave the example of “take care”. The collocate word “take” loses its primary meaning with the node word “care” and it means “be careful”.

Altenberg (1993) goes on to say that verb-noun collocations are inclined to compose the communicative core utterances on which the most significant information is fixed up. In literature a great number of studies investigated verb- noun type of collocations (Nesselhauf, 2003; Taeko, 2003; Chan and Liou 2005; Gyllstad, 2007; Laufer and Waldman, 2011; Bağcı,2014; Mutlu, 2015; Cai,2017; Kim-Chon 2017; Nguyen and Webb, 2017; Cangır, 2018). “Make a sacrifice” or “set an example” are the examples of verb-noun collocation type.

As to the second category, it is “adjective-noun” collocations. Kurosaki (2012) claims that adjective- noun collocation type is less commonly employed by native speakers compared to verb- noun combinations, yet it is still recognized as beneficial combinations due to the fact that native speakers resort to this type of collocations frequently. For that reason, it is also an oft-examined category (Nesselhauf 2005; Wolter, 2006; Siyanova and Schmitt, 2008; Fan, 2009; Wolter and Gyllstad, 2011; Bağcı,2014; Kim-Chon 2017; Nguyen and Webb, 2017; Cangır, 2018). The findings of the studies suggest that L2 learners have problems not only with their knowledge of “verb-noun” collocations, but also with the knowledge of “adjective- noun” collocations. Thus, “adjective-noun” collocations are also investigated in the present study. “Rich history” or “black coffee” are the examples of “adjective- noun” collocations.

As has been explained previously, the most important underlying reason to select these patterns to see the effect of typology, which refers to word order at this study, and different parts of speech on productive/receptive collocational knowledge by investigating the influence of different parts of speech and by making an analogy between similar typology of adjective-noun and different typology of verb-noun combinations.

To begin with, Gitsaki (1996) examined the influence of patterns of collocations on the learners’ collocational knowledge in Greek context. In fact, it was a very exhaustive study as it included 37 collocation types and 275 Greek students from different proficiency levels. In the study, the researcher made most of three instruments; essay writing, translation test, and gap-filling tasks. The results revealed that grammatical collocations were easier to learn compared to lexical collocations and as the proficiency levels advanced, so did the collocational knowledge. When it comes to the type of collocational patterns, she found that the verb-noun pattern was the most difficult one of the thirty-seven types of collocations covered in the study. She indicated that collocational knowledge was under the influence of not only collocational patterns, but

also L1 of the learner, maturity and exposure to language. Gitsaki (1996) suggested three phases for the development of collocational competence. In the first phase, she proposed that collocations are acquired as unanalysed lexical units, hence students are better at lexical collocations than grammatical ones. In the second phase, grammatical knowledge of collocation increases, thus students get better at grammatical collocations. In the third and last phase, students have a better command of both lexical and grammatical collocations compared to the previous stages.

In the Turkish context, Bağcı (2014) investigated four different collocational patterns; verb-noun, adjective-noun, adjective-preposition, and noun- preposition with 34 pre- intermediate and 34 advanced level learners. In the study, she herself developed the instruments which was composed of a gap-filling test and acceptability judgment task to gauge the productive and receptive knowledge of the learners on collocations. Along the same line with Gitsaki (1996), the result showed that proficiency level was an important factor because it was revealed that advanced level learners were better at both tests than pre-intermediate level learners. Different from Gitsaki (1996), she claimed that advanced level students performed better in lexical collocations, on other hand it was disclosed that there was no significant difference between the lexical and grammatical collocational knowledge of pre-intermediate learners. Another difference was that the verb-noun pattern was found to be the easiest category in both receptive and productive tests. Moreover, the study disclosed that learners from advanced and pre-intermediate levels had better performance on the receptive collocational knowledge test compared to the productive one.

In the Arabic context, Shehata (2008) examined verb- noun and adjective-noun types of collocations regarding the influence of learning environment (ESL or EFL) and influence of time exposure to the target language both at receptive and productive level. The participants were 35 ESL students studying in the USA and 62 EFL students majoring at English at an Egyptian university. The data were collected via a questionnaire about the amount of exposure to the target language, two fill-in-the-blank productive tests measuring verb-noun and adjective- noun collocations, an appropriateness judgment receptive test, and a vocabulary recognition test. Two gap- filling productive tests were consisted of 32 target collocations while appropriateness judgment receptive test involved 50 items, which included 18 distractors apart from the 32 target collocations in the productive tests. According to the results, both ESL and EFL groups had better

performance at receptive test, but ESL students did much better at both the tests compared to EFL students. Furthermore, results showed that L1 had a strong effect on L2 collocation acquisition. Concerning the pattern of the collocations, participants had better performance at verb-noun category than adjective-noun one.

From a similar perspective and again at the Arabic context, Alsakran (2011) also investigated the influence of ESL and EFL context on the collocational knowledge of 38 EFL students and 30 ESL students. Alsakran concentrated on the same collocational patterns with Shehata (2008). Namely, she also examined verb-noun and adjective-noun categories with the same instruments as Shehata's (2008). In addition to those two categories, she added verb-preposition collocation category. For that category, she made use of Bonk's (2000) instrument. By adding verb-preposition category, she measured both lexical (verb-noun, adjective-noun) and grammatical (verb-preposition) categories. Receptive collocational knowledge of students was measured by means of an appropriateness judgment test. The results showed that the ESL students outperformed EFL students at all tests, which proved the significance of the environment on collocational knowledge. Receptive collocational knowledge of the both groups were much better than productive knowledge. Another finding of the study was that students were more successful at lexical category than grammatical one while at lexical category they were better at verb-noun collocations compared to adjective-noun collocations. For that reason, it can be concluded that results coincided with Shehata's (2008) findings.

In the same vein with studies implemented in Arabic context, Gaballa and Al-Khayri (2014) carried out a study with 68 students studying at Taif University to compare verb-noun, adjective-noun and verb-preposition types of collocations via appropriateness judgement test and gap-filling tests. The result indicated that students had better verb-noun collocation mastery compared to adjective-noun and verb-preposition ones.

In a Thai context, Kuo (2009) implemented a study with 49 Taiwanese learners to investigate the collocational errors via 98 essays written under two different topics. The results of the study displayed that students' errors were made more frequently in verb-noun collocational type compared to adjective-noun type of collocations, which was contradicting with previously mentioned studies. Moreover, Kuo claimed that collocational errors were mainly rooted in using synonym, closeness of the words. Interestingly, negative transfer from L1 had the least influence on collocational knowledge of all the factors.

Another study in a Thai context was conducted by Phoocharoensil (2011). The data were collected by means of essays written by two different proficiency groups involving 90 first-year undergraduate students. The analysis showed a similar result with Kuo's (2009) study implemented in a similar context. According to result, both of the proficiency groups had more difficulty with verb-noun combinations than adjective- noun ones. Participants with low- proficiency were found to have difficulty with verb- noun combinations by 40.54% points and with adjective- noun by 5.41% points. As for the high-proficiency students, they had problem with verb- noun collocations by 25.28% points and adjective- noun collocations by 13.79% points. It is of note that high proficiency students also had difficulty with collocations.

To examine the effect of different collocational patterns on collocational errors, Hama (2010) implemented a study with 40 senior ELT Kurdish students by means of multiple choice test and think-aloud protocol. The analysis revealed that the most challenging category for the participants was adjective- noun combination, which was followed by verb-preposition and verb-noun. Another finding of the study was L1 influence and low frequency were the major causes of collocational violations in the study. To sum up, the data displayed that collocational competence was proportional to frequency, but the frequency of the components and MI score had no effect on collocational competence.

In a similar context with Hama's (2010), Ramadhan (2017) investigated the impacts of collocation features such as frequency, collocational pattern, transparency and congruency of collocations on collocational competence and enhancement with 252 Kurdish high school students. The instruments to measure the knowledge of 114 collocations were an acceptability judgement test for receptive dimension and a gap filling test for productive dimension. Interestingly, the results indicated that productive collocational knowledge of the participants improved much better in a year compared to their receptive knowledge. It means they successfully managed to turn the input into intake. However, as for their overall collocational competence, their productive collocational competence lagged behind their receptive one. Collocation frequency was proved to be the best predictor for collocational competence, then it was followed by the patterns of the collocations and congruency respectively, and it was displayed that semantic transparency had the least effect on collocational knowledge. The contrasting results of the study were grammatical collocations were known better than lexical ones,

which corroborated Gitsaki's result, and L1 congruency had a little effect on collocational knowledge.

In a Vietnamese context, a more recent study was carried out by Nguyen and Webb (2017). They investigated EFL students' collocational knowledge of verb-noun and adjective-noun combinations and the factors predicting their receptive knowledge of collocations (frequency of collocation and node words, MI score, congruency and part of speech). In the study, all the words composing the collocation were chosen from first three 1K word frequency levels based on Nation's BNC/COCA lists (2012) to compare the single word item and collocation knowledge. The data revealed the fact that mean score were low for both verb-noun (45.72%) and adjective-noun (45.29%) categories and there was no significant difference between them. Furthermore, the study displayed that there was a strong correlation between learners' single word knowledge and collocation knowledge. The data also displayed that congruency with L1 and node word frequency were good predictors for collocational knowledge. As for MI score, it was revealed that there was negative correlation, that is, the higher was the MI score, the lower was the correctness rate for target collocations. And as to collocation frequency, it was not as influential as single word frequency, it illustrated only 2.74% of the variance.

The studies aforementioned indicate that productive knowledge of the learners on collocations lags behind their receptive knowledge. However, it is seen that studies have displayed contradicting results about the students' performance in verb-noun and adjective-noun collocations.

The next part will deal with the L1 interference on collocational knowledge.

2.9.2. Studies about the influence of congruence

Formulaic expressions are commonly exclusive to a particular language. That is to say, an expression in English may not have an exactly corresponding member in Turkish, which involves the same words in Turkish (Cangır, 2018). He illustrates this with the expressions "make up mind" and "look forward to". It is not probable to make word by word translations for these expressions, so he claims that learning these expressions for Turkish learners is like acquiring a new vocabulary item in English. On the other side, Cangır (2018) goes on to maintain that collocations, in contrast to other formulaic expressions, have a cross-linguistic nature. That is to say, an English collocation is likely to have a matching member in Turkish so long as it is not a cultural-bound concept. To

exemplify, the English collocation “soft drink” has counterpart in Turkish “alkolsüz içecek” (a drink without alcohol) with different adjective choice, so it cannot be translated into Turkish word by word. On the other hand, the English collocation “naked eye” has exactly the same corresponding words in Turkish “çıplak göz” (seeing without the help of any instruments) and it can be translated into Turkish word by word. These cross-linguistic differences can be clarified by the concept of “congruency”. A congruent collocation denotes using the same lexical items in both mother language and target foreign language, on the other hand, an incongruent or a non-congruent collocation delineates using different lexical items in L1 and L2 (Yamashita and Jiang, 2010). Cangir (2018) suggests that examining the L1-L2 distinctions may elucidate arbitrary and cross-linguistic nature of collocations partially. In fact, this arbitrariness may have an impact on collocations’ being less salient as word combinations. As also suggested by Wolter (2006), congruency may have a positive effect or have an impeding effect on collocational learning. That is why, it is worth studying the effect of L1 influence and gain understanding about its effect on Turkish students’ mental lexicon.

To investigate the influence of L1, Nesselhauf (2003) conducted a research examining the 32 essays of advanced level German learners of English as foreign language to probe the problems they face in producing verb-noun collocations. On examining the correctness of collocations used in the essays, she came to conclusion that almost 25% of the collocations produced by the learners were improper. Another result displayed in the study was that L1 influence was chiefly responsible for improper production of collocations (52%).

Another study investigated collocational errors was carried out by Mahmoud (2005). He examined 42 essays of Arabic learners of English. The results showed that lexical collocations composed most of the collocational errors and almost 61% of the collocations produced by the learners were inappropriate. Moreover, it was revealed that improper usages were primarily stemmed from the mother tongue of the participants. Namely, the reason was a negative transfer from Arabic to English.

Along the same line with them, Taeko (2005) also found that L1 influence was a significant factor on the acquisition of collocations by implementing 3 tests with 130 Japanese EFL university students; a receptive collocation test, a productive collocation test and a vocabulary size test. He maintained that correspondences between L1 and L2 collocations (congruency) contribute to the learning of collocations in a positive way,

while dissimilarities between mother tongue and target foreign language lead to negative transfers. For that reason, to lessen the strain of collocational acquisition, Taeko suggested that language practitioners make use of resemblances between L1 and L2 for developing collocational knowledge.

Yamashita and Jiang (2010) implemented a study to examine the influence of L1 on the processing of L2 collocations by using a phrase- acceptability judgement test. The study compared both error rates and reaction times of native speakers of English, ESL users, and EFL students concerning congruent and non- congruent collocations. The results of the study indicated that EFL learners committed more errors and had more slow reaction times for both congruent and incongruent categories compared to ESL users. Additionally, the results revealed that ESL users were as fast as native speakers of English. However, ESL users still made more errors in incongruent collocation category compared to congruent one. All in all, results showed that both congruency and L2 proficiency are significant factors for the acquisition of collocations. Moreover, it was revealed that if L2 collocations are stored in memory, L2 collocations can be processed separately from LI, but it was asserted that incongruent collocations continue to pose difficulty for learners even with noticeable amount of exposure. However, it was claimed that L2 exposure was proved to increase the probability of acquisition.

From a similar point of view, Wolter and Gyllstad (2011) searched the effect of proficiency and congruency on the knowledge and priming effect of verb- noun collocations. The researchers made use of a primed lexical decision task measuring the accuracy and reaction time of Swedish learners of English. The test was also applied to native speakers of English as they acted as a control group. Their speed was measured on 3 categories; L2 specific collocations (incongruent), L1-L2 corresponding collocations (congruent) and baseline collocations (unrelated collocations). The results revealed that Swedish learners made more errors and they responded more slowly compared to native speakers. Also, Swedish learners were statistically more accurate in congruent collocations compared to incongruent collocations whereas no statistically significant difference existed in the scores of native speakers regarding congruent and incongruent collocations. Statistically significant difference existed in the reaction time of native and non- native learners for L2 specific collocations, which pointed out the effect of L1 on the collocational learning.

Laufer and Waldman (2011) examined verb-noun collocational usages of Hebrew

learners of English at three proficiency levels by compiling a student corpus from learners' writings. The results displayed that learners from all three proficiency levels generated fewer collocations compared to native speakers. Although the number of produced collocations showed an increase with advanced level students, the errors induced by L1 influence continued to persist. The researchers claimed that this situation was due to learners' ignorance about word use constraints, so getting their attention to the word units are of the essence for learning. They supported that students do not notice semantically transparent collocations, which are mostly composed of frequent items, so they were of the opinion that increasing learners' exposure may not necessarily culminate in an increase in their knowledge. They went on to propose that learners mostly relied on frequent individual words rather than multi- word units to convey their messages.

Another study examining the features of collocations with cross-linguistic perspective was conducted by Kurosaki (2012). The study explored the dissimilarities between Japanese and French learners' collocational knowledge and usages in respect of L1 influence and combinability and transparency influence. Four lexical categories (verb-noun, adjective- noun, delexicalised verb-noun and adverb-adjective) were examined through multiple choice question tasks and translation tasks and the learner corpora. The reason for choosing both French and Japanese participants was to see if students from different L1 backgrounds would exhibit different collocational competence. In fact, as English and French are from the same language family, so it was expected that French learners would have more L1 influence than Japanese participants. However, the data of the study indicated that the likeness between English and French did not contribute to learners' producing more appropriate collocations. The study contradicts with previously mentioned studies in this respect, which suggests the positive influence of L1 and L2 similarities on collocational knowledge and priming. Moreover, L1 could not be found as a strong indicator of collocational performance based on the results of three instruments of the study.

Lee (2016) also scrutinized the effect of L1 on the processing of 39 target English collocations with 45 Korean L2 learners and 19 native speakers of English by means phrase-acceptability judgement test. The result of the study aiming to measure the error and response rates of the participants on congruent and incongruent collocations found that advanced learners did better in both congruent and incongruent collocations compared to intermediate level students. In the meantime, it was revealed that both of the

proficiency groups had more errors and slow reactions to incongruent collocations, which indicated that even advanced level students heavily rely on their L1 intra-lexical knowledge and incongruent collocations are challenging even for them. Lee (2016) also contended that upon storing incongruent collocations in their L2 mental lexicon, students might have the chance of processing them as effectively as natives do by directly combining L2 collocation forms with their concepts irrespective of L1 influence.

In a more recent study, Kim and Chon (2017) conducted a research with 133 Korean high school sophomores to measure collocational knowledge by means of a receptive collocation test including equal numbers of congruent and incongruent collocations based on two categories (adjective-noun and verb-noun). The results indicated that participants made more errors with incongruent collocations than they did with congruent ones on the whole. However, on examining the categories separately, they revealed that they did best in the congruent adjective- noun (AN) category. The incongruent verb- noun (VN) category was seen at the second rank. It was followed by congruent (VN) and incongruent (AN) collocational categories respectively. According to researchers, participants' better performance for incongruent VN collocations compared to congruent VN collocations implies the fact that synonymous collocates may also cause a problem apart from incongruent collocations. Another finding of the study was that L2 proficiency is a crucial factor for the acquisition of collocations.

Another recent study was conducted by Wolter and Yamashita (2018), which probed the effect of several factors such as frequency of individual words composing the collocations, frequency of collocations, L1 congruency, and L2 proficiency on collocational knowledge. The participants were L1 Japanese learners of English from intermediate and advanced levels and native speakers of English. An acceptability judgement test was used to measure adjective-noun types of collocations which were divided into four categories as congruent collocations with Japanese and English, English only collocations (incongruent), Japanese only collocations and baseline items. The data of the study indicated that non-native speakers reacted congruent collocations faster than collocations only felicitous in English (incongruent), while native speakers processed the target items nearly at same speed. As for frequency, word level and collocational frequency had a positive effect on the processing of collocations. As for proficiency, both groups of the non-native learners behaved in a similar way concerning congruent and non-congruent collocations.

In sum, it is notable that the presence of correlations in the mental lexicon between L1 and L2 can make an important contribution to the L2 learners' collocational competence as claimed by Wolter and Gyllstad (2011). However, as stated before, the influence of congruency in Turkish context is under- investigated, so to gain better insights about learners' inclinations to learn collocations, investigating congruency factor may have a potential to enhance both collocational teaching and learning.

The next part will survey the effect of frequency on collocational knowledge.

2.9.3. Studies about the influence of frequency

The current study uses the concept of "frequency" in several ways. Firstly, it is used to define the term "collocation" and to choose the target items from the corpus. Also, the study aims to scrutinize the effect of frequency of collocation occurrence on participants' receptive/productive collocational competence.

Some statistical measures indicating frequency may vary across studies, and they may state different sets of collocations. However, there are some overlapping occurrences and the most commonly utilized ones are t-score, MI score, raw collocational frequency in corpus (Ellis et al., 2008; Durrant and Schmitt, 2009; Fernandez and Schmitt, 2015; Nguyen and Webb, 2017). Therefore, frequency and strength of the collocation will be indicated by t score, raw collocational frequency and Mutual information score (MI) in the current study.

According to Gablosova's et al. (2017) claim, raw collocational frequency, which has been utilized widely in corpus studies to date, may measure general repetition in language well, but may not predict the regularity ideally in language use. Gablosova et al. go on to propose that some word combinations have quite high frequency in corpus but they occur in a very specific context or generated by solely a tiny number of speakers or writers. They adduce their claim by looking over the examples "risk issues" and "moral issues". Upon examining those combinations in BNC (British National Corpus), they realize that "risk issues" appears 54 times, "moral issues" occurs 51 times. As for their text type, the first combination appears only in one text type, but the second combination occurs in 41 different text types. Therefore, it is posited that the pattern of dispersion through a corpus alters the possibility of collocation occurrence in a real language or in any speaker's speech. That is to say, the relationship between frequency and collocation

is not so straightforward. To get a broader picture of the role of frequency, raw collocational frequency should be supported by other measurements.

To begin with, t-score is described as “certainty of collocation” by Hunston (2002, p. 73) and “the strength of co-occurrence of words with a node word” by Wolter and Gyllstad (2011, p. 436). As also stated by Durrant and Schmitt (2009), t score accentuates frequent occurrences of the words. Durrant and Schmitt (2009) go on to assert that t-score and raw collocational frequency are closely associated with each other. However, the difference is t-score lowers the ranking of the collocations, the components of which occur frequently apart from the collocation itself. That is, combinations composed of words like “a, the, in”, etc. has lower t-scores compared to their raw collocational frequency. All in all, it can be maintained that not all frequent collocations have a high t-score, but all collocations with high t-scores have high raw collocational frequency (Gablosova et al, 2017).

As for Mutual Information score (MI), it is described as the strength of the tightness of the collocation (Fernandez and Schmitt, 2015). According to Fernandez and Schmitt (2015), MI score signifies the strength of association of the components constituting the collocation whereas t-score mostly weighs frequency based on the way it is calculated. In fact, two types of measurement are inversely correlated with each other. To put it differently, as T-score increases, MI score decreases, or vice-versa. This means collocations with low frequency are favoured by MI score. For the sake of example, the frequency values of the collocations “heated debate” and “open mind” can be examined in the table 2.5.

Table 2. 5. *The comparison of frequency values*

Target Collocations	Raw collocational frequency	T score	MI score
Heated debate	502	22.35	10.61
Open mind	1033	30.09	3.97

As is seen in table 2.5. as the raw collocational frequency increases, so does the t-score, but MI score is disposed to diminish.

Gablosova et al. (2017) label MI score as “exclusivity” of collocate words. They explain “exclusivity” by the degree to which component words occur only or mostly in tandem. MI score relates to the quantity of the co-occurrence of two words versus the quantity of the times of the words occur separately in a corpus. To illustrate, on seeing

the word “zig”, “zog” come to mind easily (zig zog). In this regard, Gablosova et al. (2017) propose that collocations with high MI score are more salient and easy to notice.

Scrutinizing the effect of frequency is a bit challenging as it is not so probable to control the number of exposure of students to the target collocations, but it is relatively easier to examine the relationship between frequency of occurrence in corpus and students’ collocational knowledge. However, there are some contradicting views about the bonding between frequency of occurrence in corpus and collocational knowledge. To illustrate, some researchers (Schmitt, 2010; Nation and Waring, 1997), as stated by Fernandez and Schmitt (2015), contend that students are inclined to know individual vocabulary items occurring frequently, so they assert collocations could have the probability of behaving similarly. On the other hand, Fernandez and Schmitt (2015) questioned the possibility of corpus frequency’s indicating collocational knowledge. Actually, they claim that corpus do not represent the input the learners get, rather, the input is mostly determined by classroom environment. That is, the competence of language practitioners is of vital significance as they may overuse, underuse or misuse collocations irrespective of their frequencies and accurate usages in native language environment.

In this vein, Fernandez and Schmitt (2015) carried out a study to gauge participants’ productive knowledge of 50 collocations in respect of raw collocational frequency, t-score, MI score. The results indicated that students generated a mean score of 56.6% in a correct way. As for the correlation of collocational knowledge and corpus frequency, it was moderate (.45). Moreover, it was found that MI score, namely the rising tightness and relative infrequency, did not have a significant effect on collocational knowledge. Fernandez and Schmitt (2015) maintain that MI score is particularly noticeable for native speakers, and it lacks in non-natives’ output, so it differentiates between natives and non-natives.

From frequency-based approach perspective, Durrant and Schmitt (2009) investigated a corpus based study with Turkish and Bulgarian university students who studied in the UK by making use of frequency information (t-score and MI score). They examined the students’ corpus composed of academic writings. Their focus was on noun +noun and adjective+ noun combinations with the purpose of defining the extend to which word combinations, especially the ones with strong associations, are utilized by non-natives in natives’ norms. The data showed that non-natives were inclined to use

collocations with high t score, namely frequent ones, even at a similar rate with natives. This result is important in respect of the fact that all the participants lived in an English-speaking environment. However, the participants did not produce as many collocations with high MI score as natives did, which tallied with the results of Fernandez and Schmitt's (2015) study.

In a similar line, Ellis et al. (2008) carried out a study probing the influence of frequency by means of three experiments. It was revealed that different factors of formulaicity influence the correctness and fluency of processing of collocations with native and advance-level non-native learners. The result displayed that MI score was important for native, on the other hand, t score was important for non-natives and that frequency of academic formulas could predict for language learners' processing effectively.

Wolter and Gyllstad (2013) conducted an investigation to search the influence of frequency on the processing of adjective-noun collocations, which were also categorized based on their congruency with L1. The results revealed that the frequency of the target collocations influenced the response times of advanced L2 learners regardless of congruency. In the same vein, Siyanova – Chanturia and Spina (2015) contend that the more L2 learners get advanced in the target language, the more sensitive they get for the effect of frequency. Moreover, they claim that advanced level L2 learners store word units as chunks in the lexicon based on their frequencies.

Durrant (2014) conducted a study to reveal the relationship between frequency and students' knowledge of collocations by using meta analysis. That is to say, he examined 19 previously conducted tests in the literature, believing that corpus frequency could be utilized for item selection provided that a respectable relationship could be established between frequency and collocational knowledge. The data revealed that frequency correlated with knowledge only moderately, which was corroborative with Durrant and Schmitt's (2010) assert that corpus frequency can fail to illustrate truly the language to which language learners are exposed in their learning environment. As for the impact of MI score, it did not have any correlation with knowledge. However, he highlights the fact that different corpora may have different effect on collocational knowledge. Therefore, it is better to examine the effect of frequency by means more comprehensive and up to date corpus.

In a more recent study again conducted by Gyllstad and Wolter (2016) from a phraseological perspective, the processing of free combinations and collocations by 37 Swedish learners of English and 38 native English participants were investigated. Error and response rates were measured by semantic judgement test. The results displayed that free combinations were processed in a faster rate and with less errors compared to collocations by both native and non-native groups. All in all, the data showed that semantic transparency, namely denoting literal meanings of the words, and frequency of the word units had an influence on collocational processing. Moreover, semi-transparent word units were found to be more difficult to process compared to fully transparent or fully opaque ones.

Having found contrasting results with Gyllstad and Wolter (2016), Macis and Schmitt (2017) examined 30 collocations used both in literal and non-literal sense via meaning-recall collocation test. The participants of the study were composed of 107 Chilean students of English. The results revealed that participants had very little collocational knowledge as they answered 33% of the questions correctly. Moreover, frequency and semantic transparency were proved to be not much influential on collocational competence. Rather, spending time on English and spending time in English speaking countries and year at the university were proved to have positive correlations with collocational knowledge.

To sum up, there are no consensus on the influence of frequency. Durrant (2014) claims while frequency may be an influential factor for collocational knowledge, it cannot predict learners' knowledge per se, so it is better to take other factors into consideration. Moreover, he suggests different cultural backgrounds and educational systems can be affected from some variables in a different way, so it is important to examine more than one factor and conduct the study with participants different from the previous studies.

The next part will investigate the studies scrutinizing the relationship between vocabulary size and collocational knowledge.

2.9.4. Studies about the relationship between vocabulary size and collocational knowledge

One of the aims of the current study is to investigate if collocation knowledge has any correlations with vocabulary breadth of the students, in other words, with the extent of mental lexicon. In the literature there have been a great many studies proving that

correlation (Gitsaki, 1999; Taeko, 2005; Gyllstad, 2007; Bergström, 2008; Kadlecova, 2014; Mutlu, 2015; Nguyen and Webb, 2017; Nugroho, 2018). It is assumed that students with large vocabulary size are more competent at a huge variety of language skills (Meara, 1996).

To begin with aforementioned study in 2.9.1., Gitsaki (1999) investigated collocational knowledge of 257 Greek learners for 37 various kinds of collocations. One of the results Gitsaki found out was that collocational knowledge of the participants and their vocabulary knowledge had a reciprocal relationship. That is, as participants' vocabulary knowledge increased, their collocational knowledge increased, as well.

Taeko (2005) implemented 3 tests with 130 Japanese EFL university students; a receptive collocation test, a productive collocation test and a vocabulary size test. Taeko came up with the results that participants' general vocabulary knowledge was strongly correlated with their productive and receptive collocational knowledge ($r = .828$ and $r = .778$ respectively)

In another study, Gyllstad (2007) developed receptive collocational knowledge tests called COLLMATCH and COLLEX and investigated the relationship between receptive collocational knowledge and overall receptive vocabulary size of Swedish students. He found out the fact that there was a strong correlation between two receptive collocation tests and vocabulary size test ($r = .83$ and $r = .88$ respectively). Gyllstad asserts that broader vocabulary knowledge expedites recognition of collocations.

Along the same line with Gyllstad, Bergström (2008) implemented a study to investigate the correlation between vocabulary knowledge and receptive collocational knowledge of 48 Swedish upper secondary school learners. According to results, vocabulary size of the participants was clearly correlated with their receptive collocational knowledge. Bergström (2008) believes that larger vocabulary size goes hand in hand with larger exposure to L2 and as well with better collocational knowledge.

Kadlecova (2014) suggests that learners' vocabulary size and their collocation knowledge may positively be correlated. She believes that as the mental lexicon enlarges, the possibility to embody a larger network of word associations increases and that possible increase facilitates the acquisition of collocations. In her study, Kadlecova (2014) measured the vocabulary size of 30 Slovak secondary school students by means of Nation's (2001) vocabulary level test. She came up with the results that correlation coefficient was $r = .566$. It means there was a positive, moderate correlation between

vocabulary and collocation batteries. That is, the size of mental lexicon affected positively the L2 collocational knowledge.

In Turkish context, Mutlu (2015) carried out a study probing the correlation between receptive and productive collocational knowledge and vocabulary size test (Nation and Beglar's -20.000 version, 2007). She found out that there was a positive correlation between receptive vocabulary knowledge and both receptive collocational knowledge and productive collocational knowledge. However, the results displayed that the correlation was less strong for productive collocational knowledge ($r=.29$) compared to receptive collocational knowledge ($r=.42$). According to Mutlu, this shows that learners take advantage of their vocabulary knowledge better when recognizing collocation compared to producing collocation as production necessitates broader knowledge than reception (Nation, 2001). Mutlu (2015) further suggests that students' single word knowledge may not make an association in their mental lexicon and this hinders students to trigger their vocabulary knowledge to produce collocations appropriately.

In a more recent study, Nguyen and Webb (2017) tried to gauge the correlation between 180-item receptive collocation test, composed of A-N and V-N combinations, and vocabulary size test whose items were from the first three 1K word frequency level. The analysis broke out a positive correlation between two tests. The r values for adjective-noun and verb-noun combinations were .70 and .67 respectively. The results imply that two tests presented complementary information about the participants' current vocabulary knowledge. More precisely, Nguyen and Webb (2017) make a mention of the fact that 2 dimensions of the word knowledge, namely breadth and depth, are closely related and develop together (Milton, 2009).

Nugroho (2018) conducted a study in Indonesian context to compare vocabulary size test (Nation and Beglar, 2007) scores and a receptive collocation test (adapted version of Gyllstad's, 2007) and a productive test (Nizonkiza's, 2012) scores. Nugroho found out that there was a positive correlation between those two variables both for second grade and fourth grade university students, which implies when students have broader vocabulary knowledge, they have more competent at both recognizing word strings and stringing words accurately.

In brief, above mentioned studies have shown that vocabulary knowledge is correlated with collocational knowledge. The degree of the correlation depends on the

proficiency level of the students. Kadlecova (2014) maintains that the higher proficiency level students have, the stronger the relation is. That is, students who have broader vocabulary knowledge are more competent to organize their mental lexicon to make syntagmatic associations between words. Another reason for the correlation may rest upon the fact that vocabulary size is an indicator of an overall proficiency (Gyllstad, 2007). Moreover, Gyllstad (2007) claims that deeper word knowledge, for example collocation knowledge, is the outcome of larger vocabulary knowledge.

The next part will cover the studies having been conducted in Turkish context so far about the issue of collocations.

2.9.5. Studies about collocations in Turkish context

To date, some studies about collocations in respect of language teaching environment and corpus have been carried out in Turkey.

To start with Balcı (2006), she probed the efficiency of teaching vocabulary through collocations compared to classical techniques such as L1 translations, synonym, antonym, etc. with 59 seventh grade students. According to results, teaching vocabulary through collocations was more effective than the classical techniques, and it made a contribution to vocabulary development and retention.

In same line with Balcı, Koç (2006) also explored the effect of explicit vocabulary teaching in collocations and suggested that explicit teaching for collocations, resorting different techniques were recommendable to enhance collocational competence and vocabulary retention.

In a corpus-based study, Çelik (2009) investigated the data-driven learning's impact on participants' collocational competence. The results disclosed that participants making use of corpus tools did better in the collocation test compared to control group. He drew the conclusion that data-driven learning seemed to be an influential method both for vocabulary teaching and for general language competence.

In another study, Öztuna (2009) approached the issue from a language teaching angle, she inspected the influence of input flood and negative evidence on the acquisition of make/do collocations with 7th grade Turkish EFL students. The results revealed that both input flood and negative evidence assisted learners to develop their knowledge of make/do collocations productively and receptively.

Vural (2010) examined the effect of different experimental conditions on the verb-

noun collocational knowledge. He deduced that explicit teaching (collocation-focused) of collocations outperformed the incidental teaching (meaning- focused). He also revealed that incidental instruction was merely influential with high frequent collocations. Moreover, it was disclosed that only the explicit teaching did not bring about attrition in the identification of the target collocations according to the results of the delayed post test.

In another study, Bıçk1 (2012) investigated L2 learners' mistakes in academic writing with respect to influence of students' mother tongue. He examined the learners' essays and sorted out collocational mistakes hinged on grammatical accuracy and appropriateness. He drew the inference that semi-restricted collocations were mainly sources of mistakes and L1 had a huge effect on that disposition.

As previously mentioned in 2.8.4., Mutlu (2015) conducted a study about verb-noun collocations. She compared receptive vocabulary size of students with receptive and productive verb-noun collocational knowledge. She also investigated high school students and English language teachers' perceptions about collocations. The findings revealed that students with larger receptive vocabulary size showed better performance in productive and receptive collocational tests. Moreover, the results indicated that student's receptive collocational knowledge were better off their productive knowledge. As for the perception of teachers and students, both groups were of the opinion that collocational errors stem from L1 influence.

Demir (2016) approached the issue with a different perspective. He tried to disclose the similarities and dissimilarities between Anglophonic (English speaking people) and Turkish writers in point of their using lexical collocations. In line with that objective, he assembled a corpus composed of the academic articles of both groups. In the end, he came to a conclusion that English native writers used noticeably more collocations in their academic texts compared to Turkish ones. Moreover, he proposed a collocation list compiled from native speakers' writings to be resorted by non-native writers to sound more native-like.

In a more recent study, Cangır (2018) adopted a different viewpoint compared to the other collocation studies. He approached the issue from the psycholinguistic and cross-linguistic perspective. He examined the processing of collocations and their role in the organization of the mental lexicon via a lexical decision task with the Turkish ESL and EFL learners. In the mentioned study, Cangır compared the mean of response times

for collocate and non-collocate items to probe a potential triggering effect in respect of frequency, congruency, typology of adjective-noun and verb-noun combinations. The results found out that the participants responded faster to the collocations than non-collocate items, to the adjective-noun collocations than verb-noun collocations, and to the congruent collocations than incongruent collocations.

To sum up, the previous studies implemented so far seem to have dealt with how to teach and learn collocations better and the reasons for collocational errors based on corpus-based data. However, as is seen, there are not many studies scrutinizing the factors affecting collocational competence. Therefore, the current study sets out to take up the slack in the literature with its focus on the influence of congruence with learners' first language, vocabulary size of students, collocational patterns and frequency on learners' productive and receptive collocational knowledge.

CHAPTER 3

METHODOLOGY

3.1. Introduction

This chapter deals with the methodology of the study. Firstly, the design of the research is presented. Then, participants and setting of the study, instruments of the research, item development procedures and the pilot studies are explained in detailed. Once for all, data collection and data analysis procedure are presented so as to depict the general process of the current study.

3.2. Research Design

The current study has a quantitative research design. Quantitative design deals with statistical and numeric data and descriptions and draws inferences about the collected data across the groups of people. Numeric analysis is implemented with the data which is gathered by means of surveys and experiments etc. Validity and reliability of scores bring forth meaningful apprehensions of data. The main aim is to find out the relationship between dependent and independent variables. (Creswell, 2014). In the current study, the number of the correct answers in vocabulary size test was an independent variable and the numbers of the correct answers in receptive/productive collocation tests were dependent variables in search of finding the correlation between vocabulary size and productive/receptive collocational knowledge. In pursuit of searching the possible indicator/s of collocational knowledge, the number of the correct answers in the receptive and productive tests were set as dependent variables, on the other hand, frequency, parts of speech, congruency values were set as independent variables.

3.3. Participants and Setting

The participants of the present study were 4th grade Turkish ELT students at Anadolu University where students are exposed to a variety of lessons as to language learning and teaching. They are as diverse as language skills, methodology, linguistics, teacher practicum, etc.

As for the sampling of the participants in the study, convenience sampling was resorted because participants were eager to take part in the study and relatively convenient to reach by the researcher.

102 students took part in the study. Out of 102 students, 63 of them were female students and 39 of them were male students. They were between the ages of 20-28, but most of them aged between 21 and 22 ($M_{\text{age}}=21,78$). As for their mother language, it is Turkish. They learn English as their L2. Their time of learning English was ranged between 6 and 18 years ($M_{\text{time of learning English}}=11,93$). As is known, they had to pass the university exam which is called “YDT” involving grammar and vocabulary, also reading and translation skills to study at university. As far as they reported, their admission scores were ranged between 400-464 ($M_{\text{admission score}}=431,73$). Moreover, they also had to pass the placement test conducted by the School of Foreign Languages of Anadolu University. If they cannot manage to pass it, they are to study at preparatory class before starting the department. For that reason, it is expected that they have a good level of proficiency in English.

The selection of the participants from 4th grade ELT students is rooted in the fact that, as far as the researcher is concerned, there have not been many studies implemented in Turkish context with teacher candidates to learn their collocational knowledge and their receptive vocabulary size. The participants were about to complete their four-year university degrees and they were candidates for being English Language teachers after approximately 12 years of English language instruction on the whole. For that reason, it is important for the researcher to display both their vocabulary depth (collocational knowledge) and their vocabulary breadth (vocabulary size), which is proved to be highly correlated with proficiency level, and to see if they have enough knowledge as they are expected to teach the collocations, which are indispensable part of language teaching.

3.4. Instruments

In the present study, 3 different offline tests were used to gather the intended data to answer the research questions. The first instrument was a vocabulary size test (Nation and Beglar, 2007), the second test was a gap-filling (controlled- productive) test, and the third one was an acceptability judgment (receptive) test. All test instruments were carried out in

English. Every one of the instruments will be mentioned shortly below. The tests aim to measure the importance of a number of different variables in investigating recognition and production of collocations. The variables are the parts of speech, congruency, frequency and receptive vocabulary size of the participants.

3.4.1. Vocabulary size test

The test, which was used to measure receptive vocabulary size of learners, was vocabulary size test by Nation and Beglar (2007). The test aims to gauge general receptive vocabulary proficiency rather than exactly detecting the levels where students have insufficient vocabulary knowledge. The vocabulary items in the test were chosen from the Nation's (2006) lexical lists obtained from British National Corpus (BNC). There are 140 items in the test sampling 10 words from each 1000 frequent word families (between 1000 and 14000). It amounts to 1% of the words existing in each frequency band. To get the ultimate score, the total number of correctly answered questions are multiplied with 100 as every one of the items embodies 100 words. For example, if a student does 60 out of 140 questions, it means vocabulary size of the learner is 6,000 word families. However, as in the study, the test was used as a proficiency test, the students' total scores were taken into the consideration. The maximum possible score to get from test is 140. As for the test format, it is in multiple-choice format with a plain, non-defining context. It is required from the participants to choose the best definition or translation of each word from four options. As suggested by Nation (2012), 40 minutes were allocated to the students to complete test, but if the students wanted extra time, they were allowed to continue, as the main aim was not to measure fluency.

An example question of the test is illustrated as follows:

1. see: They **saw** it.
 - a) cut
 - b) waited for
 - c) looked at
 - d) started

(taken from Nation and Beglar's VST; 2007, p.1)

The underlying reason to apply the vocabulary size test instead of proficiency test was something about the purpose of the study. As in the study, the aim was to measure collocational knowledge, it was assumed that employing vocabulary size test overlapped the main goal of the study to a larger extent in respect of the fact that all tests are about lexical knowledge (Cangır, 2018). Moreover, there are great many studies in the literature showing the correlation between overall proficiency and vocabulary size (Beglar and Hunt 1999; Stæhr, 2008; Milton, 2010; Schmitt, 2010; Kadlecova; 2014; Cellat and D. Köse, 2017; Miralpeix and Muñoz, 2018). You can see the full version of Vocabulary size test in appendix. (see appendix A)

3.4.2. Controlled productive collocation test

The controlled productive test, which was devised by the researcher, was implemented to explore the participants' controlled productive collocational knowledge. The reason for calling the test as controlled productive test hinges on the reference by Laufer and Nation (1999). According to them, controlled productive ability refers to the competence to use a word by the test taker on being forced by a teacher or a researcher. Whether the context is unrestricted such a writing task or restricted such as gap filling exercise in which a sentence context is presented and the missing item has to be provided does not matter to call it as a controlled productive ability.

In the current study, the controlled productive test was composed of the 40 target collocations in total and fell into two categories: 20 verb-noun and 20 adjective-noun collocations. Each category was further divided into two sub-categories involving 10 collocations with Turkish counterparts (congruent) and 10 collocations without Turkish counterparts (non-congruent). The first 20 questions included verb-noun collocations, which were used in controlled structures allowing only one correct answer by giving the first letter of the target verb collocate word. The first letter of the target collocate word was given to obstruct the wildly deviating answers as done by other researchers (Laufer and Nation, 1999; Alsakran, 2011; Nizonkiza, 2012; Bağcı, 2014; Mutlu, 2015; Ramadhan, 2017; Nugroho, 2018). In the same line, Schmitt (2010) asserts that the probability that students give acceptable but irrelevant answer to the target item may be high when the first letter of the

target word is not given.

The other underlying reason for giving the first letter of target word was that it would be difficult to judge the coming alternatives. Briefly, each one of the sentences included merely the node word of the collocation, namely the noun, and the participants were required to supply the missing the collocate word, namely the verb, to complete the collocational string.

As for the adjective- noun part of the test, it also involved 20 adjective-noun collocations used in controlled sentences in which only one answer was probable. In each sentence, the node, namely “noun”, was provided with the students and it was asked from students to find the missing adjective collocates best fitting the sentences. The object of this part of the test is to measure the students’ adjective- noun type of collocational knowledge and their competence to produce the target L2 collocations in a controlled way.

Sentences composing the test were taken from COCA, Collins Cobuild Dictionary, Longman Dictionary of Contemporary English. Example questions of the controlled productive test are illustrated as follows:

Example: “Unless you **g**_____ **priority** to your family, this hectic job will cause you to divorce soon”.

“I’m driving, so I had better have a **s**_____ **drink** such as coke, lemonade, fruit juice, namely anything non-alcoholic”.

The maximum possible score to get from the controlled productive test was 40.

(See appendix B to see the full version of controlled-productive test).

3.4.3. Acceptability judgment test (receptive test)

The primary object of the receptive test is to measure the participants’ receptive ability to recognize the target collocations. The same 40 target collocations as the ones used in the controlled- productive test were again utilized in the receptive test to compare students’ receptive and productive abilities. Sentences underwent no changes as in the previous studies to prevent other factors from interfering with the measurement such as the level of difficulty and length of the sentences, the number of unknown vocabulary items in the sentences, etc. (Shehata, 2008; Alsakran, 2011). The test included 60 questions. That is to say, only 20 mis-

collocations were added as distractors. The main reason for not giving the equal number of distractors was not to cause fatigue for the students. Also, some of the other previous studies, having introduced the acceptability judgement tests in a decontextualized way, were also inclined to present distractors in the number of nearly half as the total number of the target items (Gyllstad, 2007; Shehata, 2008; Alsakran, 2011; Bağcı, 2012). Briefly, the participants were presented with the same sentences as in the productive tests with the extra 20 sentences functioning as distractors and required to decide whether the underlined collocations were acceptable or unacceptable.

Example: “Unless you give priority to your family, this hectic job will cause you to divorce soon”. (A)

“The government lifts expectations about bringing down the rate of inflation, but always fails to keep its promises”. (U)

The maximum possible score to get from the receptive test was 40.

(See appendix C to see the full version of receptive test).

3.5. Item Development

For the item development, approximately 200 verb-noun and adjective-noun collocational items were extracted from the previous studies. (Huang, 2001; Taeko, 2005; Gyllstad, 2007; Hama, 2010; Wolter and Gyllstad, 2013; Men, 2015; Kim and Chon, 2017; Nguyen and Webb, 2017; Cangır, 2018; Wolter and Yamashita, 2018). After that, the component words building up the target collocations were searched on the Nation’s (2012) BNC/COCA lists to see if the component words are from the most frequent 1K, 2K and 3K frequency levels. The reason to narrow down the component words with the first three 1K word families was to ensure that students’ inability to answer the question does not stem from the lack of knowledge of single word items. (The lists are available at Paul Nation’s website: <https://www.victoria.ac.nz/lals/about/staff/paul-nation>).

Here are the lists of which words belong to which frequency level in Nation’s (2012) BNC/ COCA lists:

Table 3. 1. *Word frequencies for the productive collocation test*

Frequency level	Verbs	Adjective	Nouns
1st level	Open, reach, give, break, make, tell, put, take, throw, blow, pay, set	Serious, natural, deep, rich, white, warm, bright, soft, hard, late, close, short, hard, heavy, strong, black	Fire, pain, money, heart, lie, rule, doubt, party, visit, eye, sleep, history, drink, husband, teeth, run, rain, smell, coffee
2nd level	Gather, commit, ease, deliver, cast	Common, sharp	Evidence, murder, goal, speech, pride, whistle, exam, example, enemy, injury, welcome, future, knife, evidence, attention, copy
3rd level	donate	Naked, false	Priority, sacrifice, emphasis, disaster

As is seen in the table 3.1, most of the words belong to the first 1K frequency level. Then the items not occurring in the first 3K frequency levels were discarded from the list.

As a next step, all selected collocations and their components were checked for their frequency values in Corpus of Contemporary American English (COCA) by Davies (2008). First of all, the reason for choosing COCA over the other corpus was that it is one of the largest corpora available for free of charge and widely used one as maintained by its developers. There are more than 570 million words in different registers such as spoken, fiction, magazines, newspapers, and academic texts, which are spread equally across the years (1990-2017). Secondly, according to a study conducted by Durrant (2014), it was displayed that frequency measures of COCA were more tightly correlated with participants' collocational competence compared to frequency measures of British National Corpus (BNC).

Raw collocational frequency values for a collocation and for its components were calculated in COCA. To illustrate, the frequency values of the collocation "heavy rain" are to be examined. Firstly, the frequency occurrences of the words "heavy (48158)", "rain (31377)" and "heavy rain (939)" are displayed respectively.

When searching for the frequency levels of the component words, lemmatization was ignored based on Sinclair's (1991) assert that lemmatization presumably is unsuccessful at indicating the dissimilarities in collocational choice between different kinds of a lemma. Moreover, as far as Durrant (2014) is concerned, there are not any clear distinctions between lemmatized and non- lemmatized frequency values in regard to their correlation with

students' collocation knowledge. That is, words were computed in their word levels, for example, it was sought for "give" not "gave or given".

Both for the adjective-noun and verb-noun collocational combinations, the search was set within a span of 4:4. That is, four words to the left of the collocate and four words to the right of the nodes were allowed as suggested by Sinclair (1991).

After collocations' frequency of occurrences having been displayed, the values were written in AM calculator which was devised by Cangir (2018) to calculate their t-scores and mutual information scores (MI).

According to this calculation, it is seen that as MI score gets bigger, the association between word pairs gets stronger. If the MI score is close to 0, it means word pairs come together by chance. Durrant and Doherty (2010) contend that MI score's being 3.0 or higher is enough to call a word pair as a collocation. On the other hand, Gablasova et al., (2017) allege that when word pairs are composed of high frequent words, MI value pose a problem for collocational frequency calculation as it is inversely correlated with frequency. That is why, t score was included into the item development procedure. As far as Durrant and Doherty (2010) are concerned, t score's being 2.0 or higher is enough to call a word pair as a collocation. Therefore, only the items with MI score bigger than 3 and t-score bigger than 2 were kept in the list.

As a next step, it was asked from 2 experts with PhD degree and having studies about collocations to translate the items into Turkish. Based on experts' translation, the collocations to be utilized for the collocation tests were eliminated again after being cross-checked with their Turkish equivalents in the Turkish National Corpus (TNC) which was developed by Aksan et al. (2012). TNC comprises 50 million words which are composed of 98% written and %2 spoken texts covering the years between 1990 and 2009. It is claimed to be the most representative corpus of Turkish.

Frequency values were not taken into considerations for Turkish counterparts. They were checked just to see if they are collocations in Turkish or not. Moreover, the items translated into Turkish with one or three words were ruled out from the lists. Only collocations with two-word translations stayed on the list just as their English counterparts.

The last step was the categorization of them into congruent and incongruent categories. It was requested from 5 experts to decide if they are congruent with Turkish or not. Out of 5

experts, one is a professor working at a state university. 3 of them are lecturers at a state university with PhD degree, and the other expert works as a research assistant at a state university and is still continuing to his PhD.

Categorization of the collocation based on congruency requires inter-rater agreement as the study involves a judgement variable. For the current study, Brezina's (2018) suggestion that agreement of 80% and above is an ideal was followed. That is, raw agreement was calculated. To illustrate,

$$\text{Raw agreement} = \frac{\text{cases of agreement}}{\text{total number of cases}} \text{ (Brezina, 2018; p,89)}$$

The agreement of 80% corresponds to 4 people to express the same thing for the same item. Therefore, we set the criteria that:

- No fewer than 4 experts out of 5 agree on the target collocation is congruent or non congruent.

Collocations meeting the inter- rater agreement criteria could take place in the list.

As a last step, they were also checked in the Oxford Collocations Dictionary for Students of English to verify that they appear as collocations in the collocation dictionary.

Ultimately, a total of 40 items (10 congruent and 10 non- congruent verb- noun, and 10 congruent and 10 incongruent adjective- noun) composed the items of the study.

So as to assure collocations in all groups are akin to one another in respect of difficulty and comparableness, both t score and MI scores were compared. According to t test results, there was no significant difference across the groups.

To sum up, the following criteria were adopted in the study to develop items for the collocation tests:

- The constituents of the target collocation items should be from the first three 1000 frequency levels based on Nation's (2012) frequency list.
- T-score > 2; MI score > 3 should be set for collocation selection.
- Selected word pairs should be listed as collocations in the collocation dictionary.
- The Turkish counterparts of the collations should also be a collocation in Turkish.
- They should be expressed with 2 words both in English and Turkish.

The table 3.2 below illustrates the final version of the items used in the study.

Table 3.2.*Collocations used in the productive test*

Verb-noun Collocations Congruent	Verb-noun Collocations Non-congruent	Adjective-noun Collocations Congruent	Adjective -noun Collocations Non-congruent
Gather evidence (Hama,2010)	Put emphasis (Cangir,2018)	Common enemy (Wolter and Gyllstad,2013)	Soft drink (Cangir,2018)
Commit murder (Cangir,2018)	Deliver a speech (Gyllstad,2007)	Serious injury (Hama,2010)	Hard evidence
Open fire (Cangir,2018)	Break the rules (Men,2015)	Naked eye (Cangir,2018)	Late husband
Ease pain (Hama,2010)	Cast doubt (Cangir,2018)	Natural disaster (Nguyen and Webb,2017)	Close attention (Wolter and Yamashita,2018)
Donate money (Hama,2010)	Take pride (Nguyen and Webb,2017)	Deep sleep (Cangir,2018)	False tooth (Cangir,2018)
Reach a goal	Throw a party (Gyllstad,2007)	Rich history (Cangir,2018)	Short run (Cangir,2018)
Give priority (Cangir,2018)	Blow a whistle (Hama,2010)	White lie (Cangir,2018)	Hard copy (Nguyen and Webb,2017)
Break heart (Cangir,2018)	Pay a visit (Cangir,2018)	Warm welcome (Cangir,2018)	Heavy rain (Cangir,2018)
Make sacrifice (Gyllstad,2007)	Take an exam (Kim and Chon, 2017)	Bright future (Gyllstad,2007)	Strong smell (Cangir,2018)
Tell lie (Gyllstad,2007)	Set an example (Cangir,2018)	Sharp knife (Taeko,2005)	Black coffee (Huang,2001)

Note: The names in the parenthesis states the study from which the items were chosen.

You can see the frequency values in COCA in appendix D and appendix E.

As for the distractors used in the receptive collocation tests, there were 20 distractors. In fact, they were also selected from the previous studies. The criteria for a distractor selection were as follows:

- The constituents of the target mis-collocation items should be from the first three 1000 frequency levels based on Nation's (2012) frequency list.
- The mis-collocations function as distractors should have MI score smaller than 1 (Nguyen and Webb,2017).

The table 3.3 below illustrates the final version of the items used in the receptive collocation test.

Table 3.3. *Mis-collocations used in the receptive test*

Mis-collocations for verb-noun	Correct Target Collocation	Mis-collocations for adjective-noun	Correct Target Collocation
Finish relationship (Kim and Chon, 2017)	End relationship	Close future (Kim and Chon, 2017)	Near future
Lift expectation (Kim and Chon, 2017)	Raise expectation	Light injury (Kim and Chon, 2017)	Minor injury
Do effort (Kim and Chon, 2017)	Make effort	Fast glance (Nguyen and Webb, 2017)	Quick glance
Give harm (Kim and Chon, 2017)	Do harm	Original tongue (Bağcı, 2014)	Mother tongue
Tell prayer (Shehata, 2008)	Say prayer	Weak chance (Businessenglishresources.com)	Slim chance
Pull attention (Hama, 2010)	Draw attention	Beneficial diet (Businessenglishresources.com)	Healthy diet
Brush the floor (Gyllstad, 2007)	Sweep the floor	Rough criticism (Businessenglishresources.com)	Harsh criticism
Do debate (Kim and Chon, 2017)	Have debate	Hot argument (Kim and Chon, 2017)	Heated argument
Reply the door (Gyllstad, 2007)	Answer the door	Hard competition (Gyllstad, 2007)	Strong competition
Make research (Hama, 2010)	Do research	Strict cold (Bağcı, 2014)	Bitter cold

Note: The names in the parenthesis states the study from which the items were chosen.

3.6. The Pilot Studies for the Instruments of the Study

A pilot was conducted with 24 students for productive collocation test. For the reliability of the test, Cronbach's Alpha value was found to be $\alpha = 0,879$. As is illustrated in table 3.4, the test has high reliability according to the criteria given by Özdamar (2004).

Table 3.4. *Criteria for setting the Cronbach's Alpha value (Özdamar, 2004, p.633)*

a value	Reliability of the instrument
$0.00 \leq \alpha < 0.40$	No reliability
$0.40 \leq \alpha < 0.60$	Low reliability
$0.60 \leq \alpha < 0.80$	Quite reliability
$0.80 \leq \alpha < 1.00$	High reliability

Regarding the validity of the productive collocation test, the test was handed in 5 different experts to get comment on its validity. One of the experts has been an instructor with a PhD degree at a state university at a school of foreign languages for more than 10 years. The second expert has been teaching English in the USA. He has been a teacher for 26 years and holds a PhD degree. As for the third expert, he is the native speaker of English and he has been teaching English in Turkey nearly for years. The fourth expert has been an ELT teacher in a private institution for 29 years. As for the last expert, he has been teaching English for 13 years and instructs testing courses. He holds MA degree. After getting feedback on the test from the experts, some of the sentences underwent some changes.

As for the reliability of the receptive test, a pilot study was carried out with 20 students. Cronbach's Alpha value was found to be $\alpha = 0,79$. According to the criteria explained above in the table 3.4, the instrument has quite reliability.

Regarding the validity of the test, the items were firstly checked in COCA. The items with MI score lower than 1 were selected as distractors (Nguyen and Webb, 2017). After that, the distractor sentences were sent to 2 native speakers to ensure that distractors are really miscollocations. One of the native speakers lives in England, Scarborough and have been teaching English for nearly 25 years in a language course to people from all around the world. The other native speaker lives in Turkey and have been teaching English to Turkish people for 10 years. For 2 items, one of the experts said that it is possible to use them in spoken English. Therefore, they were changed with new items.

As for the validity and reliability of the vocabulary size test, the researcher did not conduct a pilot study as they were checked by the test's developer. Beglar (2010) conducted a study with 19 English native and 178 Japanese native speakers to provide validity evidence. According to the results of the study, most of the items displayed a good fit to the Rasch model. It justified 85.6% of the variance. Furthermore, the results of the study also displayed that Rasch reliability measures were 0,96.

3.7. Data Collection Procedure

The data were collected in three different phases during the 2018-2019 educational year. Firstly, vocabulary size test was conducted as an in-class activity to the students

studying at ELT department at Anadolu University. The test was carried out at the end of fall semester. During the implementation, the participants were not allowed to use any language sources like dictionaries or mobile phones. The time allocated to complete the test was 40 minutes as suggested by Nation and Beglar (2007).

The second stage of data collection was controlled productive task. The data wERE collected at the beginning of the spring semester. The test lasted for 20 minutes approximately.

As the last stage, receptive task was conducted and 15 minutes were allocated to the students. 3-week interval was given to eliminate the memory effect across the instruments as the sentences were the same in productive and receptive tests. As one of the aims of the study is to see the correlation between their overall vocabulary size and their receptive and productive collocation tests, and to compare their competence at these 3 tests, the students who did not take part in all three tests were discarded from the study. In the end, 102 students were involved in all three stages of the study.

3.8. Data Scoring and Data Analysis

After data collection was completed, the test results were checked by the researcher. Firstly, the 140 questions in vocabulary size test were evaluated. It was scored as correct or incorrect, and the answers left blank were also counted as incorrect. The total correct numbers out of 140 were taken as their final points.

As for the second scores, they were the results from the controlled- productive test. It was scored out of 40. However well- restrictedly it was tried to design, there were more than one acceptable correct answers for a few questions. To be more precise, for the collocations “ease the pain, serious injury, close attention, rich history and bright future”, their alternatives “eliminate the pain, severe injury, careful attention, remarkable history and brilliant future” were accepted for productive- wise analysis although they were produced by only a few numbers of the students. Before accepting them as correct answers, they were checked for their frequency values in COCA as they had meaningful values, they were included for participant- wise analysis but they were not accepted in collocation-wise analysis as they had different frequency values from the target collocations.

The target collocate words were generally given in their base forms, but even if they

needed getting some inflectional morphemes, it was ignored. That is, students' morphological or spelling errors were not taken into consideration as the main focus was on participants' correct lexical choices.

As to students' third score, they were obtained from the receptive collocation test. As in the aforementioned tests, the data were scored as correct or incorrect and unanswered items were also treated as incorrect items. Regarding the 20 distractors, they were not included into the evaluation as the research's main point was not the students' detecting the miscollocations correctly. Therefore, only the same 40 items as in productive test were evaluated.

After completing data gathering, other reliability analyses were conducted to check the reliability of the latest version of the two tests apart from the SPSS reliability analyses conducted on the pilot version of the tests. According to those analyses, both tests have high reliability based on the criteria set by Özdamar (2004), which were displayed in the table 3.4 Cronbach's Alpha was found to be $\alpha = 0,882$ for the productive collocation test and it was found to be $\alpha = 0,819$ for the receptive test.

As is seen, quantitative data were gathered from the vocabulary size test, the productive test and the receptive test. The data collected from the instruments were analysed by using SPSS.23 version. After gathering the data, two types of data were entered. The first type was participant- wise data analysis. That is, the data were arranged based on each participant's total score on receptive, productive and vocabulary size test. The aim of the participant- wise analysis was to test the difference between receptive and productive collocational knowledge and its relationship with vocabulary size. With this aim, firstly a paired sampled t- test then correlation test, namely Pearson Product Moment analyses were carried out. As for the second type of data analysis, it was collocation- wise type. That is, the data were organized based on 40 target collocations. For each collocation, the total correct numbers given by the participants in both receptive and productive tests, the frequency measures (t-scores, MI scores, raw collocational frequency values), congruency, parts of speech (adjective-noun or verb- noun) were indicated. The purpose of the analysis was to test the effect of congruence, frequency and collocational patterns on collocational performance. With this purpose, t- tests and correlation analyses were implemented. The test scores of receptive and productive tests were dependent variables while other variables (congruence, frequency, parts of speech, vocabulary size) were independent variables.

CHAPTER 4

RESULT

4.1. Introduction

The present chapter involves numerical data collected from three instruments and descriptive statistics, t- tests and correlation analyses scrutinizing the difference between productive and receptive collocational knowledge, the relationship between vocabulary size test and collocational knowledge and the influence of frequency, congruency, collocational patterns on collocational performance. Moreover, the research questions raised at the start of the study will be answered and the answers will be discussed briefly. All in all, the chapter is designed to introduce the findings of the implementation process and present an initial and brief discussion of the result regarding the relationship between some variables and collocational knowledge.

In the current study, the data will be analysed in two ways. First of all, the data will be examined in a participant- wise. That is, the data were arranged based on the number of the correct answers of each participant on each test. With participant- wise data, the first two research questions will be answered. In other words, the difference between their receptive and productive collocational knowledge and the relationship between their vocabulary size and receptive/ productive collocational knowledge will be answered based on participant- wise data. Secondly, the data will be analysed in collocation- wise. More precisely, the data were arranged based on the number of correct answers for each collocation in the productive and receptive collocational knowledge test. With collocation- wise data, the third research question will be answered. Namely, the best indicator/s of the receptive and productive collocational knowledge among some variables will be tried to be found.

Before starting to display the results of the study, the results of the normality test will be mentioned because it is necessary to check the normality assumptions to carry out parametric statistical tests. More precisely, tests of normality, which ensure the variables are normally scattered and continuous, are required to implement a healthy calculation process (Kalaycı, 2010). For that reason, Shapiro- Wilk test was run to measure the normality of the results. The table 4.1 shows the result of the tests of normality.

Table 4. 1. *Tests of normality (Shapiro- Wilk)*

	W	p
Productive	.94	.00
Receptive	.97	.00

According to normality test results, the data were not found normally distributed. However, as the sample size increases, normality parameters become more restrictive and it becomes harder to declare that the data are normally distributed. Therefore, normality testing becomes less important for very large data sets. Instead, the skewness and kurtosis values are evaluated and the values were found between ± 1.0 , thus the data were accepted as normally distributed (George and Mallery, 2010; Hair et al., 2013; Tabachnick and Fidell, 2013).

4.2. Comparison of Productive and Receptive Collocational Knowledge of the Participants

First of all, to answer the first research question “Is there a significant difference between 4th grade ELT students’ productive and receptive collocational scores?”, the data were arranged in a participant- wise. To test whether 4th grade ELT students have different receptive and productive collocational knowledge, descriptive statistics and a paired samples t-test were performed. Participants’ receptive and productive collocational test scores were independent variables in paired samples t test analysis.

According to descriptive statistics, it was revealed that mean score and standard deviation for productive collocational knowledge were M: 24.35, SD: 7.05 (60,87%) and mean score and standard deviation for receptive collocational knowledge were M: 32.31, SD: 4.77 (80,77%).

Table 4. 2. *Descriptive statistics for receptive and productive collocational knowledge*

	N	Mean	SD	SE
productive	102	24.35	7.055	0.699
receptive	102	32.31	4.772	0.472

As seen in the descriptive statistics, students' productive collocational competence lagged behind their receptive one. Another important point to be noted, the standard deviation was higher for productive knowledge compared to receptive knowledge, which implies their productive knowledge varied more among the participants. It was also noted that the correlation between the two skills was estimated at $r = .80$, $p < .001$, suggesting that paired samples t- test was appropriate in this case. The null hypothesis of no difference between those two skills was rejected $t(101) = -18.76$, $p < .001$. Thus, students' receptive skills mean was statistically higher than productive skills. Cohen's d was estimated at -1.85 , which is a large effect based on Cohen's (1992) guidelines. The results of the paired samples t- test and descriptive statistics showed below.

Table 4. 3. *Paired samples t-test for receptive and productive collocational knowledge*

	t	df	p	Cohen's d
Productive- Receptive	-18.76	101	.00	-1.85

T- test showed that receptive collocational skills of students were better than their productive ones. In this respect, the results of the study show similarity to the earlier studies (Shehata, 2008; Alsakran, 2010; Bağcı, 2014; Mutlu, 2015; Ramadhan, 2017).

4.3. The Relationship between Overall Vocabulary Size and Receptive / Productive Collocational Knowledge

The second research question was “Is there a relationship between their overall vocabulary size scores and receptive / productive collocational scores?”. To gauge students' receptive vocabulary size, Nation and Beglar's (2007) vocabulary size test was used, which is composed of 140 questions. As for the receptive and productive collocation tests, they are comprised of 40 questions. Table 4.4 provides the results of the descriptive statistics in detail.

Table 4. 4. *Descriptive statistics for vocabulary size, receptive and productive collocation tests*

	N	Range	Minimum	Maximum	Mean	SE	SD
vocabulary size	102	76,0	40,0	116,0	76,020	1,7484	17,6
productive	102	28,0	10,0	38,0	24,353	,6986	7,05
receptive	102	23,0	17,0	40,0	32,314	,4725	4,77

Descriptive statistics showed that mean scores of the participants for receptive vocabulary size, receptive collocation and productive test were M= 76.02, M=32.31 and M= 24.35 respectively. The highest score was 38 and the lowest score was 10 out of 40 in productive test and the highest score was 40 and the lowest score was 17 out of 40 in receptive test. As for vocabulary size, the range for its score was larger. The maximum score was 116 while the minimum score was 40 out of 140.

Moreover, to understand if there is any correlation between participants' receptive vocabulary size and their receptive and productive collocational knowledge, Pearson Product-Moment Correlation test was run. The number of the correct answers of the participants in vocabulary size test is the independent variable, and the numbers of the correct answers of the participants in productive and receptive collocational tests are dependent variables. Table 4.5. displays the correlation analysis for participants' vocabulary size and receptive / productive collocational knowledge.

Table 4. 5. *Pearson correlations for vocabulary size and receptive / productive collocational knowledge*

		vocab size	productive
productive	Pearson's r	.76	—
	p-value	.04	—
receptive	Pearson's r	.74	.80
	p-value	.03	.03

The Pearson Correlations Analysis showed that there was a strong positive correlation between vocabulary size and receptive ($r = .74$, $p = .03$.) and productive $r = .76$, $p = .04$) collocational knowledge of the students. When these correlations were squared, it was found that vocabulary size interpreted 55% and 59% of the variance in the receptive and productive collocation tests respectively. A positive strong correlation was also found between students' receptive and productive skills ($r = .80$, $p = .03$). The analysis showed that the students with larger vocabulary size had better receptive and productive collocational knowledge.

So as to visualize better how the results of vocabulary size test and receptive/ productive collocational knowledge test results move together, scatter diagram was also given below. Figure 4.1. represents the scatter diagram for the relationship of vocabulary size and receptive / productive collocational knowledge.

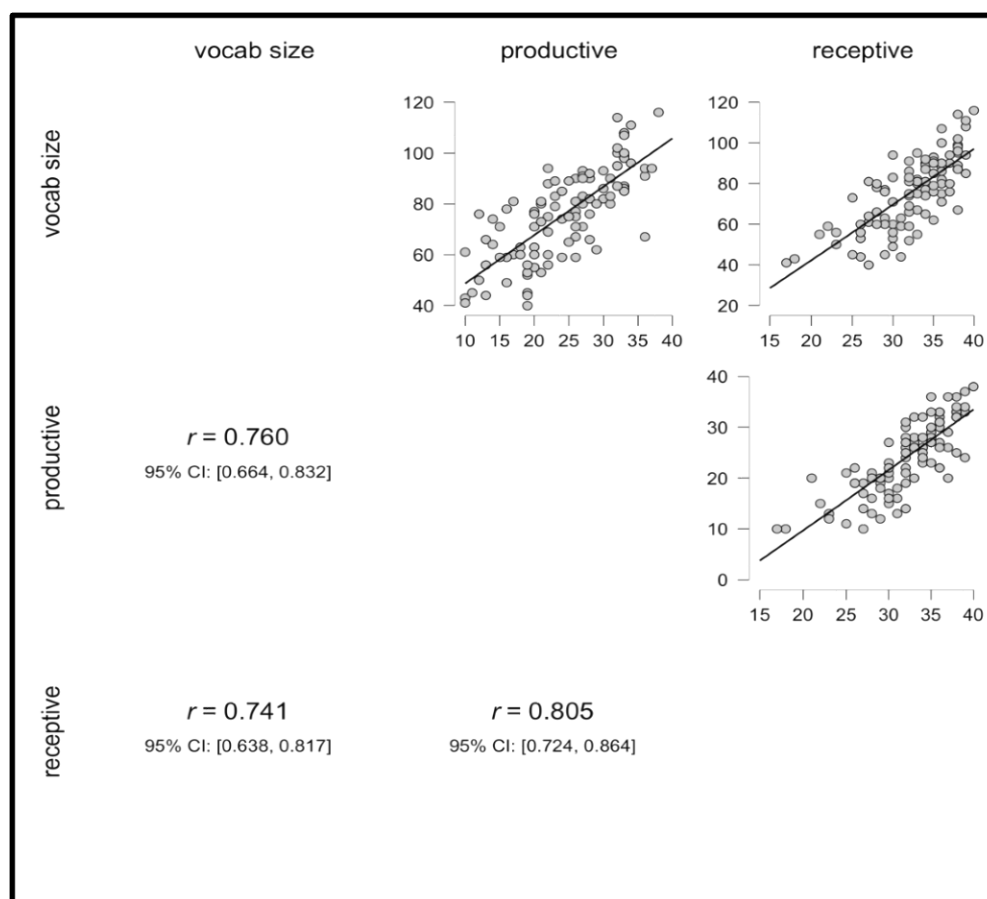


Figure 4. 1. Scatter diagram for the relationship for vocabulary size and receptive / productive collocational knowledge.

The points are about the close regression line, which displays a positive strong uphill pattern. It is understood that when vocabulary size of the student increases, so do their receptive and productive collocational knowledge. The results of second research question are consistent with the previous studies (Gitsaki, 1999; Taeko, 2003; Taeko, 2005; Gyllstad, 2007; Bergström, 2008; Kadlecova, 2014; Mutlu, 2015; Nguyen and Webb, 2017; Nugroho, 2018).

4.4. Exploring the Possible Indicator/s of Receptive and Productive Collocational Knowledge

In this part, the results of the data analyses for the influence of congruency, frequency, collocational patterns on receptive and productive collocational performance will be indicated. Collocation wise analyses will be implemented to answer the third research question of the current study as stated below:

3) Does

a) Congruence

b) Collocational frequency (MI score, t score and raw collocational frequency)

c) Collocational patterns (A-N and V-N)

affect their productive and receptive collocational knowledge?

To answer the questions above, the data were rearranged in the pattern of collocation-wise. That is, the total number of correct answers for each collocation was calculated. The reason for choosing the collocation wise data analysis was that congruence, frequency, collocational patterns all are about collocations' features, which have possibility to influence collocational knowledge, rather than the features of the participants.

For the second wave of calculation, the dependent variables were the number of correct answers for each collocation and independent variables were congruency, frequency values and parts of speech. Results will be discussed in consideration of the independent variables.

4.4.1. Congruency

Collocations were grouped according to their being congruent and non- congruent with Turkish in the study, and each group involved 20 collocations.

To see the effect of congruency on receptive and productive collocational knowledge, two-independent samples t-test was run.

The results of the two-independent samples t-test showed that mean receptive collocational performance level differs between congruent ($M = 92.40$, $SD = 8.21$, $n = 20$) and non-congruent groups ($M = 72.40$, $SD = 24.83$, $n = 20$) at the .05 level of significance ($t = 3.41$, $df = 38$, $p < .05$, 95% CI for mean difference 8.15 to 32.09). Likewise, the results showed that productive collocational knowledge level also differs significantly between congruent ($M = 74.75$, $SD = 16.02$, $n = 20$) and non-congruent categories ($M = 49.45$, $SD = 29.13$, $n = 20$) at the .05 level of significance ($t = 3.4$, $df = 38$, $p < .05$, 95% CI for mean difference 10.24 to 40.35). Cohen's d values were estimated at $d=1.076$ and $d=1.081$ for productive and receptive dimensions respectively, which are large effects.

Table 4. 6. *Results of t-tests and descriptive statistics for receptive and productive collocational performance by congruency*

Outcome	Group						95% CI for Mean Difference				
	Congruent			Non-Congruent							
	M	SD	n	M	SD	n		t	df	p	Cohen's d
Productive	74.75	16.02	20	49.45	29.13	20	10.24, 40.35	3.4	38	.00	1.076
Receptive	92.40	8.21	20	72.40	24.83	20	8.15, 32,09	3.41	38	.00	1.081

While examining the table, seeing that the number of the items is $n=20$, and the mean score is $M= 74.75$ can be confusing, but it should be noted that data were arranged based on the total number of the correct answers by the participants out of 20 congruent and 20 non-congruent collocations. That is, the mean score of the total number of correct answers for 20 congruent and 20 non-congruent collocations for each test was calculated.

As it was displayed in the table 4.6., congruent collocations are learnt better than non-congruent ones. This is probably rooted in the fact that component words in the target collocation share familiar or unfamiliar meaning connections between target language and mother tongue. That is, it is clearly seen that correspondences between L1 and L2 collocations (congruency) contribute to learning of collocations in a positive way, while

dissimilarities between mother tongue and target foreign language pose a difficulty for the students.

The results of the study show similarities to the former studies implemented on congruency (Nesselhauf, 2003; Mahmoud, 2005; Taeko, 2005; Yamashita and Jiang, 2010; Laufer and Waldman, 2011; Wolter and Gyllstad, 2011; Lee, 2016; Kim and Chon, 2017; Wolter and Yamashita, 2018). The result also is in accord with the postulation by Ellis, R and Ellis, R.R (1994) that positive interference happens between languages when L1 and L2 collocations are corresponding, conversely, when two collocations are distinctive, negative transfer and difficulty crop up.

The data were further analysed to understand the influence of congruency on parts of speech regarding adjective- noun and verb-noun categories by means of two-independent samples t-test. The results of the two-independent samples t-test showed that mean receptive adjective- noun collocational skill level differs between congruent ($M = 93.5$, $SD = 12.8$, $n = 10$) and non- congruent collocations ($M = 72.9$, $SD = 26.94$, $n = 10$) at the .05 level of significance ($t = 2.45$, $df = 18$, $p < .05$). Receptive verb- noun collocational skills showed similar results by congruency that differs between congruent verb-noun ($M = 91.3$, $SD = 9.51$, $n = 10$) and non congruent collocations ($M = 71.9$, $SD = 25.41$, $n = 10$) at the .05 level of significance ($t = 2.26$, $df = 18$, $p < .05$). As for the effect size, cohen's effect size values ($d = 0.97$ for receptive knowledge and $d = 1.01$ for productive knowledge) suggested congruence has a large effect.

Another independent samples t-test was performed to see whether the findings were along the same line with productive skills. The mean adjective- noun collocational skill level differs between congruent ($M = 77.2$, $SD = 12.8$, $n = 10$) and non-congruent ($M = 47.4$, $SD = 26.94$, $n = 10$) collocations at the .05 level of significance ($t = 3.15$, $df = 18$, $p < .05$), but the t-test results of verb- noun collocational skill level by congruency showed that there was no difference between congruent ($M = 72.3$, $SD = 19.09$, $n = 10$) and non congruent collocations ($M = 51.5$, $SD = 32.51$, $n = 10$) at the .05 level of significance ($t = 1.74$, $df = 14.55$, $p > .05$) despite the fact that the mean scores of congruent verb-noun collocations were prominently higher than non- congruent ones. As for cohen's effect size values for productive knowledge, it is suggested that congruence has a large effect on adjective-noun collocations

($d=1.41$), but congruence has a medium effect size for verb-noun collocational knowledge ($d=0.78$).

The results show that congruent collocations are seem to be learnt better irrespective of the different parts of speech except for productive verb- noun collocations. Table 4.7 displays the results by congruency regarding different parts of speech.

Table 4. 7. *Results of t-tests for adjective - noun and verb- noun collocations by congruency*

Skill	Part of Speech	Congruency	n	Mean	Sd	t	df	p	Cohen's d
Receptive	Adj-Noun	Congruent	10	93.5	12.8	2.45	18	.02	0.97
		Non-Congruent	10	72.9	26.94				
	Verb-Noun	Congruent	10	91.3	9.51	2.26	18	.03	1.01
		Non-Congruent	10	71.9	25.41				
Productive	Adj-Noun	Congruent	10	77.2	12.8	3.15	18	.00	1.41
		Non-Congruent	10	47.4	26.94				
	Verb-Noun	Congruent	10	72.3	19.09	1.74	14.55	.10	0.78
		Non-Congruent	10	51.5	32.51				

While examining the table, it should be noted that the mean score of the total number of correct answers of the participants for 20 adjective-noun and 20 verb-noun collocations, which have been subcategorized as 10 congruent and 10 non- congruent collocations, was calculated for the both dimensions.

As seen in table 4.7., the best known category was congruent adjective- noun collocations (M=93.5) and it was followed by congruent verb- noun (M=91.3), non-congruent adjective- noun (M=72.9), non- congruent verb- noun (M=71.9) collocations for receptive dimension. As for productive dimension, the best known category was congruent adjective- noun (M=77.2) and it was followed by congruent verb- noun (M=72.3), non-congruent verb- noun (M=51.5), non- congruent adjective- noun (M=47.4) collocations.

4.4.2. Frequency

In the current study, collocations were not categorized as items from high, mid or low frequency. Instead, their frequency values (t-score, MI score, raw collocational frequency) were just extracted from COCA and a Pearson correlation analysis was conducted based on

the number of their occurrences in COCA. The table 4.8. displays the result of the analyses for the collocational knowledge by frequency.

Table 4. 8. *Pearson correlations analyses for receptive and productive collocational performance by frequency*

		t_score	MI_score	raw_score	pro_corr_n
pro_corr_n	Pearson Correlation	-.09	.01	-.12	
	Sig. (2-tailed)	.56	.94	.45	
	N	40	40	40	
rec_corr_n	Pearson Correlation	-.05	.08	-.09	.88**
	Sig. (2-tailed)	.72	.60	.58	.00
	N	40	40	40	40

As is seen in the table 4.8., the Pearson Correlations Analysis showed that raw collocational frequency, MI and t score did not turn out to be related to productive and receptive collocational knowledge. The result regarding the relationship between t score and raw collocational frequency and collocational knowledge contradicts with some of the previous studies (Ellis et al., 2008; Durrant and Schmitt, 2009; Wolter and Gyllstad, 2013; Gyllstad and Wolter, 2016). Also, this result goes counter to the studies which found moderate effect of frequency on collocational performance (Durrant and Schmitt, 2010; Durrant, 2014; Fernandez and Schmitt, 2015). However, the result is accorded with the studies by Kadlecova (2014) and Macis and Schmitt (2017). On the other hand, the fact that MI score did not relate to productive or receptive collocational knowledge was not surprising since many previous studies have shown that MI score is one of the important predictors of collocational performance mostly for natives. Along the same line with the current study, most of the other studies, which were conducted in different contexts (Durrant and Schmitt, 2009; Ellis et al., 2014; Fernandez and Schmitt, 2015; Nguyen and Webb, 2017), also found MI was not correlated with collocational competence. Finally, the analyses indicated that there is a positive and high correlation between students' receptive and productive skills ($r = .88$, $p = .00$).

4.4.3. Collocational patterns

In the present study, two collocational combinations were used; adjective-noun and verb- noun. To see the influence of different collocational patterns and to see the effect of typology, in other words, to understand the effect of different (verb+noun/ noun+verb) and similar (adjective+noun) word order between English and Turkish, the data analyses were conducted. More precisely, to understand if there was a significant difference between two combinations affecting the knowledge of collocation, the two-independent samples t- test was carried out. The table 4.9. shows the influence of typology and different parts of speech on collocational performance.

Table 4. 9. *Results of t-tests and descriptive statistics for receptive and productive collocational performance by parts of speech*

Outcome	Group						95% CI for Mean Difference				
	Verb- Noun			Adj- Noun							
	M	SD	n	M	SD	n		t	df	p	Cohen's d
Productive	61.90	28.05	20	62.30	25.59	20	17.59, 16,79	-.47	37.8	.00	0.075
Receptive	81.60	21.16	20	83.20	21.11	20	15.13, 11,93	-.23	38	.00	0.014

The results of the two-independent samples t-test showed that the mean receptive collocational knowledge level differed between verb-noun (M = 81.60, SD = 21.16, n = 20) and adjective-noun (M = 83.20, SD = 21.11, n = 20) at the .05 level of significance (t = -.23, df = 38, p < .05, 95% CI for mean difference 15.13 to 11.93). Similarly, the results showed that productive collocational knowledge level differed between verb-noun (M = 61.90, SD = 28.05, n = 20) and adjective-noun (M = 62.30, SD = 25.59, n = 20) at the .05 level of significance (t = -.47 df =38, p < .05, 95% CI for mean difference 17.59 to 16.79) either. It was displayed that both receptively and productively students are slightly better at adjective-noun collocations compared to verb- noun ones. As for the cohen's effect size value, it suggested just small effect size, but it cannot be undermined.

While examining the table 4.9, it should be noted that there were 20 adjective-noun and

20 verb-noun collocations in receptive and productive tests and the data were arranged according to the total number of correct answers for each collocation by 102 participants. More precisely, the mean score of the total number of the participants' correct answers for 20 adjective-noun and 20 verb-noun collocations were calculated and compared for each dimension.

The results run counter to the previous studies by Shehata, 2008; Alsakran, 2010; Hama 2010; Bağcı 2014; Gaballa and Al-Khayri, 2014; Kim and Chon 2017 whose studies displayed students were better off with verb- noun combinations. On the other hand, the finding shows similarities to the studies by Kuo (2009) and Phoocharoensil (2011) who disclosed that students were better off with adjective- noun combinations.

All in all, various descriptive statistics, correlation analyses and t tests displayed that the most influential factor for collocational knowledge was students' receptive vocabulary size. In fact, it is not surprising result because as mentioned in part 2.4.1, vocabulary size relates to overall proficiency greatly. Moreover, larger vocabulary size facilitates the organization in mental lexicon (Kadlecova, 2014).

Another finding of the study was that students' productive collocational competence lagged behind their receptive collocational competence. When it comes to collocational patterns, a significant correlation was displayed and it was seen that the mean score for adjective-noun type of collocations was just slightly higher than the verb- noun ones.

The other important issue to speak of is the effect of congruency. It was seen that however proficient students were, they heavily relied on their L1 both producing and recognizing collocations. As for frequency, it did not show any significant correlation with collocational performance.

In the next part, the findings of the study will be discussed in detailed in consideration of the previous studies.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1. Introduction

This chapter aims to discuss the findings of the study obtained from numerical analyses in the light of previous studies mentioned in the second chapter. The answers of the research questions will be discussed in the following order:

- 1) Is there a significant difference between 4th grade ELT students' productive and receptive collocational scores?
- 2) Is there a relationship between their overall vocabulary size scores and receptive / productive collocational scores?
- 3) Does
 - a) Congruence
 - b) Collocational frequency (MI score, t score and raw collocational frequency)
 - c) Collocational patterns (A-N and V-N)affect their productive and receptive collocational knowledge?

After the detailed discussion of the study is presented, an overall conclusion of the study will be remarked. The chapter will be concluded with implications and suggestions for further studies.

5.2. Comparison of Receptive and Productive Collocational Knowledge

One of the main goals of the study was to compare the participants' receptive and productive collocational knowledge. According to the results, it was revealed that there was a statistical significant difference between the two dimensions of vocabulary knowledge ($p = .00$). The mean score and standard deviation for productive collocational knowledge were $M: 24.35$, $SD: 7.05$. That means students had knowledge of almost 60,87 % of target collocations in productive dimension. The highest score was 38 and the lowest score was 10 out of 40. As for receptive knowledge, the mean score and standard deviation were $M: 32.31$, $SD: 4.77$, which amounts to 80,77 % of target collocations in receptive dimension. The highest score was 40 and the lowest score was 17 out of 40. That is to say, students could recognize the

acceptability of the collocations more easily compared to producing the collocations. That comes to mean that the participants' productive collocational mastery lagged behind their receptive one. Moreover, the bigger standard deviation value for productive level implies students' knowledge was more heterogeneous and their competence differs from one collocation to another more in productive mastery compared to receptive mastery.

When it comes to interpretation of the result, it is not easy to evaluate if giving correct answers to 61% of the questions is good or not for productive mastery. According to Fernandez and Schmitt (2015) whose study yielded to 56% correct answer for productive collocation, the participants, who were from advanced level, knew a considerable number of collocational items and it was not quite possible that they achieved it only by L1 transfer or guessing. However, Fernandez and Schmitt (2015) went on to claim that when they adopted a different point of view and took into consideration that the students had been studying English approximately for 13.67 years, which is a long time period for learning a language, it could be asserted that the participants could have got better scores. Therefore, they concluded that participants could not meet the expectations exactly, but again they achieved to know noticeable number of collocations.

In another study by Shehata (2008), which was conducted with advanced level students majoring at English, it was revealed that students had 29.1 % correct answers in productive level and 72.4 % in receptive level. The researcher of the study claimed that the participants had low level of collocational knowledge. Compared to that study, the participants of the current study surpassed their scores and were more successful.

As for receptive collocational knowledge level of the participants, the total sum (81%) for their receptive collocational knowledge can be regarded as acceptable, which is similar to Gyllstad's (2009) study, which was conducted with advanced level Swedish students. The participants in Gyllstad's study showed receptive knowledge of 78% in COLLMATCH and 83% in COLLEX.

Along the same line with the aforementioned results, Nesselhauf (2003) lays stress on the fact that recognition of the collocations does not pose a big problem for advanced level students as they can figure out the overall meaning from the meaning of the components of collocations to some extent even when the collocation is not congruent with student's L1. That is to say, it is easier for students to retrieve ready-made chunks from their mental

lexicon on seeing the target items, but it is more challenging to activate them when producing the collocations. Therefore, it is very crucial to give students the chance of practicing collocations while teaching them, so they can activate their receptive knowledge to produce collocations more easily.

Briefly, the receptive knowledge of the participants in the current study could be regarded as satisfactory, but it is not quite possible to tell the same thing when it comes to their productive knowledge. While the results are being interpreted, it is significant to note that the participants were expectedly from high proficiency level and were about to be English language teachers. Therefore, it can be claimed that their productive collocational knowledge did not yield impressive results. Maybe the most forthright comment about the result instead of labelling them as satisfactory or unsatisfactory is that even student teachers, who are at expectedly advanced level after a long time period of learning English, have some difficulty with collocations (Altenberg and Granger, 2001; Nesselhauf, 2003; Shehata, 2008; Laufer and Waldman, 2011; Fernandez and Schmitt, 2015; Macis and Schmitt, 2017; Ramadhan, 2017).

In fact, that students had better receptive knowledge is not so surprising a finding as it is widely known receptive knowledge precedes the productive one (Hill, 2000; Lewis, 2000; Nation, 2001; Schmitt, 2010). The results of the study in this regard are in accord with the former studies (Shehata, 2008; Alsakran, 2010; Bağcı, 2014; Mutlu, 2015; Ramadhan, 2017).

Nation (2001) proposes that productive knowledge involves receptive knowledge, so students with larger productive knowledge will have larger receptive knowledge automatically. Along the same line with that claim, it was displayed that the participants' receptive and productive collocational knowledge are correlated in the current study ($r=.80$; $p=.00$).

There may be some underlying reasons for which receptive knowledge precedes productive knowledge (Schmitt, 2010). First of all, knowledge at productive level is more challenging and acquiring productive knowledge takes time. In this regard, Melka (1997) claims that on coming across with a new lexical item, students firstly learn how to pronounce, how to write and what the word means. After those processes, they get ready to use it. Melka implies productive and receptive mastery is a continuum. Read (2000) states that it is not so clear-cut to decide the threshold for the change of receptive knowledge into productive

knowledge. However, Schmitt (2010) notes that productive mastery is to do with the connections in the mental lexicon. To be more precise, he asserts that lexical items need activating to be attainable. Productive mastery depends on the quantity of the lexical item which are connected to one another, accordingly, as the number of connections increase, the possibility of connecting to an active word in the mental lexicon will increase as well. That is to say, as the student knows more about the word, his mastery moves towards productive level from the receptive level.

Schmitt (2010) maintains that receptive and productive mastery are close to each other for words from high frequency level, but the gap gets bigger for words from low frequency level. This fact underlines the importance of exposure. In this regard, Krashen (1988) points out that as the input the learners get enlarges, students acquire the input more productively. Therefore, language practitioners should expose their students to formulaic sequences more. Moreover, the teachers should not only concentrate on individual words while teaching vocabulary as endorsed by Henriksen (2013) and Schmitt (2010). Thereupon, students may be more careful for antonyms or synonyms but not for collocations. First of all, to raise the collocational competence, teachers should also raise the awareness of students of collocations. Students who are cognizant of the fact that most of the spoken and written language are composed of formulaic language will be more alert to those word units.

5.3. The Relationship between Vocabulary Size and Collocational Knowledge

The second purpose of the study was to investigate the correlation between vocabulary size and collocational knowledge of the participants.

To begin with interpreting the result, it is worth mentioning the result of the vocabulary size test. The results indicated that the mean score of the test was $M = 76,020$ and the standard deviation was $SD = 17.65$, which shows the scores deviated from the mean score and the group is not so homogenous. Moreover, the maximum score was 116 while the minimum score was 40 out of 140. As is seen, the range for its score was large. It implies they differed in their proficiency levels. According to calculation suggested by Nation, the mean score of the vocabulary size test amounts to knowledge of 7.602 word families. The result can be interpreted as satisfactory because Nation (2006) claims that a student needs some 8000-

9000 word families to comprehend written texts such as newspaper, novels, etc. He goes on to suggest that 6000 word families are required to watch and enjoy a child film. As for spoken language, it is proposed to know 7000 word families to understand interviews, conversations, etc. Along the same line, Laufer and Ravenhorst-Kalovski (2010) assert 8,000-word families are required for an optimum threshold, and 4,000–5,000-word families for a minimum threshold which correspond to 98% and 95% coverage, respectively. Another suggestion is proposed by Renandya (2018). He remarks that estimation about the required vocabulary size varies, but a learner needs 3.000-5.000 words to have the ability of reading un-simplified texts with adequate comprehension. However, Hazenberg and Hulstijn (1996) suggest higher threshold for the required vocabulary size to operate successfully and propose 10.000 word families to function well in diverse contexts (cited in Chacon-Beltran, et al., 2010). That means, the participants met the requirements of aforementioned figures in some degree. Moreover, the participants had higher scores compared to previous studies mentioned in the second chapter (2.3.) (Milton and Meare, 1998; Nurweni and Read, 1999; Bundgaard, et al., 2011; Danilović and Grujić, 2014; McLean, et al., 2014; Ibrahim, et al., 2016; Tan and Goh, 2017; Sudarman and Chinokul, 2018).

The results of the study indicated that there was a significant and high correlation between vocabulary size and receptive ($r = .74$, $p = .03$.) and productive ($r = .76$, $p = .04$) collocational knowledge of the students. Accordingly, it was proven that vocabulary size is an influential indicator of collocational knowledge and it was deduced that the students with larger vocabulary size have better receptive and productive collocational skills.

As mentioned previously, the current study used the vocabulary size test as a proficiency test due to the fact that there are a great many studies proving the high correlation between the vocabulary size tests and overall proficiency (Beglar and Hunt 1999; Cellat and D. Köse, 2017; Kadelecova, 2014; Milton, 2010; Miralpeix and Muñoz, 2018; Schmitt, 2010; Stæhr, 2008). Therefore, the findings of the analyses imply that students with high proficiency have a good command of collocations. At the same time, it comes to mean having good knowledge of collocations enhances students' language competences and overall proficiency (Wray, 2002). In the literature, there have been studies endorsing that claim. In this regard, Lewis (2000) maintains that collocational knowledge helps students comprehend the language better especially when listening and reading. To illustrate, students may not

catch all the words well while they are listening, but they can make the most of their collocational knowledge stored in their mental lexicon, and complete the missing parts especially upon coming across a strong collocation. In a similar vein, Hsu and Chiu (2008) came up with the result that students better at speaking have larger amount of collocational knowledge. As mentioned previously, collocations enable students to be more fluent by concentrating on communicative acts more deeply as it is cognitively less demanding to process ready-made word units instead of trying to produce new word units from scratch. For the writing ability, Zhang (1993) disclosed that collocational knowledge enabled students to be more fluent in writing. That is, having a better collocational performance contributed to better writing competence.

According to Gyllstad (2007), it is not so surprising that vocabulary size and overall proficiency are correlated because word items are the building blocks of written and spoken contexts. All in all, it can be claimed that vocabulary size is correlated with overall proficiency and overall proficiency is correlated with collocational knowledge. All of them develop together and they affect one another in a positive way.

As for the correlation value, a strong and positive correlation was displayed between the participants' vocabulary knowledge and receptive and productive collocation knowledge (r values were .74 and .76 respectively). When these correlations are squared, it is found that vocabulary size interpreted 55% and 59% of the variance in the receptive and productive collocation tests respectively. The correlation value was even slightly bigger for productive level. In fact, the result bears a resemblance to that of Taeko (2005). Taeko also found a positive correlation between collocation knowledge and vocabulary knowledge and the correlation value was higher ($r=.828$) for productive level than receptive level ($r=.778$). The result indicates that the students are inclined to have larger collocational knowledge as their vocabulary knowledge enlarges.

The results are also in line with Gyllstad (2007). He also found a positive correlation between two receptive collocation tests (COLLEX and COLLMATCH) and vocabulary size test ($r=.88$ and $r=.83$). It can be asserted that having a large vocabulary size signifies a large amount of exposure to L2 as high amount of exposure increases the possibility of coming across many words and their co-occurring partners in spoken and written contexts.

It is also worth mentioning that vocabulary size denotes to the vocabulary breadth and collocational knowledge refers to vocabulary depth in the literature. In this regard, Gyllstad (2009) underscores the fact that the strong, positive correlation between the results of the tests support the close relationship between these two dimensions of a word knowledge. That is to say, knowing a great many words may result in having deeper word knowledge such as collocates of the words.

The current study also came up with the results similar to Nguyen and Webb's (2017). In their study, all the words composing the target collocations were chosen from the first three 1000-word frequency levels based on Nation's BNC lists (2012) to draw an analogy between the knowledge of single words and collocations. The study displayed that there was a strong correlation between the participants' single word knowledge and collocation knowledge.

In the current study, the component words were similarly selected from the most frequent first 3K levels (1000st – 2000nd – 3000rd) based on the Nation's BNC word lists (2012). The reason for the high correlation may stem from the fact that participants were from high proficiency level and component words were from high frequency, as well. More precisely, as also claimed by Nguyen and Webb (2017), the correlation increases as the proficiency level of the students increase due to the increasing chance of exposure. Moreover, it is more probable to come across words from high frequency and their co-existing partners; consequently, learners can develop better schemata and recognize collocations more easily.

Nguyen and Webb (2017) concur with Gyllstad (2007;2009) in that they assert that two important dimensions of word knowledge, namely vocabulary depth and breadth, complement each other. One of the aims of the current study also was to give a fuller picture of the current vocabulary knowledge of the teachers-to-be. However, it should be noted that even if these two tests complement each other and have close relationship, they cannot be a substitute for each other. Another implication of the study is vocabulary depth and breadth progress together.

The present study is also in line with Mutlu's (2015) study implemented in the Turkish context. The participant of the study was 12th grade high school students. She came up with a moderate correlation between vocabulary size and collocational competence in contrast to the current study. The *r* value was .42 for receptive knowledge, and it was .29 for productive

knowledge. This supports the idea that the correlation rate increases with the proficiency level because the participants were high school students in Mutlu's study. In fact, it is probable that with higher proficiency, L2 mental lexicon expands. In this regard, Kadlecova (2014) proposes that as the mental lexicon enlarges, the possibility to embody a larger network of word associations increases and that possible increase facilitates the acquisition of collocations.

Kadlecova (2014) also came up with the data proving the positive influence of the size of the mental lexicon on collocational competence. Kadlecova expresses that successful syntagmatic links between separate words lay behind the association between the vocabulary size and collocations. Nonetheless, it is not so easy to make syntagmatic links as the words composing the syntagmatic links differ from one language to another. Moreover, syntagmatic links necessitates not only making connections between the words but also requires conceptual change (Webb, 2006). Successful syntagmatic connections may work for the combinations used in literal sense, but it may be more difficult to apply the same thing with idioms or formulaic sequences used in non-literal sense as also proposed by Mutlu (2015). Those kinds of combinations entail particular attention, so language practitioners should draw the attention of the students to them particularly.

All in all, the present study is in accord with the previous studies which found positive correlation between vocabulary size and collocational knowledge (Gitsaki, 1999; Taeko, 2003; Taeko, 2005; Gyllstad, 2007; Bergström, 2008; Kadlecova, 2014; Mutlu, 2015; Nguyen and Webb, 2017; Nugroho, 2018).

The findings of the current and previous studies justify the remarks of Meara (1996). He states that students who have larger lexical items are inclined to be more competent at a broad array of language skills compared to students who know fewer lexical items.

The practical implication of the current study is that while language practitioners are teaching new lexical items, they should provide students with their commonly co-occurring words in context (Lewis, 2000; Taeko, 2005). This will help them to boost their lexical and collocational competence simultaneously. Most importantly, the high correlation between vocabulary size test, which was used a proficiency test and collocation tests implies the importance of collocations for raising L2 proficiency.

5.4. Exploring the Possible Indicators of Receptive and Productive Collocational Knowledge

The last purpose of the study was to find the possible indicator/s of receptive and productive collocational knowledge. It is assumed that finding the best indicator/s of the collocational knowledge can facilitate both teaching and learning of those word units. With this purpose in mind, some of the indicators of the collocational knowledge were examined. In fact, all of them were investigated in the previous studies, but their effect in the Turkish context have been lacking.

As mentioned previously, the data were analysed in two phases. It was possible to investigate the influence of vocabulary size with participant- wise data. However, the influence of the frequency, congruency, collocational patterns was analysed through collocation- wise data. The following parts will try to discuss the numerical data in relation to those mentioned possible indicators of collocational knowledge.

5.4.1. The influence of frequency on productive and receptive collocational knowledge

In the current study, the frequency of collocations was referred to in two ways. Firstly, the frequency was made use of to select the target items. Collocations were chosen based on their T- score, Mutual information score (MI) and raw collocational frequency in COCA. Secondly, it was probed if these frequency values had an effect on the participants' collocational performance or not. According to the results, it was revealed that there was no significant correlation between frequency and collocational competence. In fact, it is not surprising that MI score was not an influential indicator of collocational competence. In the same line with the current study, MI score was also found to be not correlated with collocational competence in other studies which were conducted in different contexts (Durrant and Schmitt, 2009; Ellis et al., 2014; Fernandez and Schmitt, 2015; Nguyen and Webb, 2017). More precisely, according to the findings of the previous studies, it was displayed that MI score is the predictor of collocational performance mostly for natives but not for non-natives. The reason for this may hinge on the fact that MI score indicates how strongly the component words collocate with each other and favours rare instances, which could indicate that non-native users of English may not master those rare instances. In fact,

it signals the rising tightness and relative infrequency, so collocations with high MI score is said to be more salient and noticeable for natives. For non-natives, it requires a great deal of exposure to get to know a collocation with high MI where an occurrence of one of the components easily predicts the other component. To illustrate, Durrant and Doherty (2010) indicate “taste arbiters”, which means “somebody having influence on people’s ideas about trendy”, is a collocation where the word “arbiters” evokes the word “taste” in mind. That means, it is easier for natives to associate the word “arbiters” with “taste” on seeing “arbiters”. On the other hand, for the collocation “taste for”, the preposition “for” does not evoke the word “taste” despite the fact that the collocation “taste for” is far more frequent than “taste arbiter”. The collocate and the node word are more strongly tightened to each other in the former collocation, that is why it has lower frequency but higher MI. In this regard, Fernandez and Schmitt (2015) maintain that MI differentiates between natives and non-natives as it lacks in non-natives’ output.

As for raw collocational frequency and t-score, they both indicate how frequently the collocation occurs. Moreover, they are inversely correlated with MI. To put it differently, as T-score or raw collocational frequency increases, MI score decreases, or vice-versa. That is because MI favours rare instances as opposed to t score. In the current study, it was found that neither T- score nor raw collocational frequency of collocational occurrence in COCA was correlated with collocational competence.

The postulation to investigate the influence of frequency was rooted in the claims that word level knowledge develops based on frequency (Nation and Waring, 1997; Schmitt, 2010), so it was postulated by many researchers that formulaic sequences including collocations may be acquired based on their frequency. Surprisingly, it was found that frequency of collocations did not have a correlation with collocational competence or it is not a strong predictor of collocational competence. In fact, this finding goes counter to some of the studies in the literature. For example, Fernandez and Schmitt (2015) carried out a study to gauge the relationship among the participants’ productive knowledge and raw collocational frequency, t-score, MI. They came up with the result that there was a moderate correlation between collocational knowledge and corpus frequency. On the other hand, it was found that MI score did not have a significant effect on collocational knowledge. From frequency-based approach perspective, Durrant and Schmitt (2009) investigated corpus

based studies and they revealed that non-natives were inclined to use collocations with high t score, namely frequent ones. However, the participants did not produce as many collocations with high MI scores as natives did, which tallied with the results of Fernandez and Schmitt's (2015) study. In a similar line, Ellis et al. (2008) and Gyllstad and Wolter (2013; 2016) also came up with the result that students were inclined to use collocational with high t score. Durrant (2014) conducted a more comprehensive study compared to others by implementing meta analysis of 19 previous studies and found that frequency was correlated with collocational knowledge only moderately which was corroborative with Durrant and Schmitt (2010) and Fernandez and Schmitt (2015).

In the same line with the current study, but disaccording with the aforementioned studies, Macis and Schmitt (2017) found that frequency did not relate to collocational knowledge. In a similar way, Kadlecova (2014) also found that the frequency of collocational occurrence was not correlated with knowledge ($r = -.27$).

There should be underlying reasons for the findings that collocational frequency in COCA did not have an influence on participants' collocational competence because most of the aforementioned studies claim that advanced L2 learners are more sensitive to the effect of frequency and they are said to store word units as chunks in the lexicon based on their frequencies (Siyanova – Chanturia and Spina, 2015).

The underlying reason of this may culminate in the fact that the frequency values of the target collocations attained from COCA may not correspond to the real exposure rate of Turkish students. Some collocations may get more or less attention compared to others in real classroom environments or in language coursebooks. That is, it may be relevant to students' cultural, educational and linguistics surroundings. Moreover, of note is that language teachers' competence and inclinations to choose collocations are also of great importance because the input is driven by them in real language learning settings. To illustrate, the collocation "cast doubt (on)" is very frequent according to the obtained data from COCA. Its t-score is (22,85) and it occurs 527 times in 4:4 span in COCA. However, the data analyses revealed that only 3 students managed to recall it in the study. On the other hand, the collocation "make sacrifice" occurs in COCA less frequently compared to the collocation "cast doubt (on)". Its t- score is (15,79) and it occurs 315 times in COCA, but 73 out of 102 participants managed to recall it in the test. It means maybe the collocation is very

common in the natural setting, but the teacher is unaware of it. Likewise, the participants of the study, who are teachers-to-be, are uninformed about that collocation's being frequently used in English, consequently, it is not probable for them to teach it to the students. The result implies that both students and teachers need awareness raising about the collocations that are frequently used by means of more adequate meaning- focused and collocation-focused input.

Another reason for the fact that the variable frequency was proved to be an ineffective predictor of the collocational knowledge may stem from the fact that the frequency of occurrences for items was determined only from an American English corpus due to its being the most comprehensive corpus in use, yet it is probable that the informant group in the study was accustomed to British English and frequency values from American English corpus did not represent their exposure and knowledge of collocations.

Moreover, the collocations used in the current study were chosen mostly from mid or high frequency levels. Maybe it would have been better to choose collocations also from low frequency to see the influence of frequency better.

All in all, the data of the current study endorse the claim that corpus do not seem to represent the input the learners get, rather, the input is mostly determined by the classroom environment. That is, the competence of language practitioners is of vital significance as they may overuse, underuse or misuse collocations irrespective of their frequencies and accurate usages in genuine language environment. Moreover, the contradicting research findings in the literature back up the claim by Durrant (2014) who suggests learners from different language backgrounds and educational systems can be affected from the frequency aspect in a different way.

5.4.2. The influence of collocational patterns on productive and receptive collocational knowledge

The current study examined two collocational combinations; verb-noun and adjective-noun. Some explanations can be adduced for which these two collocational combinations were chosen to scrutinize in the study. The first reason is their high frequency in spoken and written language compared to other patterns (Kurosaki, 2012). Moreover, these two patterns are said to be the most challenging ones for learners (Nesselhauf, 2005; Yan, 2010). Another

reason to select these patterns is to see the influence of different typologies (word order) between Turkish and English. More precisely, the aim was to see the influence of different typology, namely word order, of verb-noun (V-N/ N-V) and similar typology of adjective–noun collocations between English and Turkish on collocational performance.

The results showed that the mean receptive collocational knowledge differs between Verb-Noun ($M = 81.60$) and Adjective-Noun ($M = 83.20$) at the .05 level of significance. Similarly, the results showed that productive collocational knowledge level differs between verb noun ($M = 61.90$) and adjective-noun ($M = 62.30$) at the .05 level of significance. That is to say, it was displayed that both receptively and productively students are slightly better at adjective- noun collocations compared to verb- noun collocations. The data run counter to some of the previous studies. In Greek context, Gitsaki (1999) found that verb-noun collocation type was the most difficult one of the thirty-seven types of collocations covered in the study. In Arabic contexts, Shehata, 2008; Alsakran, 2010; Gaballa and Al-Khayri, 2014 revealed that the participants were better at verb-noun collocations compared to adjective-noun collocations. In the study which was carried out with Kurdish students, Hama (2010) disclosed that the most challenging category for the participants was adjective- noun combinations, which was followed by verb-noun ones. In Korean context, Kim and Chon (2017) came up with the result that students were better off with verb- noun collocations. In a Vietnamese context, Nguyen and Webb (2017) carried out a more recent study. According to the result of the study, there were no significant differences regarding the students' receptive collocational competence in verb- noun and adjective- noun collocations. Similar to the current study, they investigated the influence of different parts of speech on the students' collocational competence. The data displayed that different parts of speech were not an influential predictor of collocational competence. On the other hand, the studies implemented by Kuo (2009) and Phoocharoensil (2011) in Thai context displayed the result that the participants had more difficulty with verb-noun collocations than adjective- noun, which is in the same line with the present study.

Among the above-mentioned languages, Greek, Arabic, Thai, Vietnamese, Kurdish are not from the same language family, nor have the same word order (S+ O + V) as Turkish. Therefore, it is not so right to compare them with Turkish and their results are also inconsistent. On the other hand, Korean has the same word order as Turkish. Furthermore,

Korean belongs to the same language family as Turkish. The study conducted with Korean language displayed that students were better at verb- noun collocations, which goes counter to the finding of the current study.

In the Turkish context, Bağcı (2014) conducted a study with advanced and pre-intermediate preparatory class students at university level. She came up with the result, which contradicted with the assumptions of the current study, but had similar results with Kim and Chon (2017) whose study examined the language with similar typologies to Turkish. The data displayed that students showed better performance at verb- noun collocations despite their different typology in Turkish. The underlying reason may lay behind the fact that verb-noun collocations are inclined to compose the communicative core utterances on which the most significant information is fixed up (Altenberg, 1993) regardless of the word order. On the other hand, another study in Turkish context, which contradicted with Bağcı's (2014) study, was carried out by Cangır (2018). He found that typology was a significant predictor of collocational priming and students had faster priming rates for the adjective- noun collocations. The result implies that similar typology may provide processing advantage and contribute to faster response rate of the collocations by placing less cognitive burden on the learners. However, as the study did not concern with error rates of the participants, its effect on the knowledge was not known.

When it comes to the finding of the current study, it is clearly seen that similarities between languages facilitate the recognition and recalling of the collocations. More precisely, learning a foreign language, which is analogous to one's L1 (e.g. regarding typology), is likely to culminate in a facilitating learning experience on account of the fact that most of the structures and formulaic sequences met in L2 will be more similar to the matching L1 lexical items (Cangır, 2018).

Apart from the difficulty posed by different word order of verb-noun combinations in Turkish, the underlying reason for the difficulty may emanate from the fact that the collocate word, namely the verb in verb- noun collocations, does not contribute much to meaning of the whole phrase (Gyllstad, 2009). To illustrate, Gyllstad (2009) gave the example of "take care". The collocate word "take" loses its primary meaning with the node word "care" and it means "be careful". Moreover, the finding is in the same line with Altenberg's (1993)

argument that verb-noun collocations are both difficult to learn and are frequent and indispensable parts of a language.

Additionally, the frequency of collocational occurrence of adjective- noun combinations in Turkish may affect the knowledge of them, so it should be further investigated.

Briefly, the widely varying results in the literature may rise from the difficulty levels of the items chosen in the studies. Moreover, the finding signals there are some more important indicators than collocational patterns such as congruency and students' real exposure time to the collocations, as the results of the studies have varied so much. All in all, the issue of typology and different collocational patterns are worth investigating further.

5.4.3. The influence of congruency on productive and receptive collocational knowledge

In the literature, most of the researchers assert that mother language may have a powerful impact on the acquisition of collocations (Taeko, 2005; Lee, 2016; Kim and Chon, 2017; Wolter and Yamashita, 2018). More precisely, they claim L1 interference may function as a facilitator or an inhibitor for learning. The current study was conducted to see how L1 interference works in the Turkish context and to understand the influence of cross- linguistics correspondences and dissimilarities on Turkish student teachers' inclinations to learn collocations.

To see the influence of congruency, collocations in this study were divided into two groups as congruent with participants' mother tongue and non- congruent with their L1. The results of the analyses indicated that the mean score of the congruent items in the receptive test is higher than the incongruent ones (M=92, 40 for congruent collocations and M= 72, 40 for incongruent). As for the productive test, again it was displayed that the mean score of the congruent items surpassed the incongruent ones. (M= 74, 75 for congruent collocations and M= 49, 45 for incongruent). The results showed that both receptive and productive collocational competence level differ significantly between congruent and incongruent collocations at the .05 level of significance ($p=.00$), which implies congruent collocations are learnt better than non-congruent ones by the learners. In fact, the data showed that

congruency was a strong indicator of collocational competence in the study and collocations composed of dissimilar component words with L1 posed a difficulty for the students.

If the students have a poor command of collocations, they are likely to transfer their intra-lexical knowledge of mother tongue to L2 mental lexicon to comprehend and produce collocations (Lee, 2016). To illustrate, if the students are unaware of the collocation “hard copy”, it would sound illogical according to their intra-lexical judgement because it is not a semantically possible word string in Turkish.

The result indicated that correspondences between L1 and L2 collocations (congruency) contribute to learning of collocations in a positive way, while dissimilarities between mother tongue and target foreign language lead to negative transfers. The results of the study show similarities to the studies implemented on congruency (Nesselhauf, 2003; Mahmoud, 2005; Taeko, 2005; Yamashita and Jiang, 2010; Laufer and Waldman, 2011; Wolter and Gyllstad, 2011; Lee, 2016; Kim and Chon, 2017; Wolter and Yamashita, 2018). To illustrate, in a similar line, Taeko (2005), who found congruency as a strong predictor of collocational performance, also asserts that L1 influence was a significant factor on the acquisition of collocations. He maintains that language practitioners make use of resemblances between L1 and L2 for lessening the strain of collocational acquisition and for developing collocational competence.

Similarly, Yamashita and Jiang (2010) compared the collocational competence of Japanese students who learnt English as a foreign language, ESL learners and the native speakers of English. The result of their study indicated that EFL learners had the poorest performance both in congruent and incongruent collocations among the group, which underscores the importance of exposure, as they have less L2 exposure compared to native speakers and ESL students. Additionally, no significant difference was revealed regarding the reaction time of ESL users between congruent and incongruent collocations. Their having the same fast rate for incongruent collocations as congruent ones again can be attributed to their having greater chance of exposure to L2 collocations. Moreover, it can be inferred that thanks to sufficient L2 exposure and practice, a direct link can occur between a reinforced L2 collocation and its concept without any L1 interference. However, ESL users’ errors persist in incongruent collocation category compared to congruent one. That means incongruent collocations continue to pose difficulty for learners even with noticeable amount

of exposure despite the fact that L2 exposure was proved to increase the probability of acquisition. That is, incongruent collocations are kinds of linguistics units which are difficult for non-native speakers to learn. This result implies that the difficulty posed by incongruent collocations could be overcome by explicit teaching of collocations (Kim and Chon, 2017; Lee, 2016; Nesselhauf, 2005; 2006; Shehata, 2008).

In a similar line, Wolter and Gyllstad (2011) came up with the result that Swedish participants of the study showed better performance for congruent collocations than incongruent ones. The results note that congruency is a strong predictor of collocational competence. Nevertheless, the reason for its being so needs illuminating. As far as Wolter and Gyllstad (2011) are concerned, students make a copy of syntactic and semantic data of the collocations from their mother tongue for the target language. This enables students to be more precise and faster for congruent collocations. However, interestingly, students also made mistakes in congruent collocations. The reason for students' mistakes in congruent collocations can be explained by Kellerman's (1979) postulation that when huge correspondence occurs between L1 and target language, students may suspect if the correspondence is just a coincidence and they might not resort to their intra-lexical knowledge. Or, it may come to mean L2 learners do not just blindly count on their L1 when learning L2 collocations, and they might have developed recognition that their L1 and L2 forms and functions do not always concur with one another. Therefore, the participants of the study might not have applied their L1 expressions even on coming across congruent collocations. In this vein, Lee (2016) suggests that it is necessary to highlight the congruent collocations as well as incongruent ones through meaningful inputs and explicit teaching.

Krashen (1988) asserts that dependency on L1 lessens with developing proficiency. However, the current study contradicts with this claim because in spite of participants' long exposure time to English and their expectedly advanced level, they heavily count on their mother tongue both to recognize and to produce collocations. It may be because of the way they learned collocations or due to the fact that they are not aware of the concept of multi-word expressions. That is, their L1 intuition for collocations are not reflected in their L2. In fact, in a similar line, Lee (2016) came up with the result that both advanced and intermediate proficiency groups had more errors and slow reactions to incongruent collocations, which displayed that even advanced level students heavily rely on their L1 intra-lexical knowledge

and incongruent collocations are challenging even for them (Wolter, 2006; Yamashita and Jiang, 2010; Wolter and Gyllstad, 2011; Kim and Chon, 2017).

On the other hand, Kurosaki conducted a study which runs counter to the result of the current study. In her study, she studies with French and Japanese participants to see how similarities and dissimilarities between languages contribute to collocational performance. She assumed that because of the fact that English and French belong to the same language family, the results of the French students would have had more L1 influence than Japanese students in all tests. However, conversely, Japanese students showed more L1 influence in adjective –noun combinations and the data of the study showed that the likeness between English and French did not necessarily contribute to learners' producing more appropriate collocations. Nevertheless, it is of note that adjective- noun collocational combination bears typologically similar syntactic structure between English and Japanese. It is probable because of that reason, they resort to their L1 more frequently. Moreover, L1 influence was not proved to be a strong indicator of collocational competence in three instruments of the study. It implies that the participants of the study learn collocations as chunks rather than a single lexical item.

Another study going counter to the findings of the present study was conducted by Kuo (2009). Kuo (2009) implemented a study with Taiwanese learners to investigate their collocational errors. He came up with the result that L1 interference is the least influential factor on collocational competence of all factors. He found that referring to synonymous words accounts for collocational errors mostly. He ascribes the findings to the fact that the participants of the study are cognizant of the cross-linguistics differences between their L1 and the target language and the collocation teaching is based on bilingual instruction.

Regarding the current study, the poor performance of the participants on incongruent collocations may be attributed to several reasons. First of all, Krashen (1988) implies that learners rely on their L1 more if they have insufficient input. He further believes that L1 influence is more salient if a foreign language is learned without keeping in touch with natives and without being exposed to natural settings. This explanation may be one of the reasons for insufficient collocational knowledge. Moreover, as also suggested by Cangir (2018) that incongruent collocations represent the arbitrary and cross-linguistic nature of

collocations partially. That is to say, this arbitrariness may pose a difficulty for learners as they have not learnt collocations as chunks.

In the current study, even students with large vocabulary size, which requires paradigmatic associations, made mistakes about incongruent collocations. It can be explained by the difficulty posed by making syntagmatic associations between the words. That is, collocations, especially incongruent ones, need making syntagmatic associations between words, which represents co-existing associations between the words and requires making changes in concepts. To illustrate, it is not possible in English to say “give damage*” instead of “cause damage” as syntagmatic associations differ from one language to another. For that reason, students are obliged to forge new syntagmatic links between the words and construct new connections in their L2 mental lexicon. In this regard, Kadlecova (2014) proposes that apart from the size of mental lexicon, the structure of it plays crucial role in language learning, as well.

On the other hand, it is notable that the presence of correlations in the mental lexicon between both L1 and L2 can make an important contribution to the L2 learners’ collocational competence as claimed by Wolter and Gyllstad (2011). This finding also supports the “L2 vocabulary development model” of Jiang (2004) which suggests the L1 correspondences of L2 lexical items facilitate the understanding the meaning of L2 lexical items.

All in all, as is understood, a lexical item existing in both languages and having already been processed in learners’ mental lexicon facilitates learning, on the other hand, incongruent collocations pose a difficulty also for Turkish 4th year ELT students. In this regard, it should be encouraged by teachers that incongruent collocations be stored in L2 mental lexicon by directly combining forms with their concepts without the medium of the mother tongue (Lee, 2016).

5.5. Implications of the Study

Based on the findings of the current study, a number of implications can be proposed to improve the instruction and the learning of collocations in EFL classrooms.

First of all, the difficulty the participants have in producing collocations implies the abundant practice they need. Krashen (1988) puts forward that as the input the learners get

increases, they acquire the input more productively. Accordingly, they should be exposed to a great deal of input. However, the most important issue is to turn the input into intake. As also suggested by Gllystad (2007), both in-class and out of- class exposure are expected to expedite the intake of collocations as in the other L2 competences.

Another point of note is that students' being conscious of the fact that collocations cannot come together randomly or they are not harshly fixed. However, it should be noted that collocations are arbitrary to some extent and because of this they are obliged to be learnt (Nesselhauf, 2005). In this regard, teachers should teach the collocations which are the most frequent, appear in a wide array of different contexts and have the possibility of posing difficulty for learners (Nation, 2001). Nesselhauf (2003) further claims that collocations generally come out of common words such as "take an exam", so it is difficult to notice them on spot by the learners. This claim implies whether explicit or incidental teaching occurs, the most important thing is to draw the attention of learners to the existence of collocations. In fact, for acquisition of a collocation, plentiful amount of exposure is required, but as stated by Boers et al. (2014) there is low probability of encountering at short notice with the same collocation frequently enough to learn it. That is why, deliberate teaching of collocations, which are chosen beforehand and accompanied by extensive reading and listening, enhances the acquisition process.

In the study, it was noticed that students were inclined to use synonymous words instead of the target collocates even if it was not the main concern of the study. For that reason, the language practitioners should highlight the fact that the constituents of the collocation cannot be substituted by another word even if they denote the same meaning, for example, saying "fake teeth*" instead of "false teeth". To put it in a different way, the fact that collocations are inseparable word units of a language should be underlined. Accordingly, language practitioners should make use of the idiom principle, which refers to teaching lexical items in chunks. This suggestion is also endorsed by Farghal and Obiedat (1995) and Hama (2010). They propose idiom principle have the possibility of diminishing the quantity of collocational errors.

As for the issue of L1 interference, the study displays that positive interference happens between languages when L1 and L2 collocations are corresponding. On the other hand, when two collocations are distinctive, negative transfer and difficulty crop up. As is clearly seen in

the study, L1 effect is persistent on the learning of L2 collocations even after some thirteen years of language education, and combining incongruent collocations into mental lexicon is not so straightforward, hence language practitioners should make a point of teaching them just from the beginning of language learning. That is, more importance should be attached to non-congruent collocations, which are the crux of the problem in collocation learning as posited by the study, without underrating the congruent ones in vocabulary instruction. Students should be got cognizant of the cross-linguistic differences between languages. In this regard, to cope with the incongruent collocations, teachers can follow cross-linguistics methods and their L1 correspondences can be explicitly contrasted to increase the probability of acquisition of them. To illustrate, it may be ineffective to instruct the collocation “the latest technology” to native speakers of Turkish without calling attention to the fact that it is not probable to say “last technology*” (the equivalent in Turkish) in English.

In a nutshell, it is clear that even 4th year ELT students have heavy dependency on their L1. Therefore, to facilitate the learning of incongruent collocations and to enable students to combine forms and concepts in their L2 mental lexicon, students should be exposed to explicit teaching and natural settings such as extensive reading and listening. It should especially be noted that listening activities can be of vital importance because it is said that collocations mostly occur in spoken context (Kadlecova, 2014).

Another implication of note is that most of the participants of the study produced and recognized a great many collocations. This implies that there will be a considerable number of collocations which will be known by some learners, but not known by others in a classroom environment. In this regard, group works, which are designed to practice and elicit the target collocations, may provide opportunities for the exchange of information among group members.

Another implication is about the measurement of collocation in formal tests. In this vein, as also suggested by Gyllstad (2007), collocational competence should be part of language tests; thus, learners will be inclined to be of the opinion that collocational knowledge is necessary and significant.

As to the issue of frequency, it was revealed that frequency of collocational occurrence in COCA does not seem to have an effect on collocational knowledge. It is suggested that the learners will have a better command of collocation when they can utilize and expose them

in everyday communication. In this vein, Ellis (2001) asserts that collocations will be more obvious to learners if they are both frequent and achieve a beneficial and sensible communicative purpose. Accordingly, collocations will be acquired better compared to collocations with less meaningful purposes if they are chosen from specific corpora for teaching based on the communicative goals of the students.

Another important finding of the study is the high correlation between vocabulary size test, which was used as a proficiency test, and collocation tests. This finding is aligned with other studies having displayed that collocational knowledge is correlated with general proficiency. Therefore, it can be posited that any increase in students' knowledge of collocation will contribute to their overall language competence (Fernandez and Schmitt, 2015). For this reason, language practitioners should focus on collocations rather than single word items to overcome the unpredictability of the collocations, which will also contribute to their overall proficiency.

All in all, given the limited availability of L2 input in classroom environment, collocation instruction requires to be implemented in a more organized way. If the students come across incongruent collocations arbitrarily, they may have a difficulty to comprehend the fact that it is misleading to count on their L1 for the acquisition of incongruent ones. Lee (2016) endorses that claim by saying that considering the restricted exposure amount and input the students have, explicit instruction may be more practical especially for incongruent collocations which are not so salient for learners. Moreover, teachers should urge students to use collocation dictionaries when they do not know or unsure about the use of accompanying word of a specific lexical item. Another point that deserves to be highlighted by teachers is the polysemy of adjectives and verbs. If the students do not store the collocations in a holistic way, they may mistakenly interpret a collocation based on its prime meaning. To illustrate, the adjective “soft” has different denotations in the collocations “soft drink” and “soft voice”. Therefore, it is of note to indicate that adjectives and verbs can denote different meanings on being combined with other nouns.

As a last word, curriculum designers, coursebook writers and language practitioners should gain deeper insights about the factors affecting collocational competence and Turkish students' inclinations to learn collocations, and according to those data, they should

incorporate collocations into the English lessons and materials, after all, collocational knowledge is a sine qua non for L2 mastery (Kadlecova, 2014).

5.6. Suggestions for Further Studies

The present study came up with important findings about the predictors of collocational knowledge in respect of productive and receptive mastery in Turkish context. However, further studies can be conducted to scrutinize the un-investigated points and to clarify the findings of the current study more thoroughly.

To begin with, the current study explored the relationship between corpus frequency and collocational competence. However, no relationship could be found and that was attributed to the fact that frequency values from corpus, which represents natives' usages, may not reflect students' real exposure amount. For that reason, future studies can investigate the frequency of certain corpora such as films, social media to which students have more possibility to expose. If the result is found more relevant to learners' knowledge, those kinds of corpus involving the collocations, which are more probable to come across in daily situations and more meaningful for students, can be preferred for item selection in language teaching.

Moreover, the present study made use of only frequency based approach to define collocations, yet future studies can resort to phraseological or hybrid approach to identify the collocations and may explore if collocations, which are derived from those approaches, are more known to learners or not.

Another suggestion is about the formats of instruments. The current study utilized a controlled productive test. That is, initial letter of the collocate word functioned as a prompt for the students. Future research can make use of more communicative tools such as free writing or speaking activities. As for the receptive test, a multiple choice test, which demands for more laborious examination of given distractors, can be applied for receptive dimension.

A further suggestion can be about the data collection. The current study preferred one-shot data gathering. In future studies, a longitudinal and an experimental study design can be preferred. For example, after certain amount of teaching, students' collocational knowledge and development can be measured based on the same variables. Moreover, students from

different proficiency levels can be included in the study to make more precise generalizations about the inclinations of Turkish students to learn collocations.

As for the further suggestions about the variables of the study, transparency levels of collocations and frequency of Turkish equivalents in Turkish corpora can be examined. In particular, scrutinizing and comparing the frequency of collocational occurrence of verb-noun and adjective- noun combinations in Turkish corpus may provide more insightful data about the influence of collocational patterns as the studies have displayed varying results.

Another issue which can be investigated in further studies is about the reaction time of the participants for the target collocations. Future studies might measure reaction time to understand if collocations are stored in a holistic way like chunks or they are stored as a single word item.

Finally, the current study revealed students mostly made errors in incongruent collocations, but it did not examine which cognitive strategies they adopted while producing mis-collocations. In this vein, the reasons for collocational errors both in congruent and incongruent ones can be examined, which is lacking in Turkish context and this can be supported by interviews with the participants or by think- aloud procedures.

5.7. Conclusion of the Study

The current study was undertaken in pursuit of examining the receptive and productive collocational competence of Turkish 4th grade ELT students and having a better understanding of the important factors which underlie L2 collocational performance.

The data were gathered by means of a vocabulary size test (Nation and Beglar, 2007), a productive and a receptive collocation tests, which were conducted respectively in the 2018- 2019 academic year at Anadolu university in ELT department.

The participants of the current study were especially chosen as 4th grade ELT students inasmuch as their own collocational competence is of vital importance both for their being prospective teachers and for their being at the end of education life at university level.

The target collocations were extracted from COCA based on their frequency values and categorized as verb-noun and adjective-noun combinations and each combination again was subcategorized as congruent and non- congruent collocations.

There were three research questions to be answered in the study. The first question was set to scrutinize the comparison between participants' receptive and productive collocational knowledge. The results disclosed that they had better receptive collocational knowledge compared to their productive knowledge. Moreover, high correlation between their receptive and productive competence was displayed. The result proved that collocational knowledge develops in a continuum. In addition, that high correlation suggests that the more receptive collocational knowledge learners have, the more productive collocational knowledge they will have. Despite the length of their English education life, they had difficulty in producing the target collocations. This result points out the fact that even student teachers, who are expected to be relatively at advanced level, have some difficulty with collocations (Shehata, 2008; Fernandez and Schmitt, 2015; Macis and Schmitt, 2017).

As for the second research question, it was set to investigate the influence of receptive vocabulary size on collocational knowledge. The result indicated that students' vocabulary size and collocational knowledge are highly correlated with each other. That is, the higher vocabulary size students have, the higher receptive and productive collocational knowledge they have. This result points out that vocabulary depth and breadth develops in sync. Thanks to the study, a fuller picture of the current vocabulary knowledge of the teachers-to-be was displayed.

Another important assumption is that as students with larger vocabulary size, namely students with higher proficiency, have better collocational competence, so it is possible to enhance students' overall proficiency by placing more importance to teaching collocations. This assumption is endorsed by the remarks of Meara (1996). He states that students who have larger lexical items are inclined to be more competent at a broad array of language skills compared to students who know fewer lexical items. Furthermore, it is seen that as the mental lexicon enlarges, the possibility to embody larger network of word associations increases and that increase facilitates the acquisition of collocations (Kadlecova, 2014). Therefore, it can be concluded that teaching lexical items with their co-occurring words will contribute to students' overall proficiency.

As to the third research question, it was set to find the best predictor/s of collocational knowledge. More precisely, the influence of the frequency of collocational occurrence in a representative corpus, congruency, different collocational patterns were scrutinized. The

results yielded that congruency is the best predictor of collocational competence among the variables of the study. Likewise, collocational patterns are proved to be correlated with collocational knowledge. On the other hand, it was found that frequency of collocational occurrence in corpus does not have an important influence on the competence of collocations. The findings of the study also revealed that similarities between L1 and L2 function as a facilitator, but contradistinctions function as an inhibitor in the acquisition of collocations. This result suggests that incongruent collocations require special attention during vocabulary teaching. Moreover, the influence of congruency may clarify the cross-linguistic construction of the mental lexicon. It can be inferred that congruent L2 collocations may enable L2 language learners to internalize those kinds of word units more easily and consequently, they get more readily available for them in natural communication environment. In addition, it is understood that it is an effective factor to organize the mental lexicon.

When it comes to frequency, the findings are in accord with some of the earlier studies, and contradict with some of the previous studies. It can be concluded as frequency of occurrence in COCA does not match up with students' real exposure in language learning environment. The fact that MI score do not have a positive correlation with collocational knowledge is in the same vein with most of the previous studies inasmuch as it is an important indicator of collocational knowledge for native speakers.

As to collocational patterns, it was revealed that students' knowledge differs between verb-noun and adjective- noun collocations both receptively and productively. It can be concluded that similar typology of adjective-noun collocations between Turkish and English may contribute to students' collocational knowledge. That is to say, similarities between languages facilitate the recognition and recalling of the collocations. More precisely, it can be concluded that an analogous typology to one's L1 culminates in a facilitating learning experience thanks to corresponding L1 lexical items between the languages.

In a nutshell, the present study yielded the results that students' productive collocational competence lags behind their receptive competence and congruence with L1, overall proficiency and collocational patterns with similar typologies are correlated with the competence of collocations. Accordingly, it is proposed that collocations be paid more attention both by teachers and learners to sound more proficient and native like in L2.

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APPENDICES

APPENDIX A: VOCABULARY SIZE TEST

Circle the letter a-d with the closest meaning to the key word in the question.

1. SEE: They saw it.
 - a. cut
 - b. waited for
 - c. looked at
 - d. started
2. TIME: They have a lot of time.
 - a. money
 - b. food
 - c. hours
 - d. friends
3. PERIOD: It was a difficult period.
 - a. question
 - b. time
 - c. thing to do
 - d. book
4. FIGURE: Is this the right figure?
 - a. answer
 - b. place
 - c. time
 - d. number
5. POOR: We are poor.
 - a. have no money
 - b. feel happy
 - c. are very interested
 - d. do not like to work hard
6. DRIVE: He drives fast.
 - a. swims
 - b. learns
 - c. throws balls
 - d. uses a car
7. JUMP: She tried to jump.
 - a. lie on top of the water
 - b. get off the ground suddenly
 - c. stop the car at the edge of the road
 - d. move very fast
8. SHOE: Where is your shoe?
 - a. the person who looks after you
 - b. the thing you keep your money in
 - c. the thing you use for writing
 - d. the thing you wear on your foot
9. STANDARD: Her standards are very high.
 - a. the bits at the back under her shoes
 - b. the marks she gets in school
 - c. the money she asks for
 - d. the levels she reaches in everything
10. BASIS: This was used as the basis.
 - a. answer
 - b. place to take a rest
 - c. next step
 - d. main part

SECOND 1000

11. MAINTAIN: Can they maintain it?

- a. keep it as it is
- b. make it larger
- c. get a better one than it
- d. get it

12. STONE: He sat on a stone.

- a. hard thing
- b. kind of chair
- c. soft thing on the floor
- d. part of a tree

13. UPSET: I am upset.

- a. tired
- b. famous
- c. rich
- d. unhappy

14. DRAWER: The drawer was empty.

- a. sliding box
- b. place where cars are kept
- c. cupboard to keep things cold
- d. animal house

15. PATIENCE: He has no patience.

- a. will not wait happily
- b. has no free time
- c. has no faith
- d. does not know what is fair

16. NIL: His mark for that question was nil.

- a. very bad
- b. nothing
- c. very good
- d. in the middle

17. PUB: They went to the pub.

- a. place where people drink and talk
- b. place that looks after money
- c. large building with many shops
- d. building for swimming

18. CIRCLE: Make a circle.

- a. rough picture
- b. space with nothing in it
- c. round shape
- d. large hole

19. MICROPONE: Please use the microphone.

- a. machine for making food hot
- b. machine that makes sounds louder
- c. machine that makes things look bigger
- d. small telephone that can be carried around

20. PRO: He's a pro.

- a. someone who is employed to find out important secrets
- b. a stupid person
- c. someone who writes for a newspaper
- d. someone who is paid for playing sport etc.

THIRD 1000

21. SOLDIER: He is a soldier.
a. person in a business
b. student
c. person who uses metal
d. person in the army
22. RESTORE: It has been restored.
a. said again
b. given to a different person
c. given a lower price
d. made like new again
23. JUG: He was holding a jug.
a. A container for pouring liquids
b. an informal discussion
c. A soft cap
d. A weapon that explodes
24. SCRUB: He is scrubbing it.
a. cutting shallow lines into it
b. repairing it
c. rubbing it hard to clean it
d. drawing simple pictures of it
25. DINOSAUR: The children were pretending to be dinosaurs.
a. robbers who work at sea
b. very small creatures with human form but with wings
c. large creatures with wings that breathe fire
d. animals that lived a long time ago
26. STRAP: He broke the strap.
a. promise
b. top cover
c. shallow dish for food
d. strip of material for holding things together
27. PAVE: It was paved.
a. prevented from going through
b. divided
c. given gold edges
d. covered with a hard surface
28. DASH: They dashed over it.
a. moved quickly
b. moved slowly
c. fought
d. looked quickly
29. ROVE: He couldn't stop roving.
a. getting drunk
b. travelling around
c. making a musical sound through closed lips
d. working hard
30. LONESOME: He felt lonesome.
a. ungrateful
b. very tired
c. lonely
d. full of energy

FOURTH 1000

31. COMPOUND: They made a new compound.

- a. agreement
- b. thing made of two or more parts
- c. group of people forming a business
- d. guess based on past experience

32. LATTER: I agree with the latter.

- a. man from the church
- b. reason given
- c. last one
- d. answer

33. CANDID: Please be candid.

- a. be careful
- b. show sympathy
- c. show fairness to both sides
- d. say what you really think

34. TUMMY: Look at my tummy.

- a. cloth to cover the head
- b. stomach
- c. small furry animal
- d. thumb

35. QUIZ: We made a quiz.

- a. thing to hold arrows
- b. serious mistake
- c. set of questions
- d. box for birds to make nests in

36. INPUT: We need more input.

- a. information, power, etc. put into something
- b. workers
- c. artificial filling for a hole in wood
- d. money

37. CRAB: Do you like crabs?

- a. sea creatures that walk sideways
- b. very thin small cakes
- c. tight, hard collars
- d. large black insects that sing at night

38. VOCABULARY: You will need more vocabulary.

- a. words
- b. skill
- c. money
- d. guns

39. REMEDY: We found a good remedy.

- a. way to fix a problem
- b. place to eat in public
- c. way to prepare food
- d. rule about numbers

40. ALLEGE: They alleged it.

- a. claimed it without proof
- b. stole the ideas for it from someone else
- c. provided facts to prove it
- d. argued against the facts that supported it

FIFTH 1000

41. DEFICIT: The company had a large deficit.
- spent a lot more money than it earned
 - went down a lot in value
 - had a plan for its spending that used a lot of money
 - had a lot of money in the bank
42. WEEP: He wept.
- finished his course
 - cried
 - died
 - worried
43. NUN: We saw a nun.
- long thin creature that lives in the earth
 - terrible accident
 - woman following a strict religious life
 - unexplained bright light in the sky
44. HAUNT: The house is haunted.
- full of ornaments
 - rented
 - empty
 - full of ghosts
45. COMPOST: We need some compost.
- strong support
 - help to feel better
 - hard stuff made of stones and sand stuck together
 - rotted plant material
46. CUBE: I need one more cube.
- sharp thing used for joining things
 - solid square block
 - tall cup with no saucer
 - piece of stiff paper folded in half
47. MINIATURE: It is a miniature.
- a very small thing of its kind
 - an instrument to look at small objects
 - a very small living creature
 - a small line to join letters in handwriting
48. PEEL: Shall I peel it?
- let it sit in water for a long time
 - take the skin off it
 - make it white
 - cut it into thin pieces
49. FRACTURE: They found a fracture.
- break
 - small piece
 - short coat
 - rare jewel
50. BACTERIUM: They didn't find a single bacterium.
- small living thing causing disease
 - plant with red or orange flowers
 - animal that carries water on its back
 - thing that has been stolen and sold to a shop

SIXTH 1000

51. DEVIOUS: Your plans are devious.
a. tricky
b. well-developed
c. not well thought out
d. more expensive than necessary

52. PREMIER: The premier spoke for an hour.
a. person who works in a law court
b. university teacher
c. adventurer
d. head of the government

53. BUTLER: They have a butler.
a. man servant
b. machine for cutting up trees
c. private teacher
d. cool dark room under the house

54. ACCESSORY: They gave us some accessories.
a. papers allowing us to enter a country
b. official orders
c. ideas to choose between
d. extra pieces

55. THRESHOLD: They raised the threshold.
a. flag
b. point or line where something changes
c. roof inside a building
d. cost of borrowing money

56. THESIS: She has completed her thesis.
a. long written report of study carried out for a university degree
b. talk given by a judge at the end of a trial
c. first year of employment after becoming a teacher
d. extended course of hospital treatment

57. STRANGLE: He strangled her.
a. killed her by pressing her throat
b. gave her all the things she wanted
c. took her away by force
d. admired her greatly

58. CAVALIER: He treated her in a cavalier manner.
a. without care
b. politely
c. awkwardly
d. as a brother would

59. MALIGN: His malign influence is still felt.
a. evil
b. good
c. very important
d. secret

60. VEER: The car veered.
a. went suddenly in another direction
b. moved shakily
c. made a very loud noise
d. slid sideways without the wheels turning

SEVENTH 1000

61. OLIVE: We bought olives.

- a. oily fruit
- b. scented pink or red flowers
- c. men's clothes for swimming
- d. tools for digging up weeds

62. QUILT: They made a quilt.

- a. statement about who should get their property when they die
- b. firm agreement
- c. thick warm cover for a bed
- d. feather pen

63. STEALTH: They did it by stealth.

- a. spending a large amount of money
- b. hurting someone so much that they agreed to their demands
- c. moving secretly with extreme care and quietness
- d. taking no notice of problems they met

64. SHUDDER: The boy shuddered.

- a. spoke with a low voice
- b. almost fell
- c. shook
- d. called out loudly

65. BRISTLE: The bristles are too hard.

- a. questions
- b. short stiff hairs
- c. folding beds
- d. bottoms of the shoes

66. BLOC: They have joined this bloc.

- a. musical group
- b. band of thieves
- c. small group of soldiers who are sent ahead of others
- d. group of countries sharing a purpose

67. DEMOGRAPHY: This book is about demography.

- a. the study of patterns of land use
- b. the study of the use of pictures to show

facts about numbers

- c. the study of the movement of water
- d. the study of population

68. GIMMICK: That's a good gimmick.

- a. thing for standing on to work high above the ground
- b. small thing with pockets to hold money
- c. attention-getting action or thing
- d. clever plan or trick

69. AZALEA: This azalea is very pretty.

- a. small tree with many flowers growing in groups
- b. light material made from natural threads
- c. long piece of material worn by women in India
- d. sea shell shaped like a fan

70. YOGHURT: This yoghurt is disgusting.

- a. grey mud found at the bottom of rivers
- b. unhealthy, open sore
- c. thick, soured milk, often with sugar and flavouring
- d. large purple fruit with soft flesh

EIGHTH 1000

71. **ERRATIC:** He was erratic.

- a. without fault
- b. very bad
- c. very polite
- d. unsteady

72. **PALETTE:** He lost his palette.

- a. basket for carrying fish
- b. wish to eat food
- c. young female companion
- d. artist's board for mixing paints

73. **NULL:** His influence was null.

- a. had good results
- b. was unhelpful
- c. had no effect
- d. was long-lasting

74. **KINDERGARTEN:** This is a good kindergarten.

- a. activity that allows you to forget your worries
- b. place of learning for children too young for school
- c. strong, deep bag carried on the back
- d. place where you may borrow books

75. **ECLIPSE:** There was an eclipse.

- a. a strong wind
- b. a loud noise of something hitting the water
- c. The killing of a large number of people
- d. The sun hidden by a planet

76. **MARROW:** This is the marrow.

- a. symbol that brings good luck to a team
- b. Soft centre of a bone
- c. control for guiding a plane
- d. increase in salary

77. **LOCUST:** There were hundreds of locusts.

- a. insects with wings
- b. unpaid helpers

- c. people who do not eat meat
- d. brightly coloured wild flowers

78. **AUTHENTIC:** It is authentic.

- a. real
- b. very noisy
- c. Old
- d. Like a desert

79. **CABARET:** We saw the cabaret.

- a. painting covering a whole wall
- b. song and dance performance
- c. small crawling insect
- d. person who is half fish, half woman

80. **MUMBLE:** He started to mumble.

- a. think deeply
- b. shake uncontrollably
- c. stay further behind the others
- d. speak in an unclear way

NINTH 1000

81. HALLMARK: Does it have a hallmark?
- a. stamp to show when to use it by
 - b. stamp to show the quality
 - c. mark to show it is approved by the royal family
 - d. Mark or stain to prevent copying
82. PURITAN: He is a puritan.
- a. person who likes attention
 - b. person with strict morals
 - c. person with a moving home
 - d. person who hates spending money
83. MONOLOGUE: Now he has a monologue.
- a. single piece of glass to hold over his eye to help him to see better
 - b. long turn at talking without being interrupted
 - c. position with all the power
 - d. picture made by joining letters together in interesting ways
84. WEIR: We looked at the weir.
- a. person who behaves strangely
 - b. wet, muddy place with water plants
 - c. old metal musical instrument played by blowing
 - d. thing built across a river to control the water
85. WHIM: He had lots of whims.
- a. old gold coins
 - b. female horses
 - c. strange ideas with no motive
 - d. sore red lumps
86. PERTURB: I was perturbed.
- a. made to agree
 - b. Worried
 - c. very puzzled
 - d. very wet
87. REGENT: They chose a regent.
- a. an irresponsible person
 - b. a person to run a meeting for a time
 - c. a ruler acting in place of the king
 - d. a person to represent them
88. OCTOPUS: They saw an octopus.
- a. a large bird that hunts at night
 - b. a ship that can go under water
 - c. a machine that flies by means of turning blades
 - d. a sea creature with eight legs
89. FEN: The story is set in the fens.
- a. low land partly covered by water
 - b. a piece of high land with few trees
 - c. a block of poor-quality houses in a city
 - d. a time long ago
90. LINTEL: He painted the lintel.
- a. Beam over the top of a door or window
 - b. small boat used for getting to land from a big boat
 - c. beautiful tree with spreading branches and green fruit
 - d. board showing the scene in a theatre

TENTH 1000

91. AWE: They looked at the mountain with awe.

- a. worry
- b. interest
- c. wonder
- d. respect

92. PEASANTRY: He did a lot for the peasantry.

- a. local people
- b. place of worship
- c. businessmen's club
- d. poor farmers

93. EGALITARIAN: This organization is egalitarian.

- a. does not provide much information about itself to the public
- b. dislikes change
- c. frequently asks a court of law for a judgement
- d. treats everyone who works for it as if they are equal

94. MYSTIQUE: He has lost his mystique.

- a. his healthy body
- b. the secret way he makes other people think he has special power or skill
- c. the woman who has been his lover while he is married to someone else
- d. the hair on his top lip

95. UPBEAT: I'm feeling really upbeat about it.

- a. upset
- b. good
- c. hurt
- d. confused

96. CRANNY: We found it in the cranny!

- a. sale of unwanted objects
- b. narrow opening
- c. space for storing things under the roof of a house
- d. large wooden box

97. PIGTAIL: Does she have a pigtail?

- a. a rope of hair made by twisting bits together
- b. a lot of cloth hanging behind a dress
- c. a plant with pale pink flowers that hang down in short bunches
- d. a lover

98. CROWBAR: He used a crowbar.

- a. heavy iron pole with a curved end
- b. false name
- c. sharp tool for making holes in leather
- d. light metal walking stick

99. RUCK: He got hurt in the ruck.

- a. hollow between the stomach and the top of the leg
- b. pushing and shoving
- c. group of players gathered round the ball in some ball games
- d. race across a field of snow

100. LECTERN: He stood at the lectern.

- a. desk to hold a book at a height for reading
- b. table or block used for church sacrifices
- c. place where you buy drinks
- d. very edge

ELEVENTH 1000

101. EXCRETE: This was excreted recently.

- a. pushed or sent out
- b. made clear
- c. discovered by a science experiment
- d. put on a list of illegal things

102. MUSSEL: They bought mussels.

- a. small glass balls for playing a game
- b. shellfish
- c. large purple fruits
- d. pieces of soft paper to keep the clothes clean when eating

103. YOGA: She has started yoga.

- a. handwork done by knotting thread
- b. a form of exercise for body and mind
- c. a game where a cork stuck with feathers is hit between two players
- d. a type of dance from eastern countries

104. COUNTERCLAIM: They made a counterclaim.

- a. a demand made by one side in a law case to match the other side's demand
- b. a request for a shop to take back things with faults
- c. An agreement between two companies to exchange work
- d. a top cover for a bed

105. PUMA: They saw a puma.

- a. small house made of mud bricks
- b. tree from hot, dry countries
- c. very strong wind that sucks up anything in its path
- d. large wild cat

106. PALLOR: His pallor caused them concern.

- a. his unusually high temperature
- b. his lack of interest in anything
- c. his group of friends

d. the paleness of his skin

107. APERITIF: She had an aperitif.

- a. a long chair for lying on with just one place to rest an arm
- b. a private singing teacher
- c. a large hat with tall feathers
- d. a drink taken before a meal

108. HUTCH: Please clean the hutch.

- a. thing with metal bars to keep dirt out of water pipes
- b. space in the back of a car for bags
- c. metal piece in the middle of a bicycle wheel
- d. cage for small animals

109. EMIR: We saw the emir.

- a. bird with long curved tail feathers
- b. woman who cares for other people's children in Eastern countries
- c. Middle Eastern chief with power in his land
- d. house made from blocks of ice

110. HESSIAN: She bought some hessian.

- a. oily pinkish fish
- b. stuff producing a happy state of mind
- c. coarse cloth
- d. strong-tasting root for flavouring food

TWELFTH 1000

111. HAZE: We looked through the haze.

- a. small round window in a ship
- b. unclear air
- c. strips of wood or plastic to cover a window
- d. list of names

112. SPLEEN: His spleen was damaged.

- a. knee bone
- b. organ found near the stomach
- c. pipe taking waste water from a house
- d. respect for himself

113. SOLILOQUY: That was an excellent soliloquy!

- a. song for six people
- b. short clever saying with a deep meaning
- c. entertainment using lights and music
- d. speech in the theatre by a character who is alone

114. REPTILE: She looked at the reptile.

- a. old hand-written book
- b. animal with cold blood and a hard outside
- c. person who sells things by knocking on doors
- d. picture made by sticking many small pieces of different colours together

115. ALUM: This contains alum.

- a. a poisonous substance from a common plant
- b. a soft material made of artificial threads
- c. a tobacco powder once put in the nose
- d. a chemical compound usually involving aluminium

116. REFECTORY: We met in the refectory.

a. room for eating

b. office where legal papers can be signed

c. room for several people to sleep in

d. room with glass walls for growing plants

117. CAFFEINE: This contains a lot of caffeine.

a. a substance that makes you sleepy

b. threads from very tough leaves

c. ideas that are not correct

d. a substance that makes you excited

118. IMPALE: He nearly got impaled.

a. charged with a serious offence

b. put in prison

c. stuck through with a sharp instrument

d. involved in a dispute

119. COVEN: She is the leader of a coven.

a. a small singing group

b. a business that is owned by the workers

c. a secret society

d. a group of church women who follow a strict religious life

120. TRILL: He practised the trill.

a. ornament in a piece of music

b. type of stringed instrument

c. Way of throwing a ball

d. dance step of turning round very fast on the toes

THIRTEENTH 1000

121. UBIQUITOUS: Many weeds are ubiquitous.

- a. are difficult to get rid of
- b. have long, strong roots
- c. are found in most countries
- d. die away in the winter

122. TALON: Just look at those talons!

- a. high points of mountains
- b. sharp hooks on the feet of a hunting bird
- c. heavy metal coats to protect against weapons
- d. people who make fools of themselves without realizing it

123. ROUBLE: He had a lot of roubles.

- a. very precious red stones
- b. distant members of his family
- c. Russian money
- d. moral or other difficulties in the mind

124. JOVIAL: He was very jovial.

- a. low on the social scale
- b. likely to criticize others
- c. full of fun
- d. friendly

125. COMMUNIQUE: I saw their communiqué.

- a. critical report about an organization
- b. garden owned by many members of a community
- c. printed material used for advertising
- d. official announcement

126. PLANKTON: We saw a lot of plankton.

- a. poisonous weeds that spread very quickly
- b. very small plants or animals found in water
- c. trees producing hard wood

d. grey clay that often causes land to slip

127. SKYLARK: We watched a skylark.

- a. show with aeroplanes flying in patterns
- b. man-made object going round the earth
- c. person who does funny tricks
- d. small bird that flies high as it sings

128. BEAGLE: He owns two beagles.

- a. fast cars with roofs that fold down
- b. large guns that can shoot many people quickly
- c. small dogs with long ears
- d. houses built at holiday places

129. ATOLL: The atoll was beautiful.

- a. low island made of coral round a sea-water lake
- b. work of art created by weaving pictures from fine thread
- c. small crown with many precious jewels worn in the evening by women
- d. place where a river flows through a narrow place full of large rocks

130. DIDACTIC: The story is very didactic.

- a. tries hard to teach something
- b. is very difficult to believe
- c. deals with exciting actions
- d. is written in a way which makes the reader unsure of the meaning

FOURTEENTH 1000

131. CANONICAL: These are canonical examples.

- a. examples which break the usual rules
- b. examples taken from a religious book
- c. regular and widely accepted examples
- d. examples discovered very recently

132. ATOP: He was atop the hill.

- a. at the bottom of
- b. at the top of
- c. on this side of
- d. on the far side of

133. MARSUPIAL: It is a marsupial.

- a. an animal with hard feet
- b. a plant that grows for several years
- c. a plant with flowers that turn to face the sun
- d. an animal with a pocket for babies

134. AUGUR: It augured well.

- a. promised good things for the future
- b. agreed well with what was expected
- c. had a colour that looked good with something else
- d. rang with a clear, beautiful sound

135. BAWDY: It was very bawdy.

- a. unpredictable
- b. enjoyable
- c. rushed
- d. rude

136. GAUCHE: He was gauche.

- a. talkative
- b. flexible
- c. awkward
- d. determined

137. THESAURUS: She used a thesaurus.

- a. a kind of dictionary
- b. a chemical compound
- c. a special way of speaking
- d. an injection just under the skin

138. ERYTHROCYTE: It is an erythrocyte.

- a. a medicine to reduce pain
- b. a red part of the blood
- c. a reddish white metal
- d. a member of the whale family

139. CORDILLERA: They were stopped by the cordillera.

- a. a special law
- b. an armed ship
- c. a line of mountains
- d. the eldest son of the king

140. LIMPID: He looked into her limpid eyes.

- a. clear
- b. tearful
- c. deep brown
- d. beautiful

APPENDIX B: PRODUCTIVE COLLOCATIONAL TEST

Değerli Katılımcılar,

Bu anket eşdizimlilik “collocation” bilgisi (örn: “do homework”, “golden rule”) hakkındaki yüksek lisans tez çalışmamın bir parçasıdır. Anketin tamamlanması bu çalışma için çok önemlidir. Verdiğiniz bilgiler yalnızca bu çalışma için kullanılacaktır. Zaman ayırdığınız için teşekkür ederim.

Fill in the blanks with a **“VERB”** that best completes each sentence below. Use the first letter as a clue.

***Example:** It's true that we g__ain__ **weight** when we eat more than we can burn off.*

1. Forensic experts g_____ **evidence** at the scene of the crime to find any clues about the crime and they do not allow anybody to enter.
2. A person who c_____ **murder** is called a murderer, and the penalties can vary from state to state.
3. The police decided to o_____ **fire** on the people in the building to terrify all of the demonstrators who had been there for a long time.
4. Unfortunately, the medications that are strong enough to e_____ **the pain** of head and body aches are often addictive.
5. We raise money for homeless children so would you be willing to d_____ **money** to our charity to help those children?
6. She worked hard to r_____ **her goal** of a job in the medical profession and in the end she did it. Now she is a doctor.
7. Unless you g_____ **priority** to your family, this hectic job will cause you to divorce soon.
8. It would b _____ Kate's **heart** to leave the lovely old house. I think she will be sad when she learns they have to move to another city.
9. The employees were willing to m_____ **sacrifices** in order to secure their jobs. They accepted not to receive their salaries for 2 months.
10. He can not t_____ **a lie**, so he confessed he broke his mother's favourite vase yesterday.

11. Passengers claim that the airline **p**_____ more **emphasis** on profit than on safety, so many people start to prefer other companies.
12. The vice-president **d**_____ **a speech** to the nation on TV every Friday about the most important news of the week. His speech lasts for 1 hour at least.
13. If any students **b**_____ **the rules**, he will be sent to the principal, and he will get punishment for not obeying the rules.
14. Research has **c**_____ **doubt** on the safety of mobile phones, so we should be more cautious about the dangers of them.
15. They **t**_____ **pride in** their daughter's achievements. She always comes in first in all exams and she is really a high achiever.
16. Tomorrow evening, after the hospital is closed, the nurses will **t**_____ **a party** to celebrate their pay rise.
17. At football matches, the referee looks at his watch and **b**_____ **whistle**, and then the match starts.
18. If you have time, **p**_____ **a visit** to the City Art Gallery. It is really full of art and you should not miss to see it.
19. He lost his job at a nightclub when he asked for time off to **t**_____ his **exams** at his school to pass the class.
20. Parents should **s**_____ **an example** for their children by being active and keeping fit as their children take them as a model.

Fill in the blanks with an **“ADJECTIVE”** that best completes each sentence below. Use the first letter as a clue.

Example: Today is your ***last*** **chance** to submit your final project.

1. Britain and France have a **c**_____ **enemy** so they decided to unite and fight against it together.
2. Wearing a helmet may protect you from **s**_____ **injury**, so if you want to be safe, you should wear it.
3. It's just about possible to see the planet with the **n**_____ **eye** on a clear night. You do not need to look through a telescope.
4. The earthquake and flood were the worst **n**_____ **disasters** to have hit India for over 50 years.

5. He lay down on his bed and fell into a **d**_____ **sleep**. I think he was very tired; he slept for 15 hours.
6. İstanbul has a **r**_____ **history**; it has countless historical places to visit, which remained from different civilizations throughout its history.
7. Everyone knows that a little **w**_____ **lie** is sometimes required during a time of crisis, but even if it is thought to be harmless and little, it is a lie after all.
8. His colleagues gave him a very **w**_____ **welcome** when he returned to work. He was happy for their sincere and friendly manner.
9. It seems that she has a **b**_____ **future** as a tennis player as she wins almost every match.
10. Use a **s**_____ **knife** to cut the melon into sections; otherwise, it will be difficult for you to slice it because of its hard skin.
11. I'm driving, so I had better have a **s**_____ **drink** such as coke, lemonade, fruit juice, namely anything non-alcoholic.
12. I'm pretty sure Mrs. Moses lied and misused the money, I have some **h**_____ **evidence** to back that claim up.
13. Unfortunately, Karen's husband died in a car accident two years ago and she is still grieving for her dead, in other words, **I**_____ **husband**.
14. When he entered the room, the room was filled with a **s**_____ **smell** of garlic, which was disgusting.
15. My grandmother has lost all her real teeth, evidently it is time to go to the dentist and get **f**_____ **teeth** for her.
16. Your approach may seem to work in the **s**_____ **run**, but, after some time passes, it will be proved useless.
17. I like to see a **h**_____ **copy** of the important documents because I can miss the important points when I read them on the computer.
18. It was believed that the accident happened as an indirect result of **h**_____ **rain** and snow storms in the city.
19. They listened to the speech with **c**_____ **attention** and they took notes of every single detail with great concentration.
20. When I go to the café, I always order **b**_____ **coffee** because I do not like coffee with milk.

APPENDIX C: RECEPTIVE COLLOCATIONAL TEST

Bu test 60 sorudan oluşmaktadır (1-60). Testi cevaplamak için verilen eşdizimli sözcüklerin (collocation) gerçekten İngilizce’de var olup olmadıklarına karar vermeniz gerekmektedir. Altı çizili koyu renkteki eşdizimli sözcüklerin İngilizce’de var olduğunu düşünüyorsanız verilen boşluğa “A” (acceptable); verilen eşdizimli sözcüklerin İngilizce’de birarada kullanılmadığını düşünüyorsanız da “U” (unacceptable) yazınız.

E.g: She **takes a walk** through the town. __A__

I’d like to **gain more money** than I do now. __U__

1. Marry will be very upset when she learns her boyfriend wants to **finish their relationship**. ____
2. Forensic experts **gather evidence** at the scene of the crime to find any clues about the crime and they do not allow anybody to enter. ____
3. The government **lifts expectations** about bringing down the rate of inflation, but always fails to keep its promises. ____
4. A person who **commits murder** is called a murderer, and the penalties can vary from state to state. ____
5. The police decided to **open fire** on the people in the building to terrify all of the demonstrators who had been there for a long time. ____
6. Unfortunately, the medications that are strong enough to **ease the pain** of head and body aches are often addictive. ____
7. She should **do an effort** to be politer as she is so rude. ____
8. We raise money for homeless children so would you be willing to **donate money** to our charity to help those children? ____
9. She worked hard to **reach her goal** of a job in the medical profession and in the end she did it. Now she is a doctor. ____
10. Too much sun can **give harm** to your skin. Keep away staying too long under the sun. ____

11. Unless you **give priority** to your family, this hectic job will cause you to divorce soon. ____
12. It would **break Kate's heart** to leave the lovely old house. I think she will be sad when she learns they have to move to another city. ____
13. The employees were willing to **make sacrifices** in order to secure their jobs. They accepted not to receive their salaries for 2 months. ____
14. Her children always **tell their prayers** before getting into bed. ____
15. We waved to **pull the attention** of the waitress, but he did not notice us. ____
16. He can not **tell a lie**, so he confessed he broke his mother's favourite vase yesterday. ____
17. Passengers claim that the airline **puts more emphasis** on profit than on safety, so many people start to prefer other companies. ____
18. The vice-president **delivers a speech** to the nation on TV every Friday about the most important news of the week. ____
19. He grabbed a broom and began to **brush the floor** before going out. ____
20. If any students **break the rules**, he will be sent to the principal, and he will get punishment for not obeying the rules. ____
21. Research has **cast doubt** on the safety of mobile phones, so we should be more cautious about the dangers of them. ____
22. They **take pride** in their daughter's achievements. She always comes in first in all exams and she is really a high achiever. ____
23. I think we should **do a proper debate** about population growth. ____
24. Tomorrow evening, after the hospital is closed, the nurses will **throw a party** to celebrate their pay rise. ____
25. At football matches, the referee looks at his watch and **blows whistle**, and then the match starts. ____
26. If you have time, **pay a visit** to the City Art Gallery. It is really full of art and you should not miss to see it. ____
27. Lucy ran downstairs to **reply the door** when the bell rang. ____
28. He lost his job at a nightclub when he asked for time off to **take his exams** at his school to pass the class. ____

29. Parents should **set an example** for their children by being active and keeping fit as their children take them as a model. ____
30. He had to buy a lot of different numbers of magazines to **make his research**. ____
31. Britain and France have a **common enemy** so they decided to unite and fight against it together. ____
32. It seems unlikely that he will move to another country in the **close future**, he has no preparations. ____
33. Wearing a helmet may protect you from **serious injury**, so if you want to be safe, you should wear it. ____
34. It's just about possible to see the planet with the **naked eye** on a clear night. You do not need to look through a telescope. ____
35. The earthquake and flood were the worst **natural disasters** to have hit India for over 50 years. ____
36. Before leaving the home, she gave a **fast glance** in the mirror to check her hair. ____
37. He lay down on his bed and fell into a **deep sleep**. I think he was very tired; he slept for 15 hours. ____
38. İstanbul has a **rich history**; it has countless historical places to visit, which remained from different civilizations throughout its history. ____
39. More than one-fifth of the population had Spanish as their **original tongue**. ____
40. Everyone knows that a little **white lie** is sometimes required during a time of crisis, but even if it is thought to be harmless and little, it is a lie after all. ____
41. His colleagues gave him a very **warm welcome** when he returned to work. He was happy for their sincere and friendly manner. ____
42. Tom is OK, he has just a few **light injuries** after the accident he had. ____
43. It seems that she has a **bright future** as a tennis player as she wins almost every match. ____
44. After a short **hot argument**, the inspector agreed to pay the costs in cash from local station funds. ____
45. Use a **sharp knife** to cut the melon into sections; otherwise, it will be difficult for you to slice it because of its hard skin. ____

46. I'm driving, so I had better have a **soft drink** such as coke, lemonade, fruit juice, namely anything non-alcoholic. ____
47. I'm pretty sure Mrs. Moses lied and misused the money, I have some **hard evidence** to back that claim up. ____
48. The animal's thick fur protects it from the **strict cold** in winter. ____
49. Unfortunately, Karen's husband died in a car accident two years ago and she is still grieving for her dead, in other words, **late husband**. ____
50. When he entered the room, the room was filled with a **strong smell** of garlic, which was disgusting. ____
51. My grandmother has lost all her real teeth, evidently it is time to go to the dentist and get **false teeth** for her. ____
52. He only has a very **weak chance** of being elected. Nobody likes him. ____
53. Your approach may seem to work in the **short run**, but, after some time passes, it will be proved useless. ____
54. I like to see a **hard copy** of the important documents because I can miss the important points when I read them on the computer. ____
55. A **beneficial diet** includes plenty of fresh fruit and vegetables. ____
56. It was believed that the accident happened as an indirect result of **heavy rain** and snow storms in the city. ____
57. The prison system has been the object of **rough criticism**. ____
58. They listened to the speech with **close attention** and they took notes of every single detail with great concentration. ____
59. When I go to the café, I always order **black coffee** because I do not like coffee with milk. ____
60. There is **hard competition** between the three leading soap manufacturers. ____

APPENDIX D: FREQUENCY VALUES OF VERB-NOUN COLLOCATIONS

VERB-NOUN	ENGLISH	TURKISH	TSCORE	MI	RAW FREQUENCY
CONGRUENT					
1	gather evidence	delil toplamak	15,73	4,9	265
2	commit murder	cinayet işlemek	21,49	7,42	467
3	open fire	ateş açmak	24,6	4,41	666
4	ease pain	ağrıyı dindirmek	23,20	7,83	543
5	donate money	para bağışlamak	16,87	5,8	295
6	reach goal	amacına ulaşmak	24,65	5,33	639
7	give priority	ayrıcalık vermek	17,22	4,01	337
8	break heart	kalp kırmak	24,49	4,58	653
9	make sacrifice	fedakarlık yapmak	15,79	3,18	315
10	tell lie	yalan söylemek	20,06	4,99	429
NON- CONGRUENT					
1	put emphasis	önem vermek	23,95	4,12	646
2	deliver speech	konuşma yapmak	14,91	5,31	234
3	break the rules	kuralları çiğnemek	21,3	5,47	475
4	cast doubt	şüphe uyandırmak	22,85	7,72	527
5	take pride	gurur duymak	28,93	4,42	921
6	throw party	parti vermek	17,61	4	353
7	blow whistle	düdük çalmak	16,72	10,24	280
8	pay visit	ziyaret etmek	19,7	4,69	420
9	take exam	sınav olmak	13,16	3,67	204
10	set example	örnek olmak	32,76	4,71	1160

APPENDIX E: FREQUENCY VALUES OF ADJECTIVE-NOUN COLLOCATIONS

ADJECTIVE-NOUN CONGRUENT	ENGLISH	TURKISH	T SCORE	MI	RAW FREQUENCY
1	common enemy	ortak düşman	15,76	4,55	271
2	serious injury	ciddi yaralanma	28,33	6,34	823
3	naked eye	çıplak göz	28,27	7,11	811
4	natural disaster	doğal afet	25,69	6,15	679
5	deep sleep	derin uyku	24,56	6,17	728
6	rich history	zengin tarih	23,11	3,73	625
7	white lie	beyaz yalan	12,51	4,13	429
8	warm welcome	sıcak karşılama	17,97	8,39	325
9	bright future	parlak gelecek	27,41	5,34	790
10	sharp knife	keskin bıçak	24,4	7,72	601
ADJECTIVE-NOUN NON- CONGRUENT	ENGLISH	TURKISH	T SCORE	MI	RAW FREQUENCY
1	soft drink	alkolsüz içki	23,83	7,14	576
2	hard evidence	kesin kanıt	25,17	3,42	771
3	late husband	merhum eş	24,82	3,94	705
4	close attention	pür dikkat	33,96	4,96	1231
5	false tooth	takma diş	14,27	6,01	210
6	short run	kısa vade	35,42	6,04	1294
7	hard copy	bilgisayar çıktısı	18,45	5,1	361
8	heavy rain	sağanak yağmur	30,3	6,47	939
9	strong smell	keskin koku	13,9	3,86	321
10	black coffee	sade kahve	20,16	3,16	515

APPENDIX F: CONSENT FORM

Bu çalışma katılımcıların algısal ve üretimsel eşdizimlilik arasındaki farkı araştırmak, algısal kelime bilgisiyle algısal ve üretimsel eşdizimlilik bilgisi arasında bir ilişki olup olmadığını ve üç değişken, yani anadile benzerlik, sıklık ve farklı sözcük türleri, arasından algısal ve üretimsel eşdizimlilik bilgisinin en iyi belirleyicilerini bulmayı amaçlamaktadır. Çalışmada 1 adet üretimsel, 1 adet algısal eşdizim testi ve 1 tane de kelime dağarcığı seviye testi uygulanacaktır. Çalışma, MEB İngilizce öğretmeni Sehla Betül DURCEYLAN YİĞİT tarafından yürütülmekte ve sonuçları ile eşdizimsel kelimelerinin öğretilmesine ve gelişimine ışık tutması amaçlanmaktadır.

- Bu çalışmaya katılımınız gönüllülük esasına dayanmaktadır.
- Çalışmanın amacı doğrultusunda, anket yapılarak sizden veriler toplanacaktır.
- İsminizi yazmak ya da kimliğinizi açığa çıkaracak bir bilgi vermek zorunda değilsiniz/araştırmada katılımcıların isimleri gizli tutulacaktır.
- Araştırma kapsamında toplanan veriler, sadece bilimsel amaçlar doğrultusunda kullanılacak, araştırmanın amacı dışında ya da bir başka araştırmada kullanılmayacak ve gerekmesi halinde, sizin (yazılı) izniniz olmadan başkalarıyla paylaşılmayacaktır.
- İstemeniz halinde sizden toplanan verileri inceleme hakkınız bulunmaktadır.
- Sizden toplanan veriler korunacak ve araştırma bitiminde arşivlenecektir.
- Veri toplama süreçlerinde size rahatsızlık verebilecek herhangi bir talep olmayacaktır. Yine de katılımınız sırasında herhangi bir sebepten rahatsızlık hissederseniz çalışmadan istediğiniz zamanda ayrılabilirsiniz. Çalışmadan ayrılmanız durumunda sizden toplanan veriler çalışmadan çıkarılacak ve imha edilecektir.

Gönüllü katılım formunu okumak ve değerlendirmek üzere ayırdığınız zaman için teşekkür ederim. Çalışma hakkındaki sorularınızı Eskişehir Hacı Süleyman Çakır Kız Lisesi'nde Sehla Betül DURCEYLAN YİĞİT'e yöneltebilirsiniz.

Araştırmacı Adı: Sehla Betül DURCEYLAN YİĞİT

Adres: Eskişehir Hacı Süleyman Çakır Kız Anadolu Lisesi

İş Tel: 0222 221 51 74

Bu çalışmaya tamamen kendi rızamla, istediğim takdirde çalışmadan ayrılabilceğimi bilerek verdiğim bilgilerin bilimsel amaçlarla kullanılmasını kabul ediyorum.

Katılımcı Ad ve Soyadı:

İmza:

Tarih:

APPENDIX G: ETHICS COMMITTEE APPROVAL

Evrak Kayıt Tarihi: 16.11.2018

Protokol No: 107033

Tarih: 28.11.2018



ANADOLU ÜNİVERSİTESİ
SOSYAL VE BEŞERÎ BİLİMLER BİLİMSEL ARAŞTIRMA VE YAYIN ETİĞİ KURULU
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BAŞLIK:	Ana Dil Eşdizim Benzerliğinin ve Kelime Bilgisinin İngilizce Üretimsel ve Algısal Eşsizim Bilgisine Etkisi (The Influence of L1 Congruency and Vocabulary Depth of Turkish ELT Students on Productive and Receptive Lexical Collocational Knowledge)
PROJE/TEZ YÜRÜTÜCÜSÜ:	Dr. Öğr. Üyesi Mine DİKDERE
TEZ YAZARI:	Sehla Betül DURCEYLAN YİĞİT
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