THE COMPARATIVE EFFECTS OF MEANING-FOCUSED AND FORM-FOCUSED INSTRUCTION ON L2 COLLOCATION LEARNING

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DECLARATION OF ORIGINALITY

I, Gülşah Sobucalı, certify that

- I am the sole author of this thesis and that I have fully acknowledged and documented in my thesis all sources of ideas and words, including digital resources, which have been produced or published by another person or institution;
- this thesis contains no material that has been submitted or accepted for a degree or diploma in any other educational institution;
- this is a true copy of the thesis approved by my advisor and thesis committee at Boğaziçi University, including final revisions required by them.

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Date 17.05.2019

ABSTRACT

The Comparative Effects of Meaning-Focused and Form-Focused Instruction on L2 Collocation Learning

This study investigates differential effects of Meaning-Focused (MFI) and Form-Focused Instruction (FFI) on learning of L2 collocations. Ninety-three university students with elementary level of proficiency in three intact classes participated in the study and they were randomly assigned to one of the experimental conditions, namely MFI, FFI and Control. MFI and FFI groups took part in three 40-minute instructional sessions in line with the assigned treatment. In these sessions, MFI group read passages which contained and recycled the target collocations and answered comprehension questions without help of a dictionary. FFI group, on the other hand, read the same passages and answered the same questions but dictionary use was allowed and target collocations were bold-faced in their passages to draw attention to form. Control group took only pretests and posttests. Adopting a corpus-based approach in the selection of target collocations, 20 verb-noun collocations were selected according to Node Frequency, Mutual Information and Log Dice scores. Pretests and posttests measured collocation gains at form recognition, meaning recall and form recall levels of mastery. Overall results showed that experimental groups improved significantly whereas there were no significant differences in Control group's scores from pretest to posttests. Moreover, FFI group had a significant advantage over MFI group in the mastery levels of form recognition and form recall highlighting importance of attention to form to master formal aspects of collocations.

ÖZET

Eşdizimlilik Öğreniminde Anlam-Odaklı ve Biçim-Odaklı Öğretim Yöntemlerinin Etkilerinin Karşılaştırılması

Bu çalışma anlam-odaklı (MFI) ve biçim-odaklı (FFI) öğretim yöntemlerinin ikinci dilde eşdizimlilik öğrenimi üzerine farklılaşan etkilerini araştırmaktadır. Üç farklı sınıftan başlangıç seviyesinde dil yeterliliğine sahip doksan üç öğrenci bu çalışmaya katılmış ve sınıflar MFI, FFI veya Kontrol deney durumlarından birine rastgele atanmışlardır. MFI ve FFI grupları kendilerine atanan deney durumlarına uygun olarak 40'ar dakikalık üç öğretim seansına katılmışlardır. Bu seanslarda, MFI grubu hedef eşdizimlilikleri içeren ve tekrarlayan metinler okuyup sözlük yardımı almaksızın kavrama soruları cevaplamışlardır. FFI grubu ise aynı metinleri okuyup aynı soruları cevaplamıştır. Fakat FFI grubunun metinlerinde eşdizimlilikler koyu yazılmış ve bu grupta sözlük kullanımına biçime odaklanmak amacıyla izin verilmiştir. Kontrol grubu sadece ön ve son testleri almıştır. Hedef eşdizimliliklerin seçiminde derleme dayalı bir yaklaşım benimsenerek 20 fiil-isim eşdizimliliği düğüm sıklığı ve birliktelik ölçümlerine göre seçilmiştir. Eşdizimlilik öğrenimi biçim tanıma, anlam hatırlama ve biçim hatırlama yeterlik seviyesindeki ön ve son testlerle ölçülmüştür. Genel sonuçlar deney gruplarının anlamlı bir gelişme gösterirken Kontrol grubunun skorlarında anlamlı bir değişiklik olmadığını göstermiştir. Ayrıca, FFI grubu MFI grubu üzerinde biçim tanıma ve biçim hatırlama yeterlik seviyelerinde anlamlı bir avantaja sahip olmuş ve bu sonuç da eşdizimlilikleri biçimsel bakımdan öğrenmek için biçime odağın önemini vurgulamıştır.

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To my beloved mother and father…

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CHAPTER 1

INTRODUCTION

1.1 Background to the study

"Without grammar very little can be conveyed, without vocabulary nothing can be conveyed" (Wilkins, 1972).

Language learners are to master many different aspects of language such as grammar, vocabulary and skills as fundamental requirements of language learning, which in turn makes their job quite demanding. In most EFL contexts, instruction is being tailored to guide and prepare learners in the process of language learning. The power and facilitative role of instruction in language learning has now been widely accepted in research (Benati &Nuzzo, 2017; Long, 2017) and it continues to attract attention of various researchers under the framework of Instructed SLA (ISLA). According to Benati and Nuzzo (2017), ISLA aims at examining differential effects of interventions and formal instruction on language learning. Thus, it generally focuses on different instructional manipulations and how they can affect learning gains from a pedagogical perspective, which also covers the scope of the current study.

ISLA is an umbrella term for a plenty of new areas of research. It not only deals with learning of grammatical structures but also vocabulary learning from numerous perspectives. Many SLA and ISLA studies have centralized around grammar instruction so far in spite of a growing amount of interest in vocabulary research. Nevertheless, essentiality of vocabulary is well-acknowledged among language researchers (Howarth, 1998; Hulstijn & Laufer, 2001; Nesselhauf, 2003; Peters, 2016; Schmitt, 2010) and practitioners. Language teachers including the

researcher of the present study are aware that learners are in short of vocabulary knowledge to express themselves both in academic and social domains. For example, Hu and Nation (2000) opine that leaners need to know at least 98% of the words in a text so as to understand the gist of the text. When this example in the domain of reading is considered, learners have a huge goal to achieve.

In addition to very high numbers of words to acquire, learners need to master different levels of word knowledge such as meaning, form, use, collocations, register and so on (Nation, 2001), which makes the situation even more complicated. Among others, collocations stand as an aspect of word knowledge that posit difficulty for learners. Previous research (Howarth, 1998; Nesselhauf, 2003; Peters, 2014, 2016) also uncovered that collocations are difficult to acquire for ESL and EFL learners. Likewise, conducting collocation studies can also be challenging for researchers owing to the lack of agreement on the definition of collocations. Two generally accepted approaches were adopted regarding what is a "collocation". Some researchers (Cowie, 1998; Howarth, 1998; Nesselhauf, 2005) followed a phraseological approach based on semantic relationships and non-compositionality whereas there were some others (Macis & Schmitt, 2017; Webb & Kagimoto, 2009) adopting a frequency based or statistical approach relying on frequency of co-occurrence in the identification of collocations. In this study, we also adopted a corpus based statistical approach to collocations.

When all these challenges of learning, teaching and researching collocations are taken into account, they became a major concern for many studies. While some researchers (Pellicer-Sanchez, 2017; Peters & Webb 2018; Webb, Newton & Chang, 2013) maintained that learning collocations incidentally through reading produced the optimal outcomes, some other researchers (Cobb, 2007; Ördem & Paker, 2016;

Szudarski, 2012; Szudarski & Carter, 2016) proclaimed that most of the words or collocations might stay unnoticed by the learners if their attention was not drawn to those words which brings out the issue of providing Focus on Form (FonF). Storch (2018) states that comprehensible input is neither sufficient nor effective enough and attracting learners' attention to form is crucial. In spite of the fact that FonF studies mainly targeted learning of grammar, vocabulary research also provides a fine ground for Form-Focused Instruction (FFI) (De La Fuente, 2006; Laufer, 2005; Laufer & Rozovski-Roitblat, 2011) or even collocation learning (Szudarski, 2012). This study conducted in ISLA framework also puts forward ways in which FFI can foster incidental L2 collocation learning.

1.2 Motivation for the study

A great variety of research on a similar variety of foci has been carried out in second language acquisition research. Despite the abundancy of fine-ground studies, there is still a mismatch between what language learning theories aim and what is achieved in real classrooms. At this point, as Ortega (2012) suggested, a dialogue between research and practice is necessary to eliminate the barriers between these two indispensable shareholders of language learning. Thus, this classroom-based study of vocabulary/collocation learning is conducted in the framework of Instructed Second Language Acquisition (ISLA). ISLA research is a very promising area of research, which is expected to bridge the gap between theory and practice.

As a researcher and language instructor currently working at higher education, I strongly believe that language learning practices will produce better outcomes and research on second language acquisition will be better fed by language

learning practices when language instructors become more aware of the developments in research and when researchers touch upon pedagogical issues more.

From another aspect, Schmitt (2008) argues that a broad range of vocabulary knowledge is required to function in English and vocabulary learning is a crucial part of second language (L2) learning. In three years of teaching experience, my observations taught me that Turkish learners are in desperate need of a growth in vocabulary. Turkish language policies, curricula or even textbooks are overruled by grammar instruction. When this is the situation, learners try to survive with only limited number of words in the limited number of occasions where they can use English. Thus, Turkish students need both a greater breadth and depth of vocabulary knowledge.

When depth of vocabulary is concerned, co-occurrence of lexical items stands out as an important contributor to increased vocabulary knowledge since collocations are one of the most difficult aspects of word knowledge to acquire (Nesselhauf, 2003; Peters, 2014). For all these reasons and to break this vicious cycle, the present study has a motivation to provide better options in learning and teaching of collocations in instructed settings.

1.3 Aims of the study

The present study investigates the comparative effects of Form-Focused Instruction and Meaning Focused Instruction on EFL Turkish learners' incidental learning of collocation. SLA and specifically FFI research mostly dealt with grammar instruction, and thus there is an imbalance in the number of studies investigating grammar and vocabulary. Research on second language (L2) vocabulary was thought to be a neglected area of research a few decades ago (Meara, 1980) but these days the

number of vocabulary studies is in an increase. As also stated by Nation (2011), "…with over 30% of the research on L1 and L2 vocabulary learning in the last 120 years occurring in the last 12 years" (p. 530). However, the number of studies exploring collocation gains is still quite parochial. In addition, among the studies of collocation, very few have a focus on FFI even though form is an imperative aspect of word knowledge. In addition, there have been different kinds of FFI, namely FonF and FonFs (Ellis, 2001, 2005; Long, 1991). In the present quasi-experimental study, a FonF approach was adopted and it was operationalized as dictionary use + textual enhancement in case of vocabulary learning. Seventy-two preparatory school students with elementary level of proficiency in three intact classes participated in the study. These classes were randomly assigned to two experimental groups (MFI, FFI) and one control group. After the pretests measuring their vocabulary size and knowledge of target collocations, they attended three instructional sessions based on the interventions assigned to them. In these sessions, they encountered target collocations embedded in reading texts and answered comprehension questions. Control group went on with their usual teaching agenda. Collocation gains were measured via posttests and the results were obtained. Pretests and posttests measured vocabulary gains in three degrees; form recognition of collocation, form recall and meaning recall. Hence, this study aimed at measuring the difference between students' performance in two instructional conditions in the degree of recognition and recall which is the deepest level of word knowledge. To achieve these aims, the research questions addressed in the current study are:

1. Is learning collocations in the mastery level of recall more challenging than collocation learning in the level of recognition?

2. Is there a significant difference between the effects of Meaning Focused Instruction (MFI) and Form Focused Instruction (FFI) on Turkish EFL learners' form recognition (receptive knowledge) of verb-noun collocations as a whole unit in COLLEX (Collocating Lexis) test?
3. Is there a significant difference between the effects of Meaning Focused Instruction (MFI) and Form Focused Instruction (FFI) on Turkish EFL learners' meaning recall of verb-noun collocations?
4. Is there a significant difference between the effects of Meaning Focused Instruction (MFI) and Form Focused Instruction (FFI) on Turkish EFL learners' form recall of verb-noun collocations?

1.4 Significance of the study

The current study aims at exploring the comparative effects of meaning focused and form focused instructional methods in incidental L2 learning of English collocations. It contributes to ISLA vocabulary research in various ways. Firstly, it is the only collocation learning study, to our knowledge, comparing effects of FFI and MFI with a Focus on Form component contrary to Szudarski's (2012) study investigating relative effects of FFI and MFI with a Focus on FormS component.

Furthermore, this study adopted a systematic corpus-based approach in definition and selection of target collocations. Forty candidates of target collocations were extracted from *English Collocations in Use* by McCarthy and O'Dell (2017) and these candidates were crosschecked for appropriateness to the students' vocabulary size. Having determined the participants' vocabulary sizes via Nation and Beglar's (2007) Vocabulary Size Test, node words for target collocations were determined to be from the next level in their scale. Afterwards, whether the selected

collocates of these node words were strong and highly frequent collocates of each other was crosschecked in British National Corpus (BNC) via node frequency, Log Dice and Mutual Information scores. Obtained target collocations were embedded in reading texts which were treatment materials. All the vocabulary items in these texts were also checked for the appropriateness to the students' vocabulary size by comparing the words comprising the texts to the corresponding vocabulary level in Nation's (2001) list. That is, all the words that students encountered in this study were carefully controlled.

Finally, to our knowledge, the current study is the only quasi-experimental collocation study conducted in Turkey bringing form-focused instruction in the foreground. For all these three reasons, the present study has significance in terms of its contribution to the literature.

1.5 Overview of the thesis

This thesis consists of six chapters. The first chapter is an introduction to the thesis which provides background information about the motivations, aims and significance of the current study. Chapter 2 contains a review of the literature on which the study is grounded. Therefore, literature review chapter presents a theoretical background for what constitutes word knowledge, theories and concepts related to vocabulary learning, form focused and meaning focused instruction, definitional issues and research on collocations, all of which relate to one aspect of the current study. This chapter finalizes with vocabulary research conducted in Turkey. This part has been added to the thesis since the current study and the thesis will contribute to not only vocabulary and SLA research in general but also Turkish vocabulary research carried out with Turkish participants. Chapter 3 includes information about the methodology

adopted in the present study. It gives information and details about the participants, operational definitions, selection of target items, materials, instruments, the procedure followed, data collection and analysis techniques. Chapter 4, on the other hand, reports the results and statistical outcomes of the study in relation to each research question. Chapter 5 is a discussion chapter which associates findings of the study to the relevant literature. Overall, this chapter discusses the dissenting and overlapping points between the results and the literature. Chapter 6, which is the last chapter of the thesis, concludes the thesis by giving overview of the results and mentioning pedagogical implications, limitations and recommendations for further research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Learning a language prerequisites mastering at different aspects of language such as grammar, vocabulary and skills. Although these aspects are equally valuable in language acquisition, much research in Second Language Acquisition (SLA) research and Instructed Second Language Acquisition (ISLA) research centralized around contentious issues underpinning grammar learning and evading vocabulary learning, even more specifically collocation learning (Read, 2004). There exist few studies investigating vocabulary gains compared to a number of studies investigating grammar. Even fewer studies focus on learning and teaching of multiword units like collocations. In order to contribute to the literature by conducting studies investigating the effectiveness of any collocation learning and teaching techniques, it is a prerequisite to define what a word is, what constitutes word knowledge and how words combine and comprise collocations. Hence, this chapter sets out by describing scope of word knowledge, single or multiword, at all aspects of knowledge discriminating between receptive and productive knowledge of words.

The fact that there is a limited number of studies does not necessitate that vocabulary learning is insignificant or neglected. Most researchers agree on the essentialness of vocabulary learning and especially collocation learning (Bogaards, 2001; Fan, 2009; Howarth, 1998; Hulstijn & Laufer, 2001; Nesselhauf, 2003; Peters, 2014; Schmitt, 2010). What learners need crucially in their language production is words that carry the meaning they want to convey. Under these circumstances, both teachers and learners have a consensus on the essentialness of vocabulary acquisition

(Hulstijn & Laufer, 2001, Malone 2018). At this point, the question turns out to be a how question. There has always been a space for incidental learning of words and collocations (Godfroid, Housen & Boers, 2010; Pellicer & Sanchez, 2017; Peters & Webb, 2018; Webb, Newton & Chang, 2013), however, it is also evident in classroom practices that some words are highly possible to remain unnoticed, which entails a focus on the form of the target collocations to attract students' attention to the formal properties of the words. Nonetheless, Focus on Form (FonF) research customarily dealt with grammatical structures. Read (2004) argues that SLA discussion on the necessity of focus on form almost always centralizes around acquisition of grammar but actually study of vocabulary also provides a rich background for focus on form activities in the language course design (p.146). Recent systematic research into vocabulary acquisition has started to handle FonF and it revealed promising results on effectiveness of Form Focused Instruction (FFI) (De La Fuente, 2006; Hill & Laufer, 2003). The following part of this review chapter also deals with FFI and its implications for vocabulary teaching.

On the other hand, the implications of FFI are not limited to learning of single lexical items. FFI is peculiarly helpful in establishment of form-meaning relationships in single and multiword items. Forming form-meaning relationships may be a quite challenging task on the part of the learners especially at the beginning of the acquisition process (Bogaards, 2001; Jiang, 2002) and this task becomes even more challenging when they need to learn multiword items, especially collocations. Collocations are known to be a problematic area for language learners. Previous research (Howarth, 1998; Nesselhauf, 2003; Peters, 2014; 2016) uncovered that collocations posit an area of difficulty for most ESL and EFL learners. Macis and Schmitt (2017) argue that collocations carry figurative meanings and they are

difficult to acquire due to their polysemous nature. According to Nesselhauf (2003), collocations are quite problematic for learners to acquire because they posit restrictions in collocate selection and they can be incongruent. Hence, they should be given a place in teaching practices. (Nesselhauf, 2003). This chapter continues with definitional issues in collocations, factors affecting collocational knowledge and lay literature on collocation teaching finalizing with vocabulary and collocation research conducted in Turkey.

2.2 Research on word knowledge

2.2.1 Aspects of word knowledge: What does it mean to know a word?

Knowing a word is an ambiguous term that might lead to plenty of different perceptions. One can argue that knowing a word is solely knowing its meaning while another researcher can emphasize the necessity of correct use to be able to say that a word is known. For instance, according to Nation (2001), words are not isolated forms and they need to be treated in a context. That is why, simply looking at the dictionary and listing definitions do not guarantee learning of a word. Vocabulary learning is simply beyond memorizing word lists and writing them ten times. Bogaards (2001) states that "The task that the foreign language learner faces at the lexical level is far more complicated than is often supposed. It is not just 'learning words'" (p. 327). Hence, it goes without saying that learning of new vocabulary items is a more complex phenomenon which includes learning of various aspects of word knowledge. Knowing a word basically requires knowledge of word form, meaning and use and there are various degrees of knowing, which is a categorization that is framed all disparately by vocabulary researchers by adding or subtracting different aspects.

Most researchers with an interest in vocabulary put forward key components of word knowledge. As a leading scholar in vocabulary research, Nation (1990) listed eight aspects of word knowledge, namely written and spoken form, meaning, grammatical features, frequency, register, collocations and associations. Expanding this schema of word knowledge, Nation (2001) provided a better and the most comprehensive specification of what constitutes word knowledge as demonstrated in Table 1. In this specification, he divides word knowledge into three basic aspects namely, form (spoken, written, word parts), meaning (form and meaning, concept and referents, associations) and use (grammatical features, collocations, constraints on use) and elaborates on each subcategorization by taking receptive and productive aspects into consideration.

Table 1. Aspects of Word Knowledge

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

Source: [Nation, 2001: 27]

In addition to Paul Nation's schema, a plethora of research attempted to define the breath of word knowledge. According to Richards (1976), there are

linguistic, psycholinguistic and sociolinguistic aspects of word knowledge. He lists eight assumptions to know a word and claims that knowing a word means knowing words' syntactic behaviour, underlying form, semantic value, different meanings, associations with other words, use in different situations/functions, frequency and vocabulary growth in native speakers. Schmitt (2000) also argues that words are not organized randomly in the mind of the learner and knowing a word requires knowledge of different aspects of the word. Meaning, form (phonological and orthographical information), grammatical constraints such as word class and morphology, register information regarding communicative use of the word are kinds of the lexical knowledge that a learner needs to master in order to know a word (Schmitt 2000). On the other hand, Schmitt and Zimmerman (2002) emphasize the importance of teaching derivatives and word forms besides meanings.

Commenting on the different facets of the word knowledge, Read (2004) also pinpoints that depth of the word knowledge is highly associated with various aspects of the word knowledge such as syntax, collocation knowledge and meaning. He further suggests that knowledge of a good meaning representation; formal features of vocabulary items, collocational behaviour, syntactic functioning, and register properties are indispensable components of the depth of word knowledge, which also emphasizes the importance of collocational possibilities in word knowledge. Lee (2003) supports this position by commenting that learners need to see, hear, understand, say and use the vocabulary item by stressing the importance of multi-dimensional word knowledge. In addition to this multi-dimensionality of word knowledge, the deeper the word knowledge is, the richer meaning representations become (Lee, 2003).

Some other researchers used peculiar terminologies and named aspects of word knowledge in varying ways. Thornbury (2002) for example, listed what constitutes a word with categories like a word classes, word families, word formation, multi-word units, collocations, homonyms, polysemes, synonyms, antonyms, hyponyms and lexical fields.

From another aspect, form-meaning mapping becomes essential for a full mastery of new lexical units. Learners, especially the ones at the beginning of acquisition process, have difficulty in form-meaning mapping. According to Schmitt (2010), there is not always a one to one correspondence between form and meaning of a word. Thus, learners need to map the form and meaning of a word to acquire that word. At this point, Jiang (2002) asserts that in addition to many other things, recognition of a letter string as a legitimate word in the second language (L2) and knowledge of the meaning of this letter string are two criteria to regard that word as known (Jiang (2002). This might be a challenging task for learners at the beginning of the acquisition process, which becomes even more challenging when it comes to multiword expressions such as collocations, idioms, phrasal verbs. Nevertheless, multiword expressions consisting of known vocabulary items may be learnt more easily than totally new vocabulary items, which demonstrate the facilitative effect of knowledge of previous word knowledge on newly learnt vocabulary (Bogaards, 2001).

As can be seen, no agreement has been reached neither on the breadth nor on depth of what constitutes word knowledge. Researchers came up with different conceptualizations regarding the scope of word knowledge. Table 2 presents a summary of studies conceptualizing on this issue.

Table 2. A Summary of What Constitutes Word Knowledge in Research

Jiang (2002)	recognition of a letter string as a legitimate word in L2 and knowledge of the meaning of this letter string.
Nation (1990)	written and spoken form, meaning, grammatical features, frequency, register, collocations and associations.
Nation (2001)	form (spoken, written, word parts), meaning (form and meaning, concept and referents, associations) and use (grammatical features, collocations, constraints on use).
Read (2004)	a rich and specific meaning representation as well as knowledge of the word's formal features, syntactic functioning, collocational possibilities, register characteristics, and so on.
Richards (1976)	words' syntactic behaviour, underlying form, semantic value, different meanings, associations with other words, use in different situations/functions, frequency and vocabulary growth in native speakers.
Schmitt (2000)	meaning, form (phonological and orthographical information), grammatical constraints such as word class and morphology, register information regarding communicative use of the word.
Thornbury (2002)	word classes, word families, word formation, multi-word units, collocations, homonyms, polysemes, synonyms, antonyms, hyponyms and lexical fields.

Overall, under the light of all these studies, learners must grasp the meaning, pronounce and write it correctly, form grammatical and lexical units, understand what concept the words refer to and use it in appropriate registers and situations in order to show a full mastery of target words. Schmitt (2010) indicated that some aspects of word knowledge such as written form and meaning were comparably easier to measure for research purposes whereas others like collocation and register were substantially more difficult to address.

What constitutes the word knowledge was not the only explanatory issue with which the researchers dealt. They have also made a distinction between receptive and productive knowledge vocabulary. The next section will give brief explanation on this issue.

2.2.2 Receptive and productive knowledge of vocabulary

According to Schmitt (2010), measuring all aspects of word knowledge is not reasonably possible for three main reasons. Firstly, not every aspect of word knowledge has a legitimate way of measurement. Secondly, it is very time consuming to try to test them all. Lastly, it is considerably difficult to avoid cross-test effects. Due to these difficulties of testing all aspects of word knowledge, researchers applied one more categorization into knowledge of vocabulary and came up with receptive knowledge and productive knowledge distinction. They are also known as active and passive mastery (Schmitt, 2010). To differentiate between these two types of knowledge, Nation (2001) suggests that receptive vocabulary knowledge is concerned about recognizing a word form and remembering its meaning, which takes place during reading or listening. Productive vocabulary knowledge, on the other hand, deals with the retrieval and production of word form orally or in a written way. He elaborates every aspect of his classification with questions tapping receptive and productive knowledge (Nation, 2001).

In an attempt to set a model for vocabulary development, Henriksen (1999) came up with three dimensions of lexical competence, namely partial to precise knowledge, depth of knowledge and receptive to productive knowledge and she specified relationships among these dimensions. She also emphasized the necessity of more standardization and precision of terms in vocabulary development. For the scope of the present study, only Henriksen's (1999) receptive to productive knowledge dimension was considered. She examined three dimensions as three vocabulary development continua and highlighted the significance of system changing in addition to item learning, which underscored the change in the interlanguage of the learner. Henriksen (1999) also stipulated that test batteries

developed up to the date of her study failed to tap both productive and receptive vocabulary knowledge simultaneously although there were quite successful tests measuring either receptive or productive knowledge such as Lex30 which was a productive test of vocabulary knowledge developed by Meara and Fitzpatrick (2000). In a similar vein, Teichroew (1982) denoted that word knowledge developed from receptive knowledge to productive knowledge in a continuum stressing the need for a more precise definition of what constitutes receptive and productive knowledge. She further commented on issue of comprehension preceding production. In our case, this discussion corresponds to the notion that receptive knowledge precedes productive knowledge. It was found in many studies (Laufer & Goldstein, 2004, Webb, 2005), that active knowledge was harder to develop than passive knowledge, thus receptive vocabulary development preceded productive development. Nevertheless, Teichroew (1982) argued that the relationship between receptive and productive knowledge was not static and they were interdependent on each other and which one preceded the other could vary along factors such as linguistic development or age.

As another study building upon receptive/productive distinction, Webb (2005) examined how receptive and productive vocabulary learning affected word knowledge. He measured differential effects of one productive (writing task) and one receptive task (reading task) on five aspects of word knowledge, namely orthography, syntax, association, grammatical functions and meaning and form. He found that reading task provided better results when time on task was the same. However, when students were allowed to take more time for writing task, productive task was more effective. Webb (2005) also claimed that vocabulary learning in classrooms was usually receptive, since receptive activities were easier to design. Nonetheless, productive activities could result in better vocabulary gains both in

receptive vocabulary and in productive vocabulary knowledge despite the popularity of receptive tasks. Webb (2008), on the other hand, compared receptive and productive vocabulary sizes through two translation tests. The tests were scored at two sensitivity levels. Results revealed that learners had more receptive vocabulary than productive vocabulary when fully scored whereas the gap between these two narrowed when partial scoring was administered.

No framework is without any pitfalls, and so receptive/productive distinction also has some problems. As Schmitt (2010) states, it does not have an accepted conceptualization and measurement because results of receptive and productive tests rely highly on the type of the tests used in individual studies. Even the tests measuring not only receptive and but also productive vocabulary knowledge have their shortcomings. Bruton (2009), for example, evaluated Paribakht and Wesche's (1993) Vocabulary Knowledge Scale (VKS), which was a test tapping both receptive and productive vocabulary. He concluded that VKS tapped only ability to identify meanings of L2 words and to use them in sentences. Thus, it becomes highly difficult to design tests to measure both productive and receptive vocabulary in L2 empirical research.

Newton (1995) also points to this need of developing test instruments sensitive to not only receptive but also productive knowledge, which urges vocabulary research to develop new test batteries tapping both knowledge types. Overall, so-called receptive/productive dichotomy relies on many different factors with test batteries being the most decisive one. The next part of the literature review chapter will provide a general picture of vocabulary learning research from different aspects.

2.3 Research on learning of vocabulary

2.3.1 Incidental versus intentional learning of vocabulary

Acquisition of vocabulary incidentally versus intentionally is one of the central issues discussed in current second language acquisition and vocabulary learning research (Derin, 2002; Gass, 1999; Huckin & Coady, 1999; Hulstijn, 2001; 2003, Long, 2017; Malone, 2018; Schmitt 2008). Nevertheless, there has not been a consensus on what incidental or intentional learning is in literature. Basically, two approaches to define incidental and intentional learning were adopted in literature. The first one regards incidental learning as "a by-product" of other meaning-based activities or skills (Hulstijn, 2001; Gass, 1999). The second realm of research differentiates between intentional and incidental learning in terms of presence or absence of "an intent to learn" (Bruton et al.; 2011; Malone, 2018). In a similar categorization but different terminology, Laufer and Hulstijn (2001) differentiate between incidental and intentional learning in terms of presence or absence of forewarning of a test after carrying out vocabulary learning tasks or more generally in relation to presence or absence of "an intent to learn". Whichever definition is adopted, researchers do not focus on learner consciousness but on learner intent, which assures the distinction between intentional/incidental and implicit/explicit dichotomies (Hulstijn, 2003; Laufer & Hulstijn, 2001; Schmitt 2008).

Hulstijn (2001) defines incidental and intentional vocabulary learning saying **"…**incidental vocabulary learning refers to the learning of vocabulary as the by-product of any activity not explicitly geared to vocabulary learning, with intentional vocabulary learning referring to any activity aiming at committing lexical information to memory." (p. 270). In his following review, Hustijn (2008) indicates that both intentional and incidental learning involve attention and noticing. However,

attention is deliberately on the new information in the former, while direct attention is not paid to target vocabulary learning in the latter. The following part of this section presents research conducted on intentional and incidental learning of vocabulary.

2.3.2 Studies on incidental and intentional learning of vocabulary

A plethora of studies (Çakmak & Erçetin, 2018; Godfroid et al., 2018; Joe, 1995; Laufer & Hulstijn 2001; Malone, 2018; Newton, 1995; Paribakht & Wesche, 1999; Pellicer-Sanchez, 2017; Watanabe, 1997; Webb et al., 2013) investigated incidental vocabulary from different angles. In his case study involving learning of unfamiliar vocabulary in communication, Newton (1995) proved that there were considerable vocabulary gains in incidental vocabulary learning via task-based interaction.

In a more current eye tracking study, Godfroid and colleagues (2018) examined how unknown words were processed with repeated exposures and how they were acquired incidentally through reading an authentic and ecologically valid text. Their results revealed that words became more familiar as frequency of exposure increased. Moreover, increased time spent on each exposure facilitated learning of word meaning. Another recent study, Malone (2018), explored the effect of exposure frequency (two versus four) in incidental learning of vocabulary on form recognition and form meaning mapping outcomes. He controlled for bimodal learning, (± aural enhancement (AE)) and investigated role of working memory (WM) in treatments. The results uncovered frequency effects on both outcomes. On the other hand, aural enhancement seemed to affect two-exposure and four exposure groups differently in form recognition with a lack of AE in four-exposure group. Furthermore, according to Malone (2018), it is undeniable that instructors put

emphasis on only the most frequent words (up to 3,000 word families) in EFL/ESL classrooms, which raises questions regarding the low chance of exposure to 8,000 and above most frequent word families. It is obvious that while frequent words are mostly learnt intentionally, there is also a need for incidental learning for 8,000 to 9,000+ word families as it is not plausible to expect to teach them all in classrooms.

Most of the studies investigating incidental vocabulary learning explored how words were acquired through reading (Godfroid et al., 2018; Krashen, 2004a; Malone 2018; McQuillan, 2016; Paribakht and Wesche,1999; Pellicer-Sanchez, 2016; Watanabe, 1997; Webb, Newton & Chang, 2013; Yali, 2010). In a classroom study with intermediate level ESL university students, Paribakht and Wesche (1999) investigated whether or not vocabulary could be gained incidentally through reading texts based on similar topics. They used introspective and retrospective think-aloud data to examine the process of vocabulary learning through reading. They found that most vocabulary items went unnoticed by the students and they usually used inferencing strategies when they paid attention. What is more, learners thought that learning words through reading was not a useful way of vocabulary learning. Paribakht and Wesche (1999) concluded that unpredictability would be the key issue in vocabulary gains through reading since each learner would have different investments and pay different attention to unknown words. Similarly, Watanabe (1997) investigated the effect of text modification (appositives, single and multiple-choice marginal glosses) on 231 Japanese university students' incidental vocabulary learning through reading. He found evidence for substantiality of marginal glosses for vocabulary learning. He also underscored that attention to form and form meaning mapping, lack of which was the reason for the inefficiency of appositives in the study, were of robust importance for language acquisition.

Nevertheless, not all researchers believe that incidental learning through reading is more effective than intentional learning. There has been continual debate on effectiveness of incidental learning through extensive reading practices (Cobb, 2007; Huckin & Coady, 1999; McQuillan, 2016). In relation to the breath of the vocabulary knowledge, Hu and Nation (2000) suggest that learners need to know at least 98% of the lexical items to understand a text. Cobb (2007) adopts the view that extensive reading only is not enough to understand 98% of a text. When learners know less than 98% of the words in a text, acquisition of unknown words incidentally is not possible since learners will not be able to infer meanings of those words from context.

Likewise, Huckin and Coady (1999) argue that extensive reading does not directly contribute to vocabulary learning because it also depends on the context, task demands and learners' attention. Also, incidental learning through reading is open to guessing and this is a limitation for studies promoting incidental learning since words can be misleading for the learner to infer meaning. Furthermore, according to a collocation study by Szudarski (2012), most of the words can go unnoticed by the learners when deliberate attention is not drawn to form of the lexical items. Koya (2003) also agrees on the essentialness of explicit teaching of word combinations. In a similar vein, Ördem and Paker (2016) compared traditional vocabulary learning with learning vocabulary through collocations and highlighted that frequent recycling of collocations was vital and incidental learning only was not sufficient to acquire vocabulary.

From another aspect, Derin (2002) examined changing perceptions of learners and measured vocabulary knowledge in meaning and form levels with respect to incidental and intentional learning of vocabulary. They argued that both

learners' perceptions and vocabulary knowledge showed a significant difference. While intentional learning yielded higher vocabulary gains, vocabulary learnt incidentally was more modest in amount but more permanent in the long run. As can be seen, neither incidental learning nor intentional learning can cater for all vocabulary learning demands. Hence, for Huckin and Coady (1999), it is important to combine incidental learning with some intentional vocabulary learning activities. This integrative position is supported by various studies (Hulstijn, 2003; Schmitt, 2008; Yali, 2010). Yali (2010); for example, asserts that combining intentional and incidental learning in vocabulary instruction results in much more vocabulary gains in Chinese ESL students' vocabulary acquisition. An integration of incidental and intentional learning obligates a shift in instructional practices which favor only incidental or intentional learning. The next section provides a way of realizing this integration through Form Focused Instruction.

2.4 Research on Form-Focused Instruction (FFI)

2.4.1 Principles of Form-Focused Instruction

The research interest on a need for focus on form in Instructed Second Language Acquisition (ISLA) started to develop in 1990s, which was mainly stimulated by previous findings in SLA research revealing the insufficiency of solely meaning focused instructional practices. Unlike L1, learning in naturalistic settings, L2 learners in immersion and naturalistic settings could not develop some linguistic properties in target like levels (Doughty & Williams, 1998). Moreover, as Schmidt (1990) also states, subliminal learning is not probable and noticing is a precondition to learn a target structure in L2. There are also views (The Limited Attentional Capacity Hypothesis) that different aspects of knowledge such as form and meaning

cannot be attended at once (Skehan & Foster, 1997). On the contrary, Robinson's (2001, 2007b) Multiple Attentional Model and Cognition Hypothesis entail no competition between attentional resources. Thus, form and meaning can actually be attended and dealt. Long and Robinson (1998) opine that Multiple Attentional Model has substantial implications for Focus on Form. This situation heightened need for a Focus on Form at least to fasten the natural learning process. Long (2017) also maintains that developing implicit knowledge through unobtrusive incidental learning should be the ultimate aim of language learning; however, incidental learning fostered by FonF in the form of noticing, detection, input enhancement is crucial especially for adult learners. Beside its pedagogical concerns, Form Focused Instruction (FFI) has also become a source of definitional and terminological discord in ISLA.

According to Ellis (2001), Form-focused Instruction can be defined as "any planned or incidental instructional activity that is intended to induce language learners to pay attention to linguistic form." (p. 2). Long (1991) scrutinized two kinds of form focused instruction and differentiated between Focus on Forms (FonFs) and Focus on Form (FonF). In his terms, "… the content of lessons with a focus on *forms* is the *forms* themselves,… focus on form… overtly draws students attention to linguistic elements as they arise incidentally in lessons whose overriding focus is on meaning or communication" (p. 45-46). Some researchers (Spada 1997; Doughty & Williams, 1998); however, argued that FonF could also be provided in predetermined ways.

In a similar vein with Long (1991), Ellis (2001) contrasts FonF and FonFs. He apprises that learners consider language as an "object of study" in FonFs whereas they consider it as a mean to communicate and themselves as users in FonF. Ellis

(2001) asserts that there are three kinds of FFI, namely Focus on Forms, Planned focus on Form and Incidental Focus on Form. He explains that in Focus on Forms students and the teacher are well aware that the aim of the activity is to learn a predetermined form and they need to pay attention to that form. On the contrary, in planned Focus on Form, learners' attention is drawn to form thanks to enriched input and focused communicative tasks where primary attention is on meaning. In incidental Focus on Form, on the other hand, learners temporarily devote their attention to form due to a communication breakdown in the course of meaning focused communication activity (Ellis, 2001).

Other researchers made further categorizations within FFI (Elgün-Gündüz, Akcan & Bayyurt, 2012; Spada & Lightbown, 2008, Valeo, 2018) and incorporation studies (Nassaji, 2000) to implement it in real classrooms. Nonetheless, these aspects of FFI are beyond the scope of this study. All these concerns about implications of FonF led to the comparison of form focused and meaning focused instruction as also discussed in the following part of the review.

2.4.2 Form-Focused Instruction versus Meaning-Focused Instruction

After the conceptualization of FFI in SLA research, researchers have turned their attention to investigate effectiveness of FFI and to compare FFI with Meaning Focused instruction (MFI). Ellis (2001) contrasts MFI and FFI stating that FFI represents instruction involving drawing learners' attention to linguistic form while MFI is characterized by instruction devoted to attend only to content of communication.

Loewen (2018) describes meaning focused instruction as "the theoretical equivalent of communicative language teaching, which advocates that teachers

should focus exclusively on meaning-centered activities in the classroom, with no attention being given to linguistic forms" (p. 1). He suggests that totally meaning focused instruction is not sufficient for L2 acquisition from FonF and FonFs perspectives. In Storch's (2018) definition, advocates of meaning focused instruction (Krashen, 1981; 1982) attribute little or no benefit to attention to form and highly value provision of comprehensible input. On the contrary, building upon Schmidt's (1990) noticing hypothesis, proponents of FFI (Long, 1991; Spada, 1997) promote the idea that some attention to linguistic form is crucial. In her concluding remarks, Storch (2018) claims that attention to form is beneficial for L2 grammar learning on the condition that it does not become the only focus of instruction. In an earlier study, Loewen (2004) examined the occurrence and successfulness of uptake in 12 meaning focused ESL classes. He also focused on the features of incidental FonF that led to successful uptake. He concluded that complexity, timing, and type of feedback were decisive factors affecting the successfulness of uptake.

Studies comparing MFI and FFI handled the issue from different angles. A classroom study by Doughty and Varela (1998); for example, examined the effectiveness of Focus on Form in a communicative ESL science class. They provided ample evidence for the efficiency of an implicit Focus on Form facilitating the science class incidentally and helping the instructor in a comfortable way without disrupting the naturalness of the science class. On the other hand, Allen and colleagues (1990) made use of a classroom interaction scheme named the Communicative Orientation to Language Teaching (COLT) and they investigated the effects of different analytic and experiential activities on language learning. Their results revealed that not only meaning focused but also form focused interactions led to learning.

From another perspective, Laufer and Girsai (2008) investigated the effects of explicit contrastive analysis and translation (CAT) in comparison to two other conditions; meaning focused instruction (MFI) and non-contrastive form-focused instruction (FFI) on incidental second language vocabulary acquisition. They applied active and passive recall tests and the findings showed that CAT group outperformed others and these results were explained with "noticing", "pushed output" and "task induced involvement load" provided by the CAT condition. MFI group had almost no vocabulary gains while FFI group learnt most of the single words and collocations (50%) in receptive new vocabulary and 27% of productive vocabulary. FFI group performed significantly better than MFI group in active and passive recall immediate post-tests. In the delayed posttests, FFI group had a significant advantage over MFI group only in active recall test which was equivalent to form recall test in the current study. However, their study might also be susceptible to testing bias since their tests were more similar to the treatment given to CAT group.

Not all researchers favoured FFI, though. To measure 58 Japanese EFL students' vocabulary gains, Mason and Krashen (2004) tested the effectiveness of two instructional treatments; one being through hearing a story and the other through hearing a story plus supplementary vocabulary activities to focus students' attention to the new words in the story. Story only group spent 25 minutes to complete the tasks and tests whereas story plus study group had 85 minutes to carry out the tasks (reading, comprehension questions and retelling) and tests. In line with Mason and Krashen's (2004) initial hypothesis, the group having Form Focused activity outperformed the group who only heard the story by doubling the amount of vocabulary they learnt. Nevertheless, they asserted that this advantage of FFI was not worth the amount of extra class time (85 minutes). Contrary to Mason and Krashen's

(2004) findings, Sonbul and Schmitt (2009) asserted that explicit word focused instruction of vocabulary was worth the efforts and time even at the deepest level of knowledge (form recall). They looked at the effectiveness of incidental learning of vocabulary through only reading and incidental learning supported by explicit teaching of vocabulary and administered form recall, meaning recall and meaning recognition tests immediately after teaching. They found that reading aided by explicit teaching group outperformed reading only group in all tests and had more vocabulary gains compared to the moderate gains in reading only condition. (Sonbul & Schmitt, 2009) Under the light of the results of many other studies (Nation, 2001; Tian and Macaro, 2012), it is highly important to support learners in learning of word form by focusing on form, which is often neglected in classroom practices that rely solely on incidental learning (Sonbul & Schmitt, 2009).

Furthermore, a relevant discussion, at this point, may be that of Van Patten's (1994, 1996, 2004) Primacy of Meaning Principle. According to Van Patten (2004), input processing is a process through which learners make form-meaning connections from the input. He further argues in the Primacy of Meaning Principle that they primarily process meaning before they deal with form owing to working memory restraints and prosodic cues that push this prioritization. This conceptualization raises the issue of whether simultaneous processing of meaning and form is possible. In this scope of research, Leow et al. (2008) investigated the impact of attentional conditions (form versus meaning) on reading comprehension. In this study which had a hybrid design, it was revealed that there were no significant differences between attentional conditions such as processing for meaning while paying attention to specific forms in the input in the written mode. The results were discussed under the light of depth of processing and modality (aural versus written).

The studies reviewed in this section provided an overview of Form Focused Instruction research in general. The next section deals with FFI and its implications in vocabulary teaching.

2.4.3 Form-Focused Instruction and vocabulary teaching

Vocabulary learning requires attention to various aspects of the word (Bogaards, 2001; Richards, 1976; Lee, 2003; Nation, 2001; Read, 2004; Schmitt, 2000; Schmitt & Zimmerman, 2002; Webb, 2005) and especially formal aspects require attention to alleviate difficulties in form-meaning mapping. From this aspect, Form Focused Instruction is very likely to have its implications for vocabulary teaching. Nonetheless, as also granted by Laufer (2005), grammatical features have been the focus of almost all FFI studies overlooking the need to design studies dealing with form focused vocabulary instruction. The underlying reason for the belated need for vocabulary to be more visible in FFI is that grammatical structures are more frequent in the input than words. Thus, more FFI may be required to learn words. Furthermore, language learning entails attention and noticing (Godfroid et al., 2010; Schmidt, 1990; 1994) and as the learners get more involved in the vocabulary learning task, their vocabulary gains will be much higher (Laufer & Hulstijn, 2001). Building upon these two hypotheses (The Noticing hypothesis and the Involvement Load hypothesis), Laufer (2005, 2006) accentuates that form focused activities, either FonF or FonFs, are indispensable for lexical items to be noticed and internalized with high involvement.

In partial contrast to what Krashen and colleagues (i.e. Cho & Krashen, 1994) proclaimed about the possibility of learning vocabulary only through comprehensible input while reading, Laufer (2003) and Laufer and Rozovski-Roitblat (2011) asserted

that “word-focused” or form focused activities as simple as matching or dictionary search increase the likelihood of vocabulary items to be acquired. Laufer and Rozovski-Roitblat’s (2011) explored the effect of task-type (reading with dictionary versus reading with word-focused activities), number of word occurrences and combined effects of these two components on long-term retention of 60 new vocabulary via passive recall and recognition tests. The results revealed that only reading + focus on forms condition was impacted by word occurrence and task type effect was bigger than effect of word occurrence only in recall test. Moreover, learners’ introspective questionnaires showed that they highly valued word-focused practices in vocabulary learning.

De La Fuente (2006) compared effects of three different vocabulary learning conditions (Presentation, Practice, Production (PPP) condition, task-based lesson with no explicit Focus on Form (FonF) component and task-based lesson with an explicit Focus on Form component) in task-based lessons. Her results showed that task-based lesson with an explicit FonF outperformed the other experimental groups. These results show the essentialness of an explicit vocabulary teaching through pedagogical tasks in language classrooms. Likewise, Shintani (2013) aimed at comparing the effectiveness of FonF and FonFs in beginner level young learners’ L2 vocabulary production. In this study, FonFs was operationalized as isolated vocabulary exercises and FonF as task-based language teaching (TBLT). A discrete point test and a task-based test were administered to measure productive knowledge of vocabulary as pre and posttests. The findings disclosed that both FonFs and FonF groups outperformed control group and proved effective for acquisition of nouns. For free production of adjectives; however, FonF group surpassed FonFs group which was explained by “contextualized input, the occurrence of negotiation of meaning,

and student-initiated production" (p. 59) provided only in FonF condition. The strengths of Shintani's (2013) study were twofold: (1) control for the frequency of target words and (2) sufficient exposures to the target words in input.

A number of other researchers also focused on FFI vocabulary learning. For instance, Laufer (2006) examined whether FonF or FonFs was more effective in vocabulary learning of 158 L2 learners of English. FonF group read a text where target words were embedded, had a small group discussion and answered comprehension questions whereas FonFs group were assigned to study target words as discrete items presented with meanings and examples. Laufer (2006) found that FonFs resulted in better vocabulary learning gains and it was necessary to develop L2 vocabulary. In another study investigating the effectiveness of pre-emptive and reactive FonF on 12 Spanish students' vocabulary learning, Alcon (2007) made use of seventeen 45-minute audio-recordings of teacher-led conversation and 204 learners' diaries. Post-test and delayed post-test translations of learners' diaries uncovered teachers' role in pre-emptive and reactive lexically oriented focus on form episodes (FFEs) in incidental learning of vocabulary. Furthermore, pre-emptive FonF episodes yielded effective outcomes in students' noticing and incidental learning of vocabulary even though reactive FonF did not lead to noticing or learning at any significance. In other studies such as Luppescu and Day's (1993), on the other hand, FonF was operationalized as dictionary use during reading. They explored the effect of dictionary use on vocabulary learning and showed that learners who got help of a dictionary while reading performed significantly better than the ones who did not.

Another line of research centralized around input enhancement and elaboration in vocabulary acquisition. Kim (2006) had a twofold aim. He examined the impact of (a) lexical elaboration (LE) and/or typographical enhancement (TE)

and (b) type of lexical elaboration on Korean learners' lexical development in English. The participants were asked to read an English text for 20 minutes and then they took three unannounced tests, namely a meaning-recognition, a form recognition and a retrospective vocabulary posttest. The results revealed that only LE or combination of TE or LE did not lead to significant gains in form recognition of vocabulary. Similarly, TE did not prove to be effective in form and meaning recognition tests. On the other hand, not only explicit but also implicit LE turned out to be beneficial for meaning recognition of vocabulary (Kim, 2006). In a similar vein but different foci, Ellis and He (1999) compared the effects of premodified input (input which is simplified or made appropriate for the level of learners), interactionally modified input (learners interact for negotiation of meaning) and modified output in incidental acquisition of word meanings. Their study could be distinguished from the previous ones in terms of output condition it included. They concluded that modified output condition produced better results owing to the higher quality dialogic interaction it provided.

In another input enhancement study, Peters and colleagues (2009) designed a computerized study comparing the effects of enhancement techniques in promotion of dictionary use, thus increasing the vocabulary gains of L2 German learners. They had both between-subjects and within-subjects design. In between-subjects design, they formed four experimental groups, namely ± pre-reading test announcement and ± post-reading vocabulary task. Amount of learners' online dictionary use while reading, form recognition and meaning recall tests were used to measure learning of 16 unfamiliar words. Learners' attention was drawn to half of the target items through comprehension questions, which was the within-subject experiment based on word relevance. The results revealed that word relevance and test announcement

were two important factors to increase dictionary use. Nevertheless, only test announcement and vocabulary task led to better performances in word recognition. Vocabulary task and word relevance affected performances in meaning recall tests considerably. Under the light of these findings, Peters et al. (2009) further argued that vocabulary learning through reading could be fostered by techniques such as dictionary use or comprehensive processing form meaning relationships.

So far, an overview of research describing what constitutes a word and vocabulary teaching through FFI was provided in the previous sections. The following sections will specifically focus on collocation research starting by defining what collocation is.

2.5 Research on collocations

2.5.1 Definitional issues in collocation

As emphasized in vocabulary studies, collocational knowledge comprises a substantial part of world knowledge and collocations rise as an area of difficulty on the part of the learners (Brown, 1974; Leśniewska, 2006; Philip, 2007; Shei & Pain, 2000) mainly due to the arbitrariness of their co-occurrence (Philip, 2007) and restricted sense they have (Nesselhauf, 2003), which differentiates learner production of collocations from that of native speakers (Laufer & Waldman, 2011; Siyanova & Schmitt, 2008). Literature and pedagogical practices have shown the essentialness of collocations for language acquisition so far and collocations have started to be widely researched. Nonetheless, a consensus even on the definition of word knowledge has not still been reached since Firth (1957) first coined the term, "collocation" for frequently co-occurring words. Noteworthiness of collocational knowledge while defining words is explained in Nation (2001) who claims that

words are not isolated entities and they gain a meaning in context. Similarly, Richards (1976) argues that knowing a word is beyond knowing its meaning and it also includes its associations with other words, use in different situations/functions and frequency.

As can be seen, collocations are well acknowledged while describing what constitutes word meanings. Nevertheless, as also stated by O'Donnell et al. (2013), there exists no consensus on how to define collocations, as well. Researchers have adopted different criteria to set the word boundaries for word combinations. Howarth (1998) defines collocations as "combinations of words with a syntactic function as constitutes of sentences" (p.24). Likewise, Nesselhauf (2003) argues that this variety in definitions is due to the fact that collocations are not visibly 'delimitable'. She examines collocations in terms of their "restricted sense" and she defines collocations as "the sense in which the noun is used is unrestricted, but the sense of verb is restricted, so that the verb in the sense in which it is used can only be combined with certain nouns" (p. 225).

Contrary to Nesselhauf (2003), Thornbury (2002) claims that there is a looser kind of association between "node" and "collocate". He further defines collocates as words occurring together with more than chance frequency. Pursuing a statistical standpoint in a similar way, Webb et al. (2013) operationalize collocation as "the regular co-occurrence of words within a given span demonstrating a statistical strength of co-occurrence" (p. 97). On the other hand, Schmitt (2000) comes up with a broader conceptualization of word combinations. He defines Multiword Units (MWU) as "string of words with a single meaning" (p. 97). As also used in this definition, the term multiword units/expression is usually used interchangeably with the term, collocation. Evert (2008) however, makes a distinction between multiword

expression and collocations stating that collocations are “observations on the combinatorics of words in a language” while multiword units are prefabricated expressions. Considering the diversity of definitions of collocation, two major approaches have been proposed in the literature, which is the focus of the next part of this section.

2.5.2 Phraseological versus statistical approaches in setting word boundaries

In identification of collocations, two approaches are widely acknowledged: the phraseological approach and statistical, frequency based or distributional approach. According to Gablasova, Brezina and McEnery (2017), phraseological approach is concerned about the semantic bonds between collocating words and extent of non-compositionality of their meaning. Bannard and colleagues (2003) provide the definition of compositionality in multi-word expressions as “an entailment relationship between the whole and its various parts and solicit entailment judgements based on a handful of example sentences.” (p. 66). On the other hand, frequency-based approach relies heavily on corpora to estimate word co-occurrence. While some researchers (i.e. Macis & Schmitt, 2017; Sinclair, 1991; Webb & Kagimoto, 2009) adopt frequency-based statistical approach in identification of collocations or multiword units, some other researchers (i.e. Cowie, 1998; Howarth, 1998; Nesselhauf, 2003, 2005) prefer a classification on the basis of phraseological approach.

In phraseological approach, semantic and syntactic criteria are applied in determining which words collocate. As a well-known proponent of phraseological approach, Howarth (1998) argues that, whether native or non-native, language learners do not utter collocations relying on the collocations’ frequency of co-

occurrence. Rather, his investigations on internal form and external function of the collocations show that learners apply a set of features such as semantic specialization, syntactic restriction and blocking of lexical substitution to choose the right collocate. He also makes a distinction between lexical collocations and grammatical collocations. In his categorization, lexical collocations are composed of two open class words (e.g. verb + noun, adjective + noun) whereas grammatical collocations are made up of one open class and a closed class word (e.g. preposition + noun, adjective + preposition).

Following all these examinations and based on the phraseological approach he adopted, Howarth (1998) constructed a continuum model which considers collocations as gradable entities from free collocations to pure idioms. In his model, there are free combinations, restricted collocations, figurative idioms and pure idioms. Free combinations contain words with literal senses and they can be freely changed with other words (e.g. carry a trumpet). Restricted collocations, on the other hand, include an element carrying a specialized and figurative meaning only found in a parochial number of collocates. Figurative idioms bear a metaphorical meaning besides a current literal meaning. On the other edge of the continuum stand pure idioms that carry unitary meanings which are impossible to draw from the meanings of the components it is made up of. Nevertheless, Howarth (1998) also emphasizes that this categorization should not be considered as a dichotomous one and it is derived from grading the features of semantic specialization, syntactic restriction and blocking of lexical substitution. Table 3 demonstrates an example provided by Howarth (1998) for categorization of collocations according to phraseological approach.

Table 3. Categorization of Collocations in Phraseological Approach

	free combinations	restricted collocations	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 the microscope	under the weather

Source: [Howarth, 1998]

In statistical approach, on the other hand, two words are called collocations depending on the frequency of occurrence of those two collocates. As advocated by Sinclair (1991), collocations follow an idiom principle which postulates no random occurrence of two words. The idiom principle requires a visibly consecutive choice of two words. Collocating words are likely to allow for internal lexical and grammatical variation to some extent which can be exemplified by the variation between "set x on fire" and "set fire to x."

In contrast to Howarth's (1998) phraseological classification of collocations, Sinclair (1991) formulates a different categorization based on the node-collocate relationship determined by the frequency of collocating words. He propounds two broad categories of collocations, namely downward collocations and upward collocations preconditioned according to their frequencies. To illustrate, when a less frequent *x* node is followed by a frequent *y* collocate, the emerging collocation is an upward collocation. On the other hand, when frequent *x* node is followed by a less frequent *y* collocate; the emerging collocation is called a downward collocation, which is stronger and more frequently encountered in statistical terms. In Sinclair's (1991) account, *back to home* can be an illustration of upward collocation whereas *climb back* stands out as a stronger downward example.

What makes a collocation was briefly explained in the previous part of the section and the next part will review corpus-based explanations in description of collocations.

2.5.3 Collocational strength and corpora

Frequency based approach to formulaic sequences was widely utilized in various areas of research such as applied linguistics, corpus linguistics, psycholinguistics and cognitive linguistics to describe what makes a lexical unit. They sought to make use of statistical tools and measures to figure out collocational strength between two or more words (Biber, 1993; Smadja, 1993). Biber (1993), for example, applied a factor analysis technique to assess the relationship not only between different senses connected to a word but also between different collocational pairs using mutual information index. Such corpus-analytic measures are applied to define word boundaries in statistical terms. Frequency and Mutual Information (MI) scores are two of these typically used measures in research (i.e. Ellis & Simpson-Vlach, 2009; Evert, 2008). Informed by psycholinguistic research, Church and Hanks (1990) drew upon word associations and created the concept of Mutual Information to explain word co-occurrence. In their conceptualization, MI compares the possibility of observing a node and collocate together with possibility of observing them separately. In O'Donnell and colleagues' (2013) terms, on the other hand, MI is "a measure of the degree to which the words of a formula attract each other" (p. 86). MI is a measure of association and a high MI score reflects a strong association between collocating words whereas a low MI score means two words co-occur mostly by chance. MI scores do not represent significance levels and do not have a maximum or minimum degree (O'Donnell et al., 2013). Gablasova et al. (2017) expound that

MI scores are likely to favor infrequent and more specialized word combinations generally found in L1 production. Thus, these scores may not be an optimal measure to explore formulaic sequences in L2 production since L2 users might own them in their lexicon later on.

One of the important corpus-based studies on collocations, O'Donnell et al. (2013) made use of four of corpus-analytic measures, namely association (MI grams), n-gram frequency (Frequency grams), phrase-frames which are semi-structured phrases such as *it is…to* (P-frames) and native norm (AFL grams) to explore whether different statistical operationalizations of formulaic language will provide different findings in knowledge of formulaic sequences in terms of expertise (graduate vs. undergraduate) and linguistic background (L1 vs L2). Results of the MI-defined formulas showed that expert and graduate level writers produced high amount of formulaic sequences without any effect of L1/L2 difference unlike P-frames where no effect of L1/L2 or expertise has been observed. In frequency-based formulas, both expertise and L1/L2 effect have been observed. These findings reveal that differential operational definitions of multiword units formed around distinct measures can actually produce different results regarding L1/L2 status and expertise. Next part of the section will deal with other determinants of collocational knowledge since they might serve as strong confounds in studies of collocations.

2.5.4 Factors affecting collocational knowledge: Frequency, congruency, collocate-node relationship and semantic transparency

Collocations have started to be the center of much vocabulary research in recent years. An overview of collocation shows that there are some concerns that are needed to be considered while carrying out collocation research. Frequency,

congruency, node-collocate relationship and semantic transparency can be listed among those factors (Nesselhauf, 2003; Pellicer-Sanchez, 2017; Szudarski, 2012).

To be more specific, frequency is the likelihood of co-occurrence of the two collocating words. In O'Donnell and colleagues' (2013) description, "Formulas are recurrent sequences… and… high frequency n-grams occur often" (p. 89). Evert (2008) comes up with an elaborate definition of co-occurrence in terms of surface co-occurrence (words that are appearing close to each other), textual co-occurrence (words that appear in the same sentence, paragraph etc.) and syntactical co-occurrence (words that are in a syntactic relationship like adjective-noun modification).

Congruency, on the other hand, refers to presence or absence of a literal translation equivalent of target word in learner's L1. Nesselhauf (2003) adopted very strict definition of congruence. She states that "Only combinations that sounded natural in both languages if they were rendered word for word were regarded as congruent" (p.236). All these factors, and especially congruency, affect the level of difficulty learners may face in the acquisition process. According to Peters (2016), incongruent collocations are generally more difficult to learn.

Collocate–node relationship is about different combinations of words such as adjective–noun, verb–noun and phrasal-verb–noun collocations. Sinclair (1991) defines term, node as "the word being studied" and the term, collocate as "any word that occurs in the specified environment of the node (p. 115). Moreover, regarding the difficulty it may pose on leaners, Peters (2016) proclaims that adjective-noun collocations are easier to learn because they have little variation and they are learnt in chunks.

Semantic transparency is linked to concreteness of word meaning in many studies (Nesselhauf 2003; Webb et al., 2013). According to Walker & Hulme (1999), concrete words are learnt more easily than abstract words. This is also the case for collocations. Webb et al. (2013) makes a distinction between highly transparent collocations such as *play football*, less transparent collocations such as *play (it) safe* and semantically opaque collocations such as *shoot (the) breeze*. Thus, the more opaque a collocation becomes, the more difficult it becomes to learn them.

Such factors as frequency, congruency, node-collocate relationship and semantic transparency are of paramount importance for collocation research and they need to be paid sufficient attention since they may also serve as confounds in studies. The following part will review studies on teaching of collocations.

2.5.5 Studies on collocation teaching

2.5.5.1 Research on induction versus deduction

Collocations are known as word co-occurrences that are notoriously hard to learn. (Chanell, 1981, Peters, 2014; Sun & Wang, 2003, Szudarski, 2012). Notwithstanding the difficulty they pose on the learners, they are not among the highly researched areas of SLA except for some studies touching upon the issue from very different angles. Sun and Wang (2003), for instance, enquired into the comparison of two cognitive approaches (deductive and inductive) in learning of collocations through concordancers by 81 Taiwanese learners. Having taken the pretest and students were divided into treatment groups. Inductive group searched for five examples of the key word on the concordance and induce underlying patterns of collocation. Then, they were asked to correct sentences through their induced rules. Deduction group, on the other hand, was provided with the underlying grammatical rules and asked to correct

sentences similar to the induction group. According to the findings, easy collocations appeared to be more likely to be learnt through concordancers and inductive approach produced better results than deductive approach in learning of collocations.

2.5.5.2 Research on amount and type of encounters

Webb, Newton and Chang (2013) carried out a systematic inquiry into the effects of repetition on collocation learning to determine the number of encounters needed to acquire 18 incongruent, high frequency and semantically opaque collocations incidentally through extensive reading practice. Taiwanese EFL learners were randomly assigned to one of five experimental groups. The students took Vocabulary Levels Test and a pretest measuring receptive knowledge of form of target collocations one week before the treatment. Afterwards, the treatments were given in a bimodal way combining reading and listening during a 100-minute class time. The students read and listened to different versions of a modified graded reader with a set of 18 target collocations. The modified reader had four versions and they varied in the number of encounters to the target collocations ranging from one to 15 times. It was revealed in this study that repetition of the collocations significantly affected the learning of form of collocations. There was a significant positive relationship between the number of encounters and the amount of collocational knowledge. In a study producing similar results to Webb, Newton and Chang's (2013) study, Peters (2014) focused on the impact of repetition on the form recall of single words and collocations and revealed that frequency of encounters affected vocabulary gains significantly regardless of the time of the posttests administered.

Similarly focusing on word encounters and investigating the effects of various kinds of repetition on learning of L2 collocations, Durrant and Schmitt

(2010) aimed to explore if adults learn collocations in non-formulaic ways. Eighty-four non-native adult ESL speakers of English were assigned to three conditions of repetition, namely single exposure (seeing two lists of collocations once), verbatim repetition (seeing two lists of collocations) and varied repetition (seeing 20 sentences with target collocation, 20 with only the noun part of the collocation and 40 fillers). A naming task where a target adjective stayed on the computer and participants were asked to provide the noun collocate was utilized to test the gains. The findings revealed that there was some level of recall for all nouns. However, they performed better for the nouns they had seen with adjective collocates than the nouns in filler sentences, since they had formed an association during the training conditions. Verbatim task turned out to be slightly better than varied repetition tasks although both tasks yielded effectiveness. Overall, results showed that adult ESL learners acquired word pairs that appeared together in contexts.

From another aspect, Webb and Kagimoto (2009) investigated the relative effects of receptive and productive vocabulary tasks on the learning of L2 verb-noun collocations and meanings by 145 Japanese speaking EFL learners. While 28 students were in the control group, others were assigned to two treatment conditions according to their results in Vocabulary Levels Test (Schmitt, 2010) and pretest results. There were 62 higher-level learners and 55 lower level learners in the treatment groups. Receptive treatment group encountered target collocations and their Japanese translations in three glossed sentences while the productive group were given the same glossed sentences in the form of a cloze test. They had to decide between two collocations and fill in the blanks. After the treatments, they took four posttests measuring receptive knowledge of collocation (multiple-choice test), productive knowledge of collocation (writing the correct collocate), receptive

knowledge of meaning (writing L2 collocations cued by to L1 meanings) and productive knowledge of meaning (writing L1 meanings cued by to L2 collocations). According the results obtained, both tasks generated significant gains in collocation learning. The groups increased their receptive knowledge of collocations from 17% to 85%. The cloze group showed that they knew 35% of the collocations and reading group showed that they knew 38% of the collocations. These results support that productive knowledge is harder to gain. When considered in two proficiency levels, productive task turned out to be more effective for higher-level learners whereas receptive task served better for lower level learners. In the productive tests, both groups performed slightly better on the test of meaning than on the test of collocation.

2.5.5.3 Research on factors affecting collocational knowledge

Macis and Schmitt (2017) aimed at examining 107 Chilean learners' knowledge of figurative meanings of collocations which could have both figurative and literal meanings. Role of frequency, semantic transparency and language engagement in collocation learning was also explored. Two tests, a meaning recall test which measured the knowledge of figurative meaning of the collocations and a questionnaire designed to explore the learners' language engagement were utilized as test batteries. The findings from a mixed effect model analysis showed that learning figurative meanings of collocations was a difficult phenomenon. In addition, neither semantic transparency nor frequency was related to the figurative knowledge of collocations. This was mainly because formulaic language did not follow frequency as much as single words and semantic transparency measures were mostly subjective. Nonetheless, language engagement factors such as time spent at the

university, spending time in an English-speaking country and the amount of reading showed significant positive correlations with the knowledge of figurative collocational meanings (Macis and Schmitt, 2017).

Peters (2016), on the other hand, sought to examine possible impact of interlexical (congruency) and intralexical factors (collocate node relationship and word length) on 41 Dutch learners' collocation learning at the initial stages of form-meaning mapping. In the study, which had a pretest-posttest design, learners attended a learning session lasting for two hours. They read a list of 18 target collocations and completed four online exercises. They were given feedback on the incorrect answers. Following the treatment, they completed Vocabulary Levels Test and three posttests, namely a form recall test, a form recall with clues test and a form recognition test. Results showed that collocate-node relationship had a significant effect on collocation learning, but it was conditioned by congruency in the first form recall test. Adjective-noun collocations were easier to learn because they had little variation and they were learnt in chunks. The findings related to word length were mixed, since word length was negatively correlated with form recall and positively correlated with form recognition levels of mastery. Vocabulary size was positively correlated with participants' scores only in the first form recall test.

2.5.5.4 Use of concordancers in collocation learning

Various studies (Chan & Liou, 2005; Chen, 2011; Daskalovska, 2015) focused on the use of web-based tools and concordancers in L2 learning of collocations. Most of these studies compared effectiveness of these online tools to traditional ways of teaching collocations such as giving definitions, synonyms and antonyms. Daskalovska (2015), for example, investigated effectiveness of corpus-based

activities (concordancers) in comparison to traditional activities of textbooks. The results revealed an advantage of using concordancers in collocation learning over traditional techniques.

Chan and Liou (2005), on the other hand, examined impact of a Chinese-English bilingual concordance on collocation learning via five web-based practice units. Their findings also yielded significant collocation learning even though they were conditioned by prior collocation learning and different collocation types.

2.5.5.5 MFI versus FFI in collocation teaching

Much research reviewed so far dealt with the amount of encounters, interlexical and intralexical factors or productive versus receptive tasks. Yet another focus of enquiry in collocation research, incidental learning of lexical items through reading is highly valued in literature (Godfroid et al., 2010; Pellicer-Sanchez, 2017; Webb et al., 2013); however, not a plethora of studies investigated how Meaning Focused Instruction (MFI) and Meaning Focused Instruction plus a Focus on Form (MFI + FonF) component conduced to collocation learning. Given the limited amount of systematic research on learning of collocations with an FFI component, current research revealed that MFI + FonFs was significantly more effective. With 43 intermediate Polish EFL learners divided into three groups (MFI, FFI and control), Szudarski (2012) looked at comparative effects of MFI and FFI on the acquisition of incongruent verb-noun collocations through reading. The study adopted a pretest-delayed posttest design. There were two experimental groups and one control group. One of the experimental groups was Meaning Focused Instruction (MFI) group and the other one was Meaning Focused Instruction + Focus on Forms (MFI + FonFs) group. Both groups were exposed to target collocations in a different story they read

each week. Each target collocation appeared twice in each text and six times in total in the whole treatment. After reading the story, MFI + FonFs group answered comprehension questions first and then had a form focused vocabulary activity containing target collocations whereas MFI only group answered comprehension questions and continued with other meaning focused instruction and comprehension questions. Control group only took the pretest and the posttest. Three posttest taping productive and receptive knowledge of collocations (form recall of collocation, form recall of the verb and form recognition of the verb) were administered. Results revealed that MFI + FonFs group improved significantly and outperformed MFI only and control group in all posttests although there were no significant differences in the pretest between three groups. There were no significant differences between MFI only and Control group which was attributed to the sufficiency of treatment to lead to an improvement at the productive level. Szudarski (2012) estimated that a focus on target collocations preceded by form focused activities yielded better results than solely meaning focused instruction. As another study exploring contribution of dictionary use to the retention and production of L2 collocations, Laufer (2011) expounded that students' attention should be drawn to restricted co-occurrence of collocating words and this should be supported with word focused activities, which also points out to the importance of having a FonFs component in vocabulary teaching.

From another aspect, Choi (2017) claimed that textual enhancement which draws learners' attention to collocations improved learners' acquisition of target collocations. Nonetheless, it may have resulted in decreased textual comprehension (Choi, 2017). Another typological enhancement study was that of Szudarski and Carter (2016). They compared two instructional conditions, namely input flood only

and input flood + textual enhancement (underlining) and found that input flood + enhancement led to acquisition of verb-noun collocations at the levels of form recognition and form recall. They concluded that incidental acquisition of collocations was quite unlikely with input flood only. Input enhancement studies of this kind bear importance for the methodology of the current study since FonF was operationalized as textual enhancement and dictionary use in the study. As can be seen, current research conducted on collocations aimed attention at different foci and the results generally favor focus on form on the collocating words. The next section will preview the recent developments in vocabulary research and collocation research onward, conducted in Turkey.

2.6 Research on vocabulary conducted in Turkey

Vocabulary as a field of research and education at different levels from primary school to university level has been an area of neglect in Turkey. Notwithstanding the majority of the EFL learners' limited vocabulary knowledge, there is still very little emphasis on vocabulary instruction in Turkish education and curricula. A similar situation goes for the scientific research. The number of studies conducted on vocabulary and especially collocation learning is quite limited and they all have their strengths and weaknesses. The following review provides a brief and general portrait of vocabulary research conducted in Turkey between 2008 and 2018.

2.6.1 Research on vocabulary learning through online tools

Much of recent vocabulary research undertaken in Turkish EFL context has predominantly focused on use of online tools such as concordancers or mobile applications. Most of these studies investigating the effects of online tools like

Quizlet (Başoğlu & Akdemir, 2010; Kılıçkaya & Krajka, 2010; Köse & Mede, 2016), mobile applications such as WhatsApp or Facebook (Çetinkaya & Sütçü, 2018) or concordancers/online dictionaries (Başal, 2019; Yılmaz & Soruç, 2015) on vocabulary learning had a similar design examining efficiency of online vocabulary learning in comparison to traditional vocabulary learning usually through flashcards or vocabulary exercises. Based on the analyses of pre and posttests and qualitative data obtained through interviews or observations, these studies obtained similar results. They all supported supremacy of online learning tools over traditional techniques of vocabulary learning and found that students had positive attitudes towards use of online tools.

2.6.2 Research on vocabulary through reading

Turkish researchers not only dealt with use of online tools in vocabulary instruction but also vocabulary learning through reading (Yıldırım, Yıldız & Ateş, 2011; Yıldırım et al. 2014; Varol and Erçetin, 2016). Yıldırım and colleagues (2011) looked at the correlation between vocabulary knowledge and reading comprehension in terms of text types. They found a medium correlation between these two variables and the correlation turned out to be large when students read expository texts with much scientific vocabulary. Varol and Erçetin (2016), on the other hand, investigated differential effects of lexical annotation glosses and topic level glosses on vocabulary gains and text recall with Working Memory (WM) as a mediator. Their results uncovered a significant relationship between WM and reading comprehension notwithstanding effects of glossing or treatment condition. However, they also found that vocabulary development was highly correlated with annotation use. Yet another correlational study, Yıldırım et al. (2014) looked at the extent to which components

of reading fluency, namely word recognition accuracy, word recognition automaticity and prosody, accounted for variability via video-recorded retelling task and a vocabulary test designed for the study. The findings affirmed that reading fluency correlated with differential levels of vocabulary knowledge. The next part of overview of Turkish research is about vocabulary and visual cues.

2.6.3 Research on vocabulary and visual cues

Another line of research focused on the impact of pictures, visual multimedia tools, and captions on vocabulary learning. Emirmustafaoğlu and Gökmen (2015) compared efficacy of two instructional treatments; pictures and L1 translations as cues for word recall and their findings showed an advantage of pictures over L1 translations as cues for recall. What is more, Türk and Erçetin (2014) explored the impact of interactive display of visual and verbal multimedia where students could choose the gloss type in comparison to simultaneous display of the same input where verbal and visual information was provided in a single gloss. They found that students used multimedia glosses more when they had less control over the type of glosses. Çakmak and Erçetin (2018) also examined whether multimedia glosses were effective tools in incidental vocabulary learning and reading comprehension while listening. According to the results, use of glosses did not have any impact on text recall but they positively affected the recognition and production of vocabulary regardless of the type of the gloss. Yüksel and Tanrıverdi (2009), on the other hand, focused on the role of captions in incidental learning of vocabulary and found that watching the clip with captions performed better. The following part will cover a review of studies on vocabulary learning strategies.

2.6.4 Research on vocabulary learning strategies

Another area of interest for Turkish researchers was vocabulary learning strategies. Bilican and Yeşilbursa (2015) sought to explore learners' attitudes towards vocabulary learning before and after two hours of awareness raising program on self-regulated vocabulary learning. However, they could not find any impact of strategy training due to limited duration of awareness raising program. Çelik and Toptaş (2010), on the other hand, focused on students' views on strategy use and the relationship between proficiency and strategy use in vocabulary learning. They claimed that there was a mismatch between students' positive attitudes towards strategy use and their actual use of strategies concluding that as learners became more proficient, they generally used vocabulary learning strategies such as cognitive, memory, metacognitive strategies more frequently. The last part of this section on vocabulary research in Turkey covers research on collocation learning.

2.6.5 Research on collocation learning in Turkey

Studies on collocation learning undertaken in Turkey reflect the status of collocation research in the world from the aspect that they are few in number. Among these few studies, Demirel and Kazazoğlu (2015) is a corpus-based study of collocation examining whether L1 background has an impact on collocation use. By means of three corpora, namely Turkish Corpus of Spoken Learner English (TC-SLE) compiled by the researcher, International Corpus Network of Asian Learners of English (ICNALE) and British National Corpus (BNC), Demirel and Kazazoğlu (2015) conducted a data-driven comparison between Turkish and Asian learners' and native speakers' use of collocation. The comparison was based upon frequency counts, types, and inaccuracy types of collocation use. It was indicated that L1

background had a significant effect on collocation use which is quite limited and problematic in learner speech. Furthermore, they suggested that Turkish and Asian learners' use of collocations in speech bear more similarities to each other unlike native speakers (Demirel & Kazazoğlu (2015).

Dealing with collocations from a different angle, Tekingül (2013) was concerned about explicit collocation teaching and its influence on reading comprehension. The participants were third year students at English Language Teaching (ELT) department at a university. Tekingül (2013) attempted to compare explicit teaching of collocations to explicit teaching of single items. Only one treatment session was hold, which was discussed as a reason for insignificant results obtained in the vocabulary posttests. Yet in another study conducted with 59 seventh grade students from Konya, Balcı and Çakır (2012) investigated teaching vocabulary through collocations in comparison to traditional techniques (synonym, antonym, definitions and so on) and reported that a significant difference between collocation technique and traditional technique only appeared after six weeks of instruction in the last posttests. These findings supported Tekingül's (2013) conclusion that one treatment session was very unlikely to observe the effects on the experimental conditions.

All these studies conducted in Turkish EFL context have a different foci and methodologies. Most of them investigated effectiveness of online tools or learning of vocabulary as a by-product of reading. Irrespective of the foci they have, they also diversify in the method of target item selection in that no information was given about how target words are chosen. Most of them (Balcı & Çakır, 2012; Tekingül, 2013; Yılmaz & Soruç, 2017; Türk & Erçetin, 2014) presented students with a list and asked the learners if they know the items or not while target words were adopted

from available textbooks or online tools in the others (Başoğlu & Akdemir, 2010; Çetinkaya & Sütçü, 2018; Yıldırım et al., 2014). Still others determined the target words through a pilot study or proficiency level of the target group (Çakmak & Erçetin, 2018; Yüksel & Tanrıverdi, 2009) or randomly selected target words from academic word lists with a pedagogical consideration (Başal, 2019). In contrast to all these studies, the present study adopted a corpus-informed approach to selection of target items by checking their node frequencies, MI and Log Dice scores, which distinguishes the current study from the others in Turkish EFL context. As another strength of the present study, to our present knowledge, it is the only collocation learning study under ISLA framework conducted in Turkish EFL context.

2.7 Conclusion

Learning a language is multifaceted, that is, it requires mastery in all language aspects, which are all fundamental to acquisition. Among these aspects, vocabulary stands out as one of the least popular aspect in the research arena in defiance of its essentialness for language acquisition. To a certain extent, this situation is owing to the fact that it is very difficult to define what a word is and what makes a word. More challengingly, collocational pairs appear to be a matter of disunity. Fundamentally, two approaches to designate collocations, namely phraseological and statistical approaches, each with its own tenants, loom among others. While defining collocations, several factors such as congruency and semantic transparency also stand out. These factors can be quite decisive in learning a collocation which also stimulated considerable research interest (Macis & Schmitt, 2017; Peters, 2016). Some other studies on collocation teaching dealt with issues such as deductive versus inductive learning of collocations (Sun & Wang, 2003), amount of encounters to

learn a collocational pair (Peters, 2014; Webb et al., 2013) and role of receptive versus productive tasks in learning of collocations (Webb & Kagimoto, 2009). Collocations pose a difficulty not only on the part of the researchers, but also on the part of the learner. They present a source of difficulty for learners especially at the beginning of the acquisition process (Nesselhauf, 2003; Peters, 2016). To relieve this burden of the learners, miscellaneous instructional techniques have been proposed. Roughly described as instructional activities attracting learners' attention to form, Form Focused Instruction was shown to produce better results than purely meaning based incidental kind of collocation instruction.

Szudarski (2012) investigating the differential impacts of meaning focused and form focused instruction on learning of collocations obtained similar results. Nevertheless, FFI was operationalized as Focus on Forms in Szudarski's (2012) study even though it is the only study to compare effects of MFI and FFI in collocation learning. Considering all the aforementioned studies reviewed, vocabulary acquisition research might have proven the benefits of FFI, however, there remains a need for systematic research in investigating effects of Focus on Form rather than Focus on Forms on collocation learning and the present study addresses this gap in literature by asking the following research questions:

1. Is learning collocations in the mastery level of recall more challenging than collocation learning in the level of recognition?
2. Is there a significant difference between the effects of Meaning Focused Instruction (MFI) and Form Focused Instruction (FFI) on Turkish EFL learners' form recognition (receptive knowledge) of verb-noun collocations as a whole unit in COLLEX (Collocating Lexis) test?

3. Is there a significant difference between the effects of Meaning Focused Instruction (MFI) and Form Focused Instruction (FFI) on Turkish EFL learners' meaning recall of verb-noun collocations?
4. Is there a significant difference between the effects of Meaning Focused Instruction (MFI) and Form Focused Instruction (FFI) on Turkish EFL learners' form recall of verb-noun collocations?

As Schmitt (2010) asserted, it is not possible to design test batteries that can measure all levels of word knowledge. Therefore, the present study tested only receptive collocational knowledge and formal aspects of word knowledge at recognition and recall degrees of mastery. Based on the theories put forward in FFI research and findings in relevant literature, the following hypotheses were formulated for each research question:

1. In line with previous research (Laufer, 2005; Laufer & Goldstein, 2004; Webb, 2005), we predict that the learners in the current study will get higher scores in the recognition test than in the recall test.
2. According to Szudarski (2012), Form Focused Instruction yields better results than Meaning Focused Instruction when learners are required to recognize form of the given words or collocations. Thus, FFI group in the present study is expected to have higher collocation gains than MFI group in tests measuring collocation learning in the degree of form recognition.
3. Learning collocations through FFI provides significantly better learning outcomes than learning with MFI in recall of word meanings (Laufer & Rozovski-Roitblat, 2011; Sonbul & Schmitt, 2009). Hence, FFI learners in this study are predicted to perform better in meaning recall test.

4. As advocated by De la Fuente, 2006, Laufer and Girsai (2008) and Szudarski (2012), learners who receive FFI perform better in form recall tests of vocabulary. Learners in FonF group of the present study are supposed to have better scores than learners in MFI group in form recall test.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter presents the design and procedure of the current study. It provides background and details about participants, operational definitions of important terms and criteria applied in the selection of target collocations. Moreover, it describes instruments used in the collection of data, scoring and data analysis procedures.

3.2 Participants

Participants of the current study were 93 students enrolled in three intact classes at English preparatory program of a private university in Turkey. Afterwards, 18 of the participants dropped out of the study since they did not attend either one of the interventional sessions. Data of another three students were removed from the study because they were extreme cases that did not represent the target population. Out of 72 students remaining, 38 of them were female and 34 of them were male students aged between 18-38. The average of their age was 19. Almost all of them were Turkish EFL learners except for an Arabic and a Turkmen student. They were reported to have elementary level of proficiency in Cambridge English Placement Test administered by the institution. They performed at 2,000-3,000 word level in Version A of Vocabulary Size Test by Nation and Beglar (2007) which is a 100 item test measuring how much vocabulary they know.

They were from different departments ranging from Electrical Engineering, Medicine, Nursing, Physiotherapy and Rehabilitation, Pharmacy to Radio, TV and Cinema, New Media, International Trade and Management, International Relations and Management Information Systems. Average age of onset of acquisition for

English ranged from seven to 25 and on average, it was 12. They had 25 hours of English instruction every week and the education was composed of five hours of listening and speaking skills course, five hours of reading and writing skills course, nine hours of general English course, five hours of English for Specific Purposes (ESP) course which covered the topics related to their departments.

While most students reported to start learning English in primary school (45), some students also reported that they started learning English in kindergarten, secondary school, high school or university. A great majority of participants had never been to a foreign country with some exceptions who had been to countries like the USA, China, Germany and so on. Some of them were bilingual and they spoke additional languages such as Georgian, Kurdish, Serbian and Zaza.

3.3 Operationalization of terms

Concepts and terminologies may not have identical meanings in every context. Different conceptualization of a term may lead to yield diversifying results for research purposes. Consequently, some key terms need to be operationally defined to clarify what is meant in the present study.

The first term to define is collocation, which is the major focus of this study. As mentioned earlier in the literature review chapter, the term, collocation has been subject to diverse conceptualizations owing to the difficulty of determining what brings node and collocate together. Semantic relationships and frequency of co-occurrence were shown as two of the most determinant factors in literature. In scientific terms, two approaches researchers adopt while defining collocational pairs stand out. Researchers such as Sinclair (1991), Thornbury (2002) and Webb et al. (2013) adopted a statistical approach based on frequency of co-occurrence while

others including Cowie (1998), Howarth (1998) and Nesselhauf (2005) defended a phraseological approach favoring semantic criteria to establish word boundaries.

Overall, the present study adopted a frequency-based approach and made use of corpus to check for frequency counts. After determining the headwords at students' word level, target collocations were selected to be frequent collocates of these node words and they were crosschecked in British National Corpus (BNC). Thus, this corpus-aided study defined collocation as word pairs frequently co-occurring in corpus since phraseological approaches were likely to lack an objective measure to set the boundaries.

Another conspicuous concept that behooves operational definition is Focus on Form. The definition of FonF as "any planned or incidental instructional activity that is intended to induce language learners to pay attention to linguistic form." (p. 2) by Ellis (2001) was adopted in the current study. Furthermore, Long's (1991) differentiation of FonF and FonFs was also taken into account and his criterion that leading focus of the instructional FonF activity should be on meaning or communication was also adopted to ensure that target collocations were learnt incidentally.

In addition to these definitions and specifications, further amendments and operationalizations were made because instructional activities designed around this definition could vary remarkably. Therefore, following Laufer and Rozovski-Roitblat (2011) and Luppescu and Day (1993) who had a FonF component operationalized as dictionary use, FonF treatment was operationalized as "dictionary use while reading a text and answering comprehension questions". Reading texts and exercises provided a meaning-based context for learners. Attention to form was induced by allowing dictionary use. Additionally, following Bruton et al. (2011) who suggested

induced vocabulary salience (p. 765) in instructional practices aiming at incidental learning of vocabulary items which were deliberately made salient or prominent, target collocations were made bold in the texts. Students' attention was drawn to those target collocations without explicitly making them look these bold collocations up in a dictionary and disrupting the meaning-based practice thereof.

3.4 Target collocation selection

Previous research adopted various approaches in the selection of target collocations. While some researchers opted for using pseudowords as target items or collocations (Godfroid et al., 2010; Pellicer-Sanchez, 2017), other researchers preferred to include real words/collocations in their studies (Choi, 2017; Durrant & Schmitt, 2010; Macis & Schmitt, 2017; Peters, 2016; Sun & Wang, 2003; Szudarski, 2012; Webb & Kagimoto, 2009; Webb et al., 2013). In this quasi-experimental classroom study, I preferred to make use of real collocations as target items for pedagogical considerations.

Target lexical units in the current study were 20 verb-noun collocations. Compared to adjective noun and adjective adverb collocations, verb-noun collocations are known to be challenging to acquire (Peters, 2016). Therefore, target items were all chosen to be verb-noun collocations to help learners master at a difficult aspect of collocation learning. Since the current study investigated incidental learning of collocations through reading, target collocations were embedded in eight short reading passages which were taken from *English Collocations in Use*, which was a collocation study and exercise book by McCarthy and O'Dell published in 2017.

At the beginning of materials adaptation process, there were 40 candidates of target collocations embedded in 12 different passages. These candidate verb-noun collocations were checked out in British National Corpus for their frequency counts using Relative Node Frequency and for their collocational strength using MI and Log Dice scores. Appendix A provides the full list of target collocations selected for the present study.

According to Nguyen and Webb (2017), node frequency was found to be a strong predictor of receptive knowledge of collocations. Therefore, a considerate amount of attention was paid to the criterion of node verb frequency in the present study, and mostly, frequent node verbs were selected with a pedagogical rationale in mind in order to ensure exposure to target words in authentic materials. Selecting frequent node words with high frequency in British National Corpus would increase the likelihood that learners would encounter target collocations in future instructional occasions. This is mainly because of the fact that the more they are encountered, the more chance students have to learn them.

Considering all these important criteria, almost all of the target items were selected to contain highly frequent node verbs. However, when node was not frequent enough, it was ensured that collocate was a frequent word in English. For instance, in the case of the node word, s*teer,* which was not a highly frequent word compared to other node words, it was made sure that its collocate *conversation* was highly frequent (55.5 per million).

Table 4 provides a list of selected node verbs and it also demonstrates frequency counts of these node words per million (Relative Node Frequency) in British National Corpus (BNC).

Table 4. Frequency of the Node Verbs per Million

Node Verbs	Relative Node Frequency (per million)
Accept	181.22
Achieve	148.92
Adopt	79.02
Attend	80.18
Boost	24.93
Conduct	71.40
Draw	208.64
Drop	118.20
Enhance	28.05
Get	1,856.57
Give	1,151.02
Invest	32.43
Launch	76.10
Make	1,875.17
Sense	216.66
Set	482.50
Steer	11.34
Trust	112.49

After target node words were determined, their frequent and strong collocates were checked out in BNC. MI and Log Dice scores were calculated to account for collocational strength between the node and the collocate. Both MI and Log Dice scores measure the degree of attraction between collocating words. Nonetheless, MI score favors specialized and infrequent collocations (Gablasova et al., 2017) whereas Log Dice accounts for frequent combinations, as well. Candidate collocations were selected as target collocations only when the collocational strength was medium or high. Medium strength collocations were operationalized as collocations with an MI score between 4.5 and 6 and with a Log Dice score between 5 and 6.5 in L5-R5 window span. Strong collocations were defined as collocations with an MI score above 6 and with a Log Dice score above 6.5 in L5-R5 window span. For this quasi-experimental study, only the collocations with an MI score above 4.5 and with a Log Dice score above five in L5-R5 window span were selected to be used in the study.

After this elimination process, 20 out of 40 target collocations were determined. Table 5 below shows MI and Log Dice scores of 20 target collocations selected.

Table 5. Target Collocations: MI and Log Dice Scores in BNC

Target Collocation	MI score	Log Dice score
Make commitment	4.813	5.472
Accept proposal	7.287	7.280
Make appointment	5.570	5.817
Achieve goals	8.565	8.636
Set targets	8.027	7.520
Make profit	6.373	7.053
Conduct research	7.402	8.154
Launch a product	7.064	7.517
Adopt a position	6.297	7.190
Draw conclusions	9.981	9.117
Make an attempt	6.168	7.797
Invest money	7.962	7.907
Boost income	6.475	5.863
Drop a hint	6.688	5.246
Give instructions	6.721	6.661
Make observations	6.288	5.494
Steer conversation	8.790	7.033
Trust instincts	7.507	5.004
Get impression	5.648	5.879
Sense tension	5.712	5.386

In the following phase of selection, 20 target collocations were assessed for their congruency and semantic transparency information by two different raters. Interrater reliability was found to be $r = 0.8$ for congruency assessment and $r = 1.0$ for semantic transparency assessment. Afterwards, two raters negotiated, and the final assessment of congruency and semantic transparency was as it is indicated in Table 6. Most of the target collocations were congruent and semantically transparent due to the fact that the participants had low (elementary) level of proficiency and it would be too challenging for them to learn incongruent and opaque collocations at the time of the present study.

Table 6. Target Collocations: Congruency and Semantic Transparency Information

Target Collocation	Congruency	Semantic transparency
Make commitment	-	+
Accept proposal	+	+
Make appointment	+	+
Achieve goals	+	+
Set targets	+	+
Make profit	+/-	+
Conduct research	+	+
Launch a product	+	+
Adopt a position	-	+
Draw conclusions	-	+/-
Make an attempt	+/-	+
Invest money	+	+
Boost income	+	+
Drop a hint	-	+/-
Give instructions	+	+
Make observations	+	+
Steer conversation	+	+
Trust instincts	+	+
Get impression	+	+
Sense tension	+	+

3.5 Materials

The present study examined the differential effects of Meaning Focused and Form Focused Instruction in incidental collocation learning through reading. Reading materials for the study were taken from *English Collocations in Use* by Michael McCarthy and Felicity O'Dell published by Cambridge University Press in 2017. As aforementioned, 12 reading passages were extracted from this book as candidates to be used as materials. After target collocation selection process, only eight of these texts were utilized for the study purposes. The texts were on different topics ranging from money and business to love and sensing. Target collocations were already embedded in the texts as the book was specifically designed for collocation learning.

Nevertheless, the book was for intermediate level learners. Henceforth, after vocabulary levels of students had been determined in Vocabulary Size Test (VST) by Nation and Beglar (2007), the texts were modified and simplified in word and sentence level to make them accessible for students' vocabulary and language

proficiency levels. Hu and Nation (2000) argue that learners need to know 98% of the words in a text to be able to comprehend it. Thus, following Hu and Nation (2000), all the words included in the reading materials were checked for appropriateness to the students' word level. Students appeared to perform at 2,000-3,000 word level in VST. Making use of this outcome of the study, all the words in the reading materials were checked in Paul Nation's list of headwords of the first 10,000 words in English, which presents all the headwords in English in groups of 1,000 words based on the BNC/COCA lists. If any word in the texts (except for the target collocations) was above students' vocabulary level (2,000-3,000), it was changed with a more frequent synonym which is within or below their level. Thus, it was ensured in the current study that all words except for the target collocations were among the words within the students' current vocabulary level, which means all of the words in the texts except for the target collocations were from the first and the second 1,000 frequent headwords in Nation's list. This way, it was assumed that students knew all the words except for the target collocations. Also, grammatical simplifications were made, and complex sentences were modified to be simple to make sure that learners with elementary level of proficiency could understand the texts. Thus, comprehension was guaranteed. Furthermore, the researcher was the instructor in all of the interventional sessions and she asked learners clarification questions about the comprehensibility of texts and none of the students reported lack of comprehension.

Having determined the texts to be adopted as instructional materials and having modified the texts, comprehension questions were written, and the passages were modified to be used as materials for both instructional conditions (MFI and FFI). In MFI materials, plain texts and questions were used whereas target

collocations were bold-faced and underlined in FFI materials to accomplish textual enhancement as a requirement of FonF operationalization in the current study.

However, the format and content of the texts and comprehension questions were exactly the same in the materials of both groups to avoid any possible confounding factors that could be brought by instructional materials. Appendix B presents instructional materials for MFI condition whereas Appendix C includes instructional materials designed for FFI condition.

3.6 Instruments

Various tests and instruments were utilized in the current study. At the very beginning of the study, Vocabulary Size Test by Nation and Beglar (2007) was adopted and administered to test students' receptive vocabulary sizes, which would in turn guarantee the comprehensibility of materials and comparability of experimental groups. VST is a discrete item diagnostic test composed of 100 questions. Items in the test represent different frequency levels of the words tested with a sample of items from each 1,000 word frequency level. Nation and Beglar (2007) stated that they determined these frequency levels according to word families in BNC and they put items in a frequency order. Below is a sample item from VST Version A:

see: They < saw it >.
a closed it tightly
b waited for it
c looked at it
d started it up

When the scores are obtained out of 100, they are multiplied by 200 to interpret these scores in terms of 1,000 word family levels. Nation and Beglar (2007) provides a detailed description of what these obtained word levels mean in terms of

receptive vocabulary size (p. 13). Table 7 demonstrates interpretation of the scores in Vocabulary Size Test to draw conclusions in three basic frequency levels.

Table 7. Interpretation of Scores in VST in Three Frequency Levels

Level	1,000 word level	Learning procedures
High-frequency	1,000-2,000	Reading graded readers Deliberate teaching and learning
Mid-frequency	3,000-9,000	Reading mid-frequency readers Deliberate learning
Low-frequency	10,000 or above	Wide reading Specialized study of a subject area

Source: [Nation & Beglar, 2007]

To measure the hypothesized difference between outcomes of two instructional techniques (MFI and FFI), four different instruments, namely COLLEX (Collocation Lexis), two translation tests and a questionnaire were developed and adopted. Pre-posttest data were collected via three test batteries. The first test was an adaptation of COLLEX test format developed and validated by Gyllstad (2009). He carried out validation and reliability analyses for COLLEX and it proved reliable in terms of internal consistency. What is more, its discriminatory power as a test format was validated by Gyllstad (2009).

As an estimate of internal consistency reliability of COLLEX via available data of the current study, Cronbach's alpha was calculated using SPSS. Cronbach's α is one of the most frequently utilized and cited statistics and a coefficient alpha value above .7 is considered acceptable in terms of reliability whereas a value .8 and above is better and ideal according to Cortina (1993) and Cronbach (1951). Cronbach's α for COLLEX was found to be .84, which showed that this test was ideally reliable.

COLLEX was a receptive collocation test measuring not only recognition of target collocations as a whole entity but also recognition of pseudo-collocations as a

non-collocating pair. Items in COLLEX test devised with the selected target collocations were made up of three options. One of the options was the frequent target collocation whereas the other two options were pseudo-collocations, which were semantically similar to the target collocations but totally nonconventional and infrequent. Participants were asked to choose one of three word sequences they thought was the most correct and common one**.** The test consisted of 23 items three of which were distractors.

Instructions in COLLEX were written both in English and Turkish to ensure understanding. Appendix D includes COLLEX test battery and below is a COLLEX test item.

a. make commitment *b. do commitment* *c. produce commitment*

Translation tests utilized in the current study measured meaning recall and form recall of target collocations. In meaning recall test, they were given the target collocations and asked to provide their L1 Turkish equivalents. Meaning recall test had Cronbach's α value of .83 and it revealed that the test was reliable. In the form recall test, on the other hand, students were provided with L1 Turkish equivalents of target collocations and asked to come up with the target collocations. Cronbach's α obtained for form recall test was .81, which was again a reliable statistic in terms of internal consistency. Each test was composed of 23 items three of which were distractors. Instructions for all tests were provided both in English and in Turkish explicitly on the test papers to ensure the comprehension of the task by the participants. Appendix E presents meaning recall test whereas form recall test is given in Appendix F.

Two examples of the items utilized in meaning recall and form recall translation tests are presented respectively as they appear on the test papers.

Meaning recall test item

Conduct research _____

Form recall test item

Gerginliği sezmek _____

What is taught during regular teaching or interventions can be carefully controlled in experiments. Nevertheless, it also sheds light on our way to learn what the students are doing outside class and to have an idea about their language learning strategies to interpret data. Therefore, in order to obtain demographic information about participants and to interpret test data more thoroughly, a questionnaire measuring English language learning and specifically vocabulary learning strategies was devised by combining three different questionnaires developed by Gu and Johnson (1996), Hyland (2004), and Tonoian (2014). Both English and Turkish equivalent versions of this questionnaire were prepared and crosschecked with several language instructors who were native speakers of Turkish. Students took the version (English or Turkish) they preferred. Almost all of the students took the Turkish version because they felt more comfortable in their mother tongue. Appendix G includes English version and Appendix H includes Turkish version of this language background questionnaire.

3.7 Procedure

The present quasi-experimental study investigated the comparative effects of meaning focused instruction and form focused instruction on incidental learning of verb-noun collocations through reading. Ninety-three preparatory school students

from three intact classes with elementary level of proficiency participated in the study. By the time all interventions analyses were carried out, 21 students dropped out of the study and data were collected from remaining 72 students. Adopting a pretest-posttest design, this study had two experimental groups and one control group. Each group consisted of almost equal number of students. The classes were intact but they were randomly assigned to one of three treatment conditions, namely MFI group, FFI group and Control group, which is the reason why this is a quasi-experimental study. The study was carried out in five weeks. During the first week, all the groups completed the consent forms and took Vocabulary Size Test Version A. Administering this test was highly crucial to determine the range where students' vocabulary size falls into between 1,000 and 20,000 word family levels. More importantly, the results of this test were used to control for the unknown words in the reading materials and to determine the headwords (node words) for target collocations. As suggested by Nation and Beglar (2007), students were allowed 30 minutes to answer 100 questions and complete the VST.

In the second week in the course of the study, instructional materials were modified according to their VST results and test batteries were designed. In the third week of the study, the students took receptive (COLLEX) and productive (from recall and meaning recall tests) pretests designed by the researcher on the acquisition of the target collocations. On the same week, the first interventions were carried out and experimental groups started to follow the interventions. Interventions took three weeks and they were provided on the third, fourth and fifth weeks. Interventions were delivered by the researcher. Having the researcher as the teacher is preferable to ensure administration of experimental conditions as planned whereas it might also posit bias since it may lead the researcher to behave in a certain way that will favor

one intervention in the study. Thus, researcher of the current study was very careful to be unbiased towards all experimental conditions. Each instructional intervention took 40 minutes and all the interventions took 120 minutes in total.

In each session, MFI group read two or three texts each of which included three or four target collocations and answered related comprehension questions. They were given five to 10 minutes to answer the questions in each text, corrected their answers and got comprehension-based feedback from the teacher in the following 10 minutes. The researcher was very cautious not to provide form-oriented feedback to MFI group during this feedback session. When learners asked any questions about target collocations, she did not provide any explanation on purpose to ensure no focus on form. In the second and third instructional interventions, reading texts contained target collocations from the previous weeks so that they could be recycled following Webb et al. (2013) and Peters (2014) who found that the number of encounters had a significant impact on learning of collocations.

FFI group, on the other hand, read the same texts but their versions included target collocations which were made bold to attract their attention to their form. As opposed to Szudarski (2012) who compared MFI and FFI by operationalizing FFI as Focus on FormS, the present study included a FonF rather that a FonFs component. As aforementioned, adopting Ellis's (2001) FFI definition and making a differentiation between FonF and FonFs as suggested by Long (1991), Form Focused Instruction was realized through textual enhancement (bolding and underlining) and dictionary use in the present study.

Dictionary use is a technique which is highly used as a FonF treatment in literature (Laufer & Rozovski-Roitblat, 2011) and it was adopted with a textual enhancement component to make sure that students' attention was drawn to target

collocations. FonF group read the same texts with bold target collocations and answered the same comprehension questions with the help of a dictionary. This way, their attention was attracted to target collocations while they were dealing with meaning-based activities. Similar to the MFI group, FFI group answered the questions in five to 10 minutes and got feedback in the following 10 minutes. Lastly, Control group only took pre and post-tests. At the end of the fifth week, all groups took the posttests and the data were obtained. Table 8 summarizes the procedure and timing of the study.

Table 8. Interventional Procedure of the Study

Weeks	Procedure
Week I	Completion of consent forms Administration of Vocabulary Size Test
Week II	Modification of instructional materials Development of tests
Week III	Administration of pretests The first interventional sessions in experimental groups
Week IV	The second interventional sessions in experimental groups
Week V	The third interventional sessions in experimental groups Administration of posttests

3.8 Scoring

VST was the first test to be scored since results of this test were also used to design interventional materials. In this test, there were 100 questions and students were awarded with one point for each correct answer. However, these scores were converted into scores in terms of 1,000 word family levels to interpret the results according to Nation and Beglar's (2007) criteria. The test measured vocabulary size up to twentieth 1,000 word level. Thus, it included five items in each 1,000 word

family level. Students' scores were multiplied with 200 to calculate students' score in terms of 1,000 word levels and to interpret their receptive vocabulary size.

Three different tests were administered as pretests and posttests in the current study. One of these tests was COLLEX developed by Gyllstad (2009). It was adapted to include target collocations selected for the purpose of this study. As aforementioned, COLLEX was a multiple-choice test with three options for each item. While scoring COLLEX, no partial scoring was administered, and the participants were awarded one point for each correct answer and zero point for their incorrect answer. When two options were chosen, it was marked as incorrect.

The other two tests were meaning recall and form recall tests based on translation from Turkish to English and vice versa. In the scoring of meaning recall test, a possible answers key was prepared by the researcher and it was revised with the answers given by the participants in the pretest. The revised version of the answer key was cross-checked with another scorer who is a native speaker of Turkish. She was also an English language instructor doing her MA in the same department and working in the same institution as the researcher. Upon the negotiations between these two scorers, interrater reliability reached 0.8. While scoring the meaning recall test, slight differences such as use of plurals, infinitives and so on were ignored. However, any answer creating a change at any level of word knowledge (e.g. meaning, form, register, part of speech) was marked as incorrect.

The last test measuring the deepest level of knowledge in this study was the form recall test, which required learners to translate target collocations from Turkish to English. In scoring of this test, only target collocations were accepted as correct. Two answers were marked as incorrect. Minor spelling mistakes and small nuances such as the use of plurals or insertion of determiners (a/an/the) between node and

collocate were ignored. As it went for COLLEX and meaning recall test, students were awarded one point for each correct answer they gave. Thus, maximum score was 20 for all tests.

3.9 Data analysis

Before data were collected and analyzed, the approval of The Ethics Committee for Master and PhD Theses in Social Sciences and Humanities in Boğaziçi University was taken as presented in Appendix I.

3.9.1 Pretest-posttest data analysis

VST, pre-test, post-test and questionnaire data were collected in five consecutive weeks. Having completed the scoring procedure based on the answer key which two researchers agreed upon, data were entered to Statistical Package for the Social Sciences (SPSS). Firstly, descriptive statistics were calculated to explore the data. Afterwards, normality and homogeneity of variance assumptions for parametric tests were checked. At the end, relevant analyses were run.

Normality assumption was checked by looking at numerical means such as skewness and kurtosis values and visual means such as Q-Q plots, P-P Plots and histograms. There are also tests that check normality of data like Shapiro Wilk (S-W) Test and Kolmogorov-Smirnov (K-S) Test. Nonetheless, these tests have their caveats (Field, 2009). They are two sensitive even to small deviations from normality when the sample size is relatively small and even a small change in scores can affect significance values obtained from these tests. Durilleul and Legendre (1992) argued that conservativeness of these tests was highly correlated with the sample size, which shadows robustness of both tests across different sample sizes.

Henceforth, instead of instrumenting these tests, normality checks were carried out by looking at other means, namely skewness and kurtosis values and visual means such as histograms, Q-Q and P-P plots. There has not been an agreement on any acceptable range of skewness and kurtosis values. Tabachnick and Fidell (2007, 2013) suggested that skewness and kurtosis values in +1.5 and -1.5 range were acceptable deviations from normality and sample data scores within this range were considered as normal. Huck (2012), on the other hand, commented that data were marked as approximately normal if skewness and kurtosis values ranged from +1 to -1. For George and Mallery (2010), acceptable range for normality was between +2 and -2. Under the scope of this study, I preferred following Tabachnick and Fidell (2013), and skewness and kurtosis range was determined to be between +1.5 and -1.5 so as to be as conservative as possible.

After determination of normality range, the first normality analyses were run, and the data appeared to be non-normal according to the criterion range established. This was mainly due to the presence of outliers in the data. Under such a circumstance, Field (2013) offers use of non-parametric tests. Nevertheless, non-parametric tests are very likely to result in Type II error and have less statistical power. Also, there is no non-parametric counterpart of mix design ANOVA which fits the current experimental design. (Field, 2013). Therefore, data had to be normalized in this study.

Potential outliers were checked through calculations of z-cores and boxplots created via SPSS. As suggested by Field (2009), cases with a z-score above 2.58 and shown with an asterisk (*) in boxplots were identified as outliers. It turned out to be that there were 13 outliers with either too low or too high scores. Following the steps in Field (2009), these scores were first tried to be transformed via Log transformation

and Square root transformation. However, outliers stayed the same. As the next step, scores of these outliers were then changed to be one unit above the next highest score (Field, 2009, p. 153). This modification in the data set worked well for most of the outliers. However, three outliers with extremely high scores resisted the change and these three cases were removed from data as the last resort. After these changes, experimental groups had equal number of participants and no outliers persisted. Normality analysis was run again, and it was shown that data was normal.

Regarding homogeneity of variance assumption of ANOVA, Field (2013) states that this assumption can be ignored when group sizes are the same (p. 256). As the number of participants were equated in all groups in the normalization process, equal variances were assumed in all groups.

After assumptions and descriptive statistics were checked, inferential statistics on hypothesized group differences were calculated. Firstly, to test if experimental groups were comparable or not, VST test results were compared across three groups. There was one independent variable (instruction) with three factorial levels and one dependent variable (VST scores), so a one-way ANOVA was run to explore if there are any significant differences between groups.

When it comes to pretest- posttest data, there were one independent (grouping) variable with three factorial levels (MFI, FFI and Control) and one repeated measures variable (time) with two levels (pretest-posttest). As a result, 3x2 factorial analysis of variances (3x2 mix design ANOVAs) which combines repeated measures and between subjects designs was carried out for each test to obtain inferential statistics in this study. To alleviate the risk of occurrence of Type I error, Bonferroni correction was applied to obtained p values. A significant main effect of time between pretest and posttest for all participants and a significant interaction

effect between time and group were detected in ANOVAs. Thus, Post-Hoc analyses were carried out through Tukey's Test (homogeneity assumed) and Games Howell Test (homogeneity not assumed) and multiple pairwise comparisons were made to see the difference between which groups brought about this significant difference.

As a result of the series of mix design ANOVAs conducted as repeated measures, some groups were found to be significantly different from each other in two of the pretests, namely pre-COLLEX and pre-form recall tests. Thus, a gain score (posttest score minus pretest score) analysis was carried out to observe the differences between collocation gains. After gain scores were calculated in SPSS, two one-way independent ANOVAs were carried out for each test along with Post-Hoc analyses.

Inferential statistics calculated in aforementioned ways and obtained *p* values are a useful indicator of statistically significant or non-significant effects. However, according to Plonsky and Oswald (2014), *p* values are greatly affected by the degree of the relationship between the variables and the sample sizes. They assert that reporting *d* or *r* values as measures of effect sizes and interpretation of these values through field-specific scales are pivotal. In addition to Plonsky and Oswald (2014), many other researchers (Durlak, 2009; Ellis & Steyn, 2003; Field, 2009; Lakens, 2013; Long, 2017; Norris & Ortega, 2006) highly recommend calculating effect sizes to observe practical significance of outcomes. Field (2013) also opines that effect sizes are very beneficial especially for focused effects and he suggests using Pearson correlation coefficient *r* as the most suitable effect size measure which presents effect sizes between two ranges, 0 (no effect) and 1 (perfect effect) especially for samples with equal sizes.

Under all these circumstances, it is pivotal to report effect sizes. Field (2013) also provides the following formula to calculate effect sizes, which was adopted in the current study:

$$r = \sqrt{\frac{F(1, df_{\mathrm{R}})}{F(1, df_{\mathrm{R}}) + df_{\mathrm{R}}}}$$

Plonsky and Oswald (2014) also argue that Cohen's (1988, 1994) benchmarks of effect sizes in which if *r* = .10, it represents a small effect, .30 a medium effect and .50 a large effect, fail to cater for domain related interpretations and overlooks effect size of studies in L2 research. Thus, they propose a new framework that redefines the benchmarks in which Pearson *r* bigger than .25 shows small effect size, .40 medium effect size and .60 large effect size. This field-dependent criterion was followed to interpret effect sizes in the present study.

Beside significance statistics and estimates of effect size, previous research (Cumming et al., 2012; Norris et al., 2015) also stresses importance of reporting Confidence Intervals (CI) associated with these obtained effects. According to Field (2013), confidence intervals are usually examined at 95% and sometimes 99% intervals both of which stand out as a limit set in such a way that "for a certain percentage of samples (be that 95% or 99%) the true value of the population parameter will fall within these limits" (p. 104). He also suggests that if sample means are so different and they represent different populations, it may be of great importance for experimental research. When two random samples are taken, these people are expected to be from the same population. If they appear to represent different populations after experimental manipulations, this means the intervention is successful to create a difference (Field, 2009). Thus, the results obtained in the

current study will also be analyzed and reported via confidence interval graphs to check for a true difference between sample means of experimental groups.

3.9.2 Questionnaire data analysis

A background questionnaire which was a compilation of various other questionnaires by Gu and Johnson (1996), Hyland (2004), and Tonoian (2014) was administered to the learners to obtain data about their language learning background and vocabulary learning activities outside class. Data were entered in SPSS and descriptive statistics and frequency tables were obtained for each item.

This chapter presented research questions, participant information, instruments utilized in the study. Furthermore, details related to selection of target collocations, procedure followed and data analysis were given. The next section will examine results of the study by providing descriptive and inferential statistics.

CHAPTER 4

RESULTS

4.1 Introduction

Based on the normalization process and analyses explained in the previous chapter, obtained quantitative data will be presented and reported via descriptive statistics, inferential statistics, effect sizes and confidence intervals in this chapter. Firstly, it provides descriptive statistics on background information about the participants and their vocabulary learning activities. Then, the chapter extends to the results of VST and one-way ANOVA conducted to ensure comparability of the groups. Then, it presents the outcomes of a series of mix design ANOVAs to compare collocation gains across groups by providing descriptive statistics, effect sizes and confidence interval for each test.

4.2 Background statistics and language learning and vocabulary learning activities

Descriptive statistics and frequency analyses run on questionnaire data uncovered that learners made use of an abundant range of language learning activities. According to the self-report questionnaire data, the most common language learning activity was “Listening to songs” carried out by 66% of the participants outside class. “Using social media” and “Surfing the Internet” followed “Listening to songs” by being done by 53.7% and 40% of the participants respectively. On the other hand, the least frequently undertaken activities by learners were “Listening to the radio” (6%) and “Reading academic books and articles” (7.3%) and “Speaking with tourists outside” (7.3%).

When the popularity of the Internet and social media and necessities of the era are considered, the results are in line with these developments. Table 9 and Table 10 demonstrate detailed frequencies and percentages for items in language learning activities questionnaire.

Table 9. Frequencies and Percentages for Language Learning Activities

Items	Frequency of activities	Frequency	Percentage (%)
Watch TV series and films	Rarely	5	6.1
	Sometimes	19	23.2
	Often	26	31.7
	Very often	32	39
Listen to the radio	Never	39	47.6
	Rarely	16	19.5
	Sometimes	14	17.1
	Often	7	8.5
	Very often	5	6.1
Listen to songs	Rarely	4	4.9
	Sometimes	6	7.3
	Often	16	19.5
	Very often	54	65.9
Read newspapers and magazines	Never	9	11
	Rarely	29	35.4
	Sometimes	22	26.8
	Often	11	13.4
	Very often	9	11
Read books and novels	Never	2	2.4
	Rarely	10	12.2
	Sometimes	26	31.7
	Often	22	26.8
	Very often	21	25.6
Read academic books and articles	Never	35	42.7
	Rarely	18	22
	Sometimes	17	20.7
	Often	5	6.1
	Very often	6	7.3
Speak with friends and peers	Never	4	4.9
	Rarely	17	20.7
	Sometimes	25	30.5
	Often	16	19.5
	Very often	19	23.2
Speak with family and sig. other	Never	27	32.9
	Rarely	16	19.5
	Sometimes	20	24.4
	Often	11	13.4
	Very often	8	9.8

Table 10. Frequencies and Percentages for Language Learning Activities-Continued

Items	Frequency of activities	Frequency	Percentage
Speak with tourists outside	Never	13	15.9
	Rarely	26	31.7
	Sometimes	26	31.7
	Often	11	13.4
	Very often	6	7.3
Surf the internet	Never	7	8.5
	Rarely	7	8.5
	Sometimes	14	17.1
	Often	21	25.6
	Very often	33	40.2
Speak with foreigners in chatrooms	Never	43	52.4
	Rarely	8	9.8
	Sometimes	13	15.9
	Often	8	9.8
	Very often	10	12.2
Play computer games	Never	17	20.7
	Rarely	13	15.9
	Sometimes	17	20.7
	Often	11	13.4
	Very often	24	29.3
Use social media	Never	2	2.4
	Rarely	8	9.8
	Sometimes	9	11.0
	Often	17	20.7
	Very often	44	53.7
Use language learning applications	Never	5	6.1
	Rarely	14	17.1
	Sometimes	15	18.3
	Often	24	29.3
	Very often	24	29.3
Set English as the main language on mobile devices	Never	27	32.9
	Rarely	11	13.4
	Sometimes	9	11.0
	Often	11	13.4
	Very often	24	29.3

Vocabulary learning activities were given a special place in the background questionnaire since the focus of this study is investigating collocation learning. According to the questionnaire data, vocabulary learning activities outside class are highly used by language learners. The most frequently engaged activity has been found to be “Making notes of important words” carried out by 55% of the

participants and the second most preferred activity is “Use of dictionaries” (50%) which is also a part of the intervention in the current study. However, “Writing words repeatedly” (11%) seems to be the least important activity followed by “Associating new words with the words that looks or sounds similar” (17%) in vocabulary learning for learners. They are still frequently undertaken even though the participants of the current study do not carry out these activities as much as “Making notes of important words” or “Use of dictionaries”. Table 11 and Table 12 illustrate the frequency of vocabulary learning activities which are carried out by learners.

Table 11. Frequency of Vocabulary Learning Activities

Items	Frequency of activities	Frequency	Percentage (%)
Memorize word lists	Never	1	1.2
	Rarely	13	15.9
	Sometimes	35	42.7
	Often	16	19.5
	Very often	17	20.7
Use dictionaries	Never	1	1.2
	Rarely	6	7.3
	Sometimes	12	14.6
	Often	20	24.4
	Very often	41	50
Simply read a lot	Never	1	1.2
	Rarely	15	18.3
	Sometimes	20	24.4
	Often	26	31.7
	Very often	18	22
Use words in real life	Rarely	14	17.1
	Sometimes	23	28
	Often	30	36.6
	Very often	15	18.3
Make notes of important words	Never	1	1.2
	Rarely	5	6.1
	Sometimes	12	14.6
	Often	18	22
	Very often	45	54.9
Guess word meaning from context	Never	4	4.9
	Rarely	7	8.5
	Sometimes	11	13.4
	Often	32	39
	Very often	28	34.1

Table 12. Frequency of Vocabulary Learning Activities-Continued

Items	Frequency of activities	Frequency	Percentage (%)
Make use of grammatical structures to learn word meanings	Never	3	3.7
	Rarely	7	8.5
	Sometimes	9	11
	Often	28	34.1
	Very often	35	42.7
Repeat words aloud	Never	8	9.8
	Rarely	16	19.5
	Sometimes	17	20.7
	Often	19	23.2
	Very often	22	26.8
Write words repeatedly	Never	28	34.1
	Rarely	16	19.5
	Sometimes	13	15.9
	Often	16	19.5
	Very often	9	11
Associate new words with words that look or sound similar	Never	13	15.9
	Rarely	18	22
	Sometimes	23	28
	Often	14	17.1
	Very often	14	17.1

4.3 Breadth of receptive vocabulary

Before interventional process began, all three groups took Vocabulary Size Test as a pretest to measure possible differences between groups in terms of the receptive vocabulary size students have prior to the experiment. Results showed that MFI (M = 12.35, SD = 4.50), FFI (M = 14.21, SD = 9.06), and Control (M = 14.21, SD = 9.51) groups performed similarly in VST. Table 13 illustrates these results.

Table 13. Descriptive Statistics for VST

	N	Min.	Max.	Mean	SD
MFI	23	6.00	22	12.35	4.50
FFI	24	2.00	33	14.21	9.06
Control	24	0.00	33	14.21	9.51

A one-way analysis of variance (ANOVA) was conducted to see if the difference between groups was significant or not. The results of ANOVA revealed that there was not any significant difference between three groups in terms of their

VST score, F (2, 68) = .41, p > 05, r = .24. Effect size of the differences in the VST scores was also found to be small. Therefore, groups were proved to be comparable in terms of their vocabulary sizes.

4.4 Recognition versus recall tests

The present study utilized three tests to measure collocation gains. One of these tests, COLLEX, measured form recognition of the target collocations. Two other translation tests were also applied in the mastery level of recall. One of these tests measured recall of meaning of L2 collocations whereas the other test assessed recall of form of these target collocations.

In order to test the first hypothesis that learning collocations in the mastery level of recall is more challenging than in the level of recognition, learners' scores in recognition (COLLEX) and recall tests (translation) were cross compared. Results of the current study confirmed this hypothesis since almost all learners got higher scores in the recognition test than in recall tests. Table 14 demonstrates a summary of mean scores in all tests and it is clear that COLLEX, which is the only recognition test in the current study, led to higher scores and responded to intervention faster than meaning recall and form recall tests.

Table 14. Summary of Means in All Tests

	Pretest			Posttest		
	COLLEX	Meaning recall	Form recall	COLLEX	Meaning recall	Form recall
MFI	2.26	1.59	.00	4.30	2.27	.86
FFI	5.75	1.54	.00	9.50	4.08	2.46
Control	3.82	1.71	.48	3.39	.66	.67

4.5 Form recognition of collocations

In order to measure collocation gains in the mastery level of form recognition, COLLEX, a multiple-choice test of collocational knowledge was administered. This test was given both as the pretest prior to the treatments and as the posttest after the groups went under treatments. To measure the main effect of time within the groups and hypothesized differences between the groups, 3x2 mix design ANOVA was run on the COLLEX scores.

The difference between pretest and posttest was defined as time factor, which was the dependent variable in all tests. COLLEX results revealed that there was a significant main effect of time regardless of group factor, F (1, 67) = 26.75, $p < .001$, $r = .53$. Thus, when group factor is ignored, general performance of students improved in COLLEX posttest and the results were significant. This difference in scores between pre-COLLEX and post-COLLEX had a medium effect size $r = .53$. When time factor is ignored and main effect of group was analyzed, it was shown that groups performed differently in pretest and posttests. Table 15 illustrates descriptive statistics of groups and shows that the groups improved from pre to post COLLEX.

Table 15. Descriptive Statistics for COLLEX

		Pretest		Posttest	
	N	Mean	SD	Mean	SD
MFI	23	2.26	1.25	4.30	2.68
FFI	24	5.75	2.48	9.50	3.21
Control	23	3.82	3.03	3.39	3.86

Main effect of group was also significant F (2, 67) = 29.95, $p < .001$, $r = .55$. Thus, groups significantly differed from each other with a medium effect size $r = .55$ which was somewhat close to large effect. Since results of ANOVA yielded significant differences, Post-Hoc analyses were carried out to make pairwise

comparisons between groups. Pairwise comparisons with Tukey HSD (homogeneity of variance assumed) and Games Howell (homogeneity of variance not assumed) tests uncovered that FFI group performed significantly better than MFI and Control groups ($p < .001$). Nevertheless, no significant difference was observed between MFI and Control groups ($p = .86$). Table 16 demonstrates the differences between groups in pairwise comparisons of COLLEX.

Table 16. Pairwise Comparisons of Groups in COLLEX

			SE	Sig.
Tukey HSD	MFI	FFI	.62	.000*
		Control	.63	.865
	FFI	MFI	.62	.000*
		Control	.62	.000*
	Control	MFI	.63	.865
		FFI	.62	.000*
Games-Howell	MFI	FFI	.57	.000*
		Control	.61	.856
	FFI	MFI	.57	.000*
		Control	.68	.000*
	Control	MFI	.61	.856
		FFI	.68	.000*

The interaction effect between group and time was also significant, F (2, 67) = 12.43, $p < .001$, $r = .39$. These results indicated that pre and posttest performances differed across groups. The effect size for this interaction effect was a marginal medium effect. To break down this interaction, multiple comparisons were made between groups. The results indicated that MFI group got significantly higher scores in the post COLLEX ($M = 4.30$, $SD = 2.69$) compared to pre COLLEX ($M = 2.26$, $SD = 1.25$), $p = .001$. Likewise, FFI group performed significantly better in the posttest ($M = 5.75$, $SD = 2.49$) than in pretest ($M = 9.50$, $SD = 3.21$), $p < .001$. On the contrary, Control group scored slightly lower in the posttest ($M = 4.30$, $SD = 1.25$)

compared to pretest (M = 4.30, SD = 1.25), p = .47 but this result was not statistically significant. Figure 1 below shows that even though MFI and FFI groups' performances improved significantly from pretest to posttest, the increase in FFI group's scores was more pronounced.

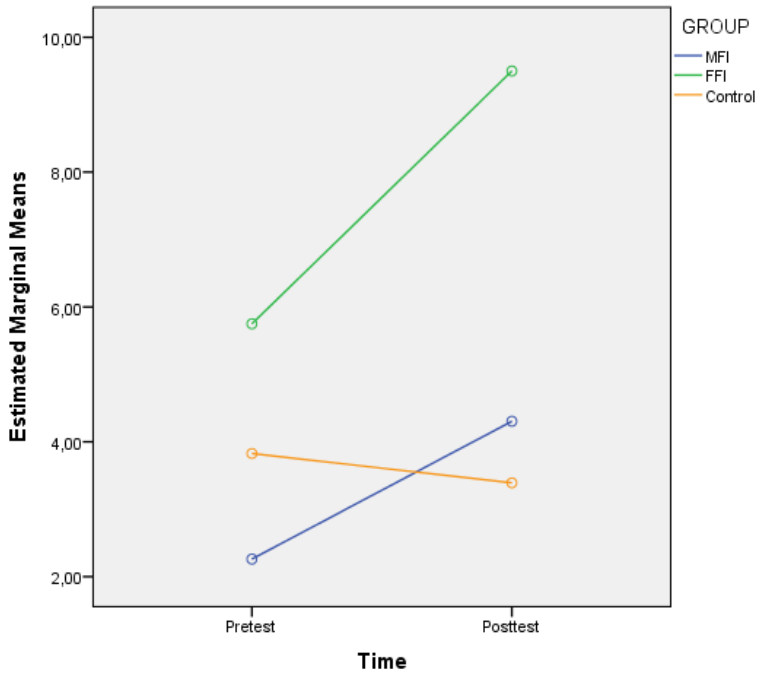

Figure 1. Comparison of COLLEX pretest and posttest across groups

To observe magnitude of mean differences, 95% Confidence intervals were checked. Figure 2 illustrates that error bars of FFI and Control groups overlap which means they are in the same confidence intervals. Thus, they belong to the same population before the treatment. However, MFI group's mean is a little lower than the other groups and they belong to a different population. When it comes to posttest COLLEX, MFI and Control group are in the same confidence intervals, which signals an increase in MFI groups' scores after the treatment. Moreover, there is not an overlap between FFI and Control group's confidence intervals anymore even

though they were from the sample population in the pretest. This population difference indicates a true experimental effect of FFI treatment.

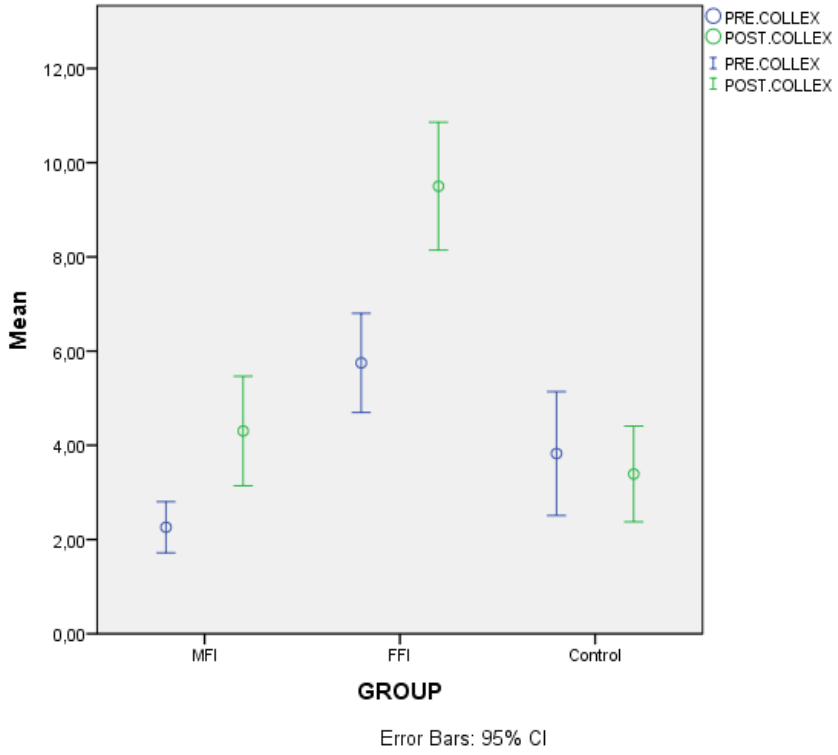

Figure 2. Confidence intervals in COLLEX

Due to the difference in pretest means in COLLEX, a further gain score analysis was carried out to observe if the significant difference between posttests were due to treatment effect or not. The results of one-way independent ANOVA run on gain scores in COLLEX showed that groups still differed significantly from each other, F (2, 67) = 12.43, $p < .001$, $r = .39$. Thus, the experimental effect was verified with a marginal effect size which is very close to medium effect $r = .39$ according to Plonsky and Oswald (2014).

Tukey's HSD and Games Howell Post-hoc analyses were done since ANOVA yielded significant results. These tests revealed that both MFI and FFI group outperformed control group in gain scores and the results were statistically significant for both MFI ($p < .05$) and FFI group ($p < .001$). Thus, it can be said that

results of gain score analysis was in line with mix design ANOVA showing a significant difference between FFI and Control group ($p < .001$).

When it comes to the difference between MFI and Control group, however, gain score analysis showed that previous insignificant difference in mix design ANOVA ($p = .86$) was due to MFI group's considerably low scores in pretest and, in terms of gain scores, this difference was significant ($p < .05$). Also, there were no significant differences between MFI and FFI group in terms of their gain scores in COLLEX ($p < .11$) despite significant differences found in mix design ANOVA ($p < .001$). Table 17 illustrates the pairwise comparisons of gain scores in Post-Hoc analyses.

Table 17. Pairwise Comparisons of Gain Scores in COLLEX

			SE	Sig.
Tukey HSD	MFI	FFI	.84	.114
		Control	.85	.013*
	FFI	MFI	.84	.114
		Control	.84	.000*
	Control	MFI	.85	.013*
		FFI	.84	.000*
Games-Howell	MFI	FFI	.89	.150
		Control	.73	.005*
	FFI	MFI	.89	.150
		Control	.87	.000*
	Control	MFI	.73	.005*
		FFI	.87	.000*

4.6 Meaning recall of collocations

In the meaning recall test, participants were asked to provide L1 meanings of target collocations. To observe within and between subject differences and interaction effects, a 3x2 mix design ANOVA was run on meaning recall test scores. The results showed that there was a main effect of time when participants were considered as a

whole group. This main effect of time was significant F (1, 64) = 6.08, $p < .05$, $r = .29$. These results showed that there was a significant difference between pretest and posttest scores regardless of group factor. The difference in the main effect of time had a small effect size $r = .29$, thus the effect it measured was slightly important.

Main effect of group factor was also measured ignoring the time factor. It was revealed that there was a significant main effect of group F (2, 64) = 6.06, $p < .01$, $r = .29$. This shows that three groups of students performed significantly different from each other with a small effect size. Table 18 below shows descriptive statistics of the experimental groups for meaning recall test.

Table 18. Descriptive Statistics for Meaning Recall Test

		Pretest		Posttest	
	N	Mean	SD	Mean	SD
MFI	22	1.59	1.73	2.27	1.75
FFI	24	1.54	1.35	4.08	3.29
Control	21	1.71	1.76	.66	.91

As ANOVA showed significant differences, various Post-Hoc analyses were conducted. Pairwise comparisons with Tukey HSD and Games Howell indicated that FFI group performed significantly better than Control group and the results were statistically significant ($p < .05$). However, there were no significant differences between FFI and MFI groups ($p = .19$). Moreover, the difference between MFI group and Control group was not statistically significant ($p = .17$). Table 19 illustrates the outcomes of pairwise Post-Hoc analyses for meaning recall test.

Results of ANOVA denoted a significant interaction effect between group and time in terms of meaning recall scores, F (2, 64) = 12.53, $p < .001$, $r = .40$. Therefore, it was clear that groups performed differently in pretest and posttests.

Moreover, there was a marginal medium effect size of the interaction effect between group and time $r = .40$. This finding indicated that the difference in time factor from pretest to posttest was conditioned by the group factor.

Table 19. Pairwise Comparisons of Groups in Meaning Recall Test

			SE	Sig.
Tukey HSD	MFI	FFI	.46	.145
		Control	.48	.274
	FFI	MFI	.46	.145
		Control	.47	.003*
	Control	MFI	.48	.274
		FFI	.47	.003*
Games-Howell	MFI	FFI	.50	.193
		Control	.40	.172
	FFI	MFI	.50	.193
		Control	.47	.004*
	Control	MFI	.40	.172
		FFI	.47	.004*

Note. Mean difference is significant at .05 level.

To cater for the interaction effect, pretest and posttest performances of experimental groups were cross-compared. According to the results obtained from ANOVA and graphs created, FFI group had significantly higher scores in meaning recall posttest ($M = 4.08$, $SD = 3.29$) in comparison to the scores they gained in pretest ($M = 1.54$, $SD = 1.35$), $p < .001$. Nonetheless, there was not a significant difference between pretest ($M = 1.59$, $SD = 1.73$) and posttest ($M = 2.27$, $SD = 1.75$) scores of MFI group, $p = .19$. When it comes to Control group, their scores decreased from meaning recall pretest ($M = 1.71$, $SD = 1.76$) to posttest ($M = .66$, $SD = .91$), $p = .05$. This decrease in the scores of Control group was a marginal one, which nearly reached statistical significance.

The interaction graph shown in Figure 3 demonstrated that both MFI and FFI groups considerably increased their scores from pretest to posttest in terms of

meaning recall mastery whereas scores of Control group decreased as time elapses. The improvement in FFI group's performance was statistically significant whereas the decrease in Control group's scores and MFI group's improved scores did not reach statistical significance.

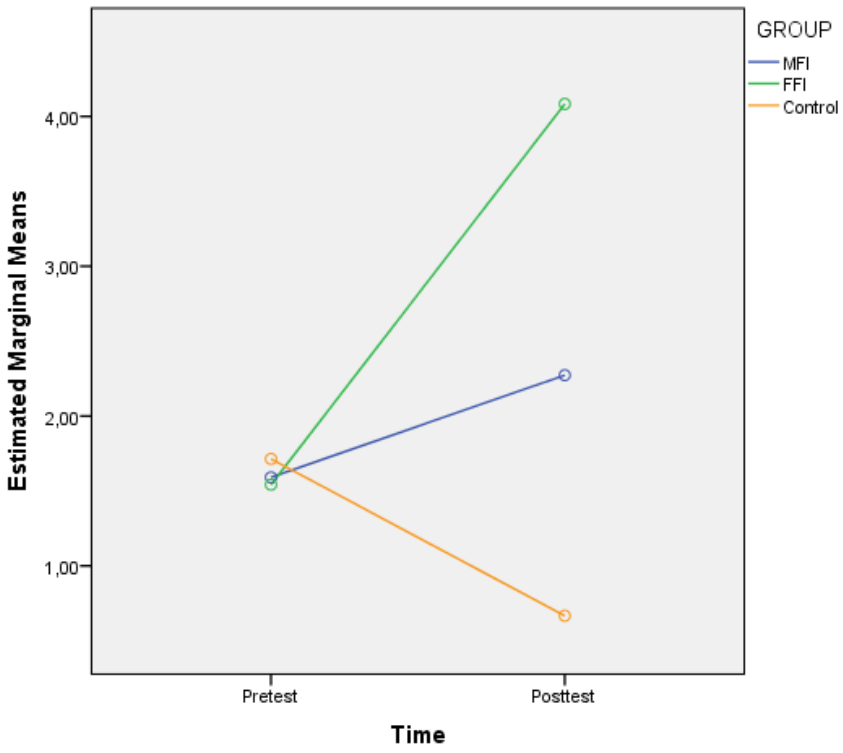

Figure 3. Comparison of meaning recall pretest and posttest across groups

The interaction effect between time and group factor was also further investigated through 95% confidence intervals. It is also demonstrated in Figure 4 that all three experimental groups were within the same confidence interval in meaning recall pretest. This finding revealed that they represented the same population prior to the interventional treatment given to them. In meaning recall posttest, however, there was not an overlap between FFI and Control group's confidence intervals, which could be considered as evidence for the result that they

no longer belonged to the same population, and therefore treatment (FFI) was successful enough to create a difference between groups in meaning recall test.

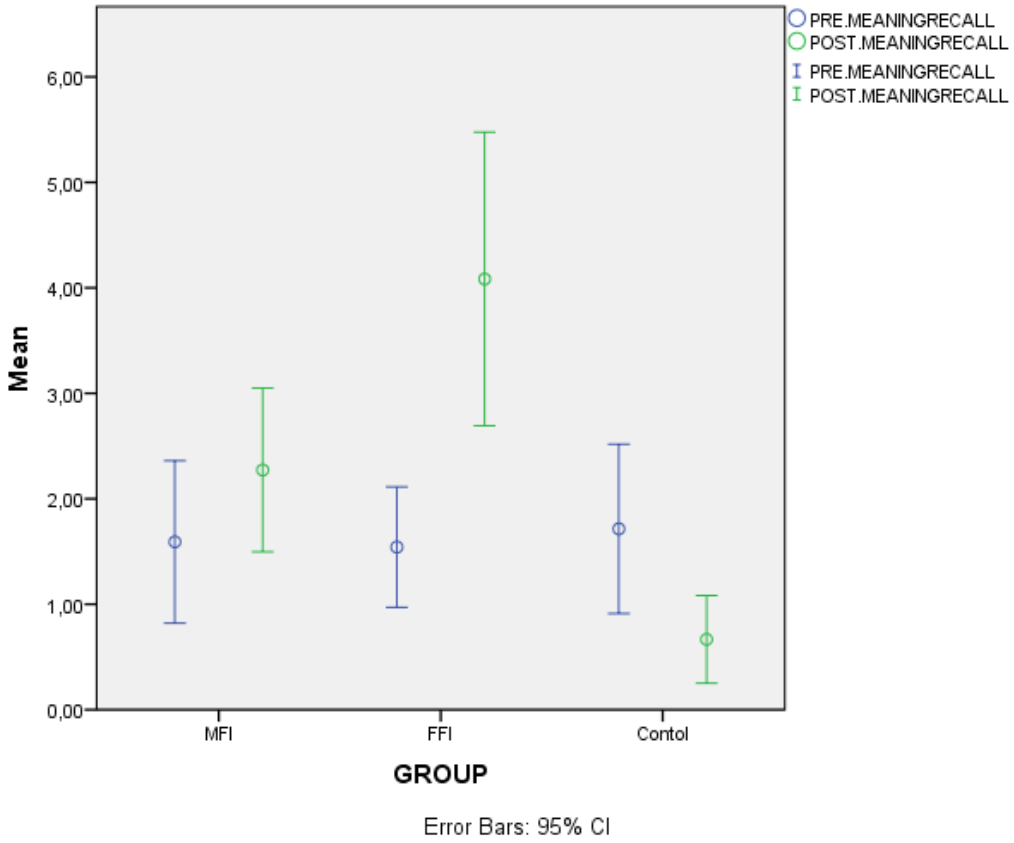

Figure 4. Confidence intervals in meaning recall test

Although the experimental groups did not significantly differ from each other in the meaning recall pretest, gain score analysis was conducted to investigate the amount of difference from pretest to posttest across groups. Findings obtained via one-way ANOVA showed that the difference in gain scores of MFI, FFI and Control groups was significant F (2, 64) = 12.53, $p < .001$, $r = .40$. This significant difference with medium effect size indicated that groups performed differently from each other in meaning recall test, which is perfectly in line with results of mix design ANOVA. To find out which groups differed, Tukey's HSD and Games Howell Post-Hoc analyses were carried out. The results were generally in line with Mix design

ANOVA conducted before. Since homogeneity of variances was not met in gain score analysis, results of Games Howell test (homogeneity not assumed) were taken into account and it revealed that there were no significant differences between MFI and FFI groups ($p > .05$). Moreover, FFI group's gain scores were significantly higher than Control group ($p < .001$). So far, all these results support results of Mix design ANOVA. However, the difference between gain scores of MFI and Control groups was found significant in gain score analysis of meaning recall test ($p < .01$). This showed the effect of instruction which was not visible in results of mix ANOVA due to the decrease in Control group's scores. Table 20 summarizes these results.

Table 20. Multiple Comparisons of Gain Scores in Meaning Recall Test

			SE	Sig.
Tukey HSD	MFI	FFI	.70	.029*
		Control	.73	.055
	FFI	MFI	.70	.029*
		Control	.71	.000*
	Control	MFI	.73	.055
		FFI	.71	.000*
Games-Howell	MFI	FFI	.78	.058
		Control	.52	.006*
	FFI	MFI	.78	.058
		Control	.74	.000*
	Control	MFI	.52	.006*
		FFI	.74	.000*

4.7 Form recall of collocations

Collocational gains in the level of form recall were measured via a translation test from L1 to L2. A 3x2 mix design ANOVA was utilized to test the hypothetical differences between pre and posttest scores across three independent groups. According to the findings, the main effect of time was significant F (1, 64) = 45.85,

$p < .001$, $r = .64$, which indicates that general performances of groups were significantly better in the posttest compared to pretests regardless of group effect. The difference between the pretest and posttest scores was not only significant but also had a fairly large effect size $r = .64$, which showed that the main effect of time was quite meaningful. When groups are compared without any consideration to the effect of time, however, it was found that three groups' performance were significantly different from each other. Therefore, main effect of group was also significant $F(2, 64) = 7.20$, $p < .01$, $r = .31$. The main effect of group exhibited a small effect size although the results were fairly significant. Table 21 below demonstrates the descriptive statistics of groups in form recall pretest and posttest.

Table 21. Descriptive Statistics for Form Recall Test

		Pretest		Posttest	
	N	Mean	SD	Mean	SD
MFI	22	.00	.00	.86	.71
FFI	24	.00	.00	2.46	2.17
Control	21	.48	.68	.67	.73

The results of ANOVA revealed a significant main effect of group $p < .01$ but ANOVA does not provide any information on the differences between which groups created this significant difference. To find out which groups differed significantly, the same procedure applied for the previous tests were followed and Post-Hoc tests of Tukey HSD and Games Howell were administered to obtain pairwise comparisons. As a result of these analyses, it was found that FFI group performed significantly better than MFI and Control groups ($p < .05$). Nevertheless, the difference between MFI and Control group did not reach statistical significance ($p = .64$) even though MFI group performed better in the posttest. Table 22 displays pairwise comparisons of experimental groups in form recall test.

Table 22. Pairwise Comparisons of Groups in Form Recall Test

			SE	Sig.
Tukey HSD	MFI	FFI	.22	.002*
		Control	.23	.821
	FFI	MFI	.22	.002*
		Control	.23	.015*
	Control	MFI	.23	.821
		FFI	.23	.015*
Games-Howell	MFI	FFI	.23	.005*
		Control	.15	.643
	FFI	MFI	.23	.005*
		Control	.26	.040*
	Control	MFI	.15	.643
		FFI	.26	.040*

Note. Mean difference is significant at .05 level.

On the other hand, there was a significant interaction effect between group and time, F (2, 64) = 15.48, $p < .001$ $r = .44$. These results pointed out a medium effect size of interaction effect between group and time. To resolve this interaction, pretests and posttest scores were compared across all groups. It was found that MFI group improved significantly from pretest ($M = 0$, $SD = 0$) to posttest ($M = .86$, $SD = .71$), $p < .01$. Similarly, FFI group got significantly better scores in posttest ($M = 2.46$, $SD = 2.17$) compared to pretest ($M = 0$, $SD = 0$), $p < .001$. Nevertheless, Control group also had higher scores in the posttest ($M = .67$, $SD = .73$) in comparison to pretest ($M = .48$, $SD = .68$) but the difference was marginal and lacked statistical significance, $p = .54$. Even though control groups' pretest scores were slightly higher in form recall pretest, both MFI and FFI group outperformed Control group in the posttest. The increase in FFI group's scores were more striking, leading to a significant difference. The interaction graph in Figure 5 illustrates increases in scores in time across groups.

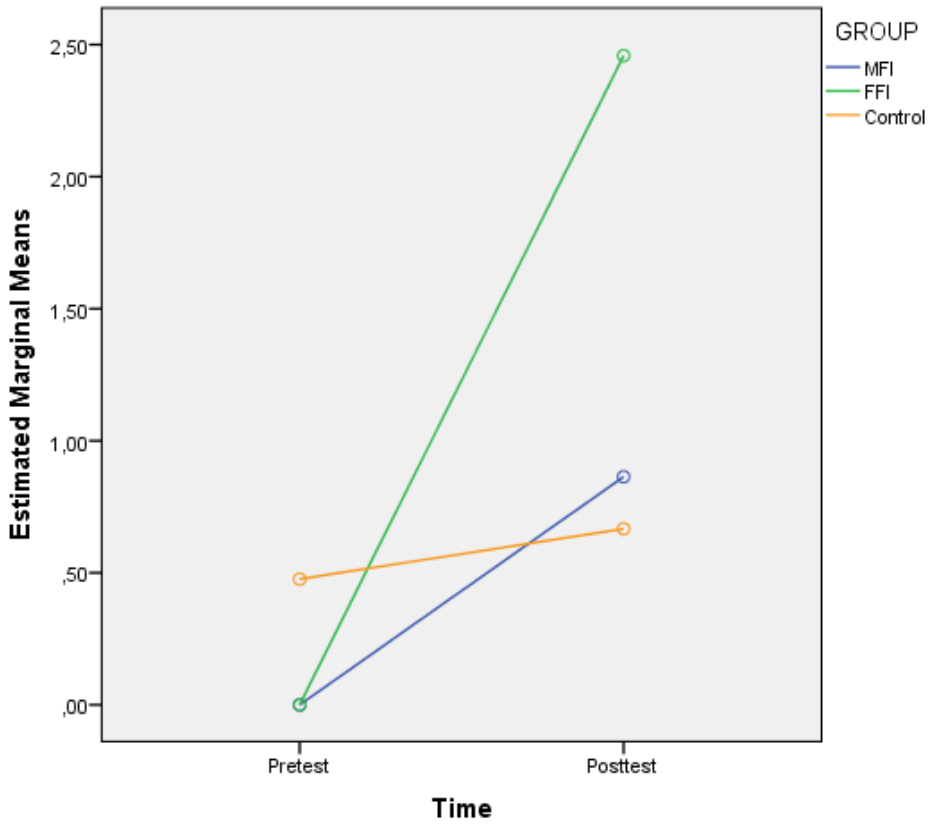

Figure 5. Comparison of form recall pretest and posttest across groups

95% confidence intervals illustrated in Figure 6 were in line with the results of mix design ANOVA for the form recall test. In the pretests, confidence intervals of MFI and FFI groups overlapped whereas Control group was in a confidence interval with a higher mean score. In posttests, on the other hand, there was not an overlap between MFI and FFI group's confidence intervals anymore. This, in turn, showed a significant treatment effect, which is successful enough to create a difference between two experimental groups. Moreover, FFI group was able to reverse the significant difference in form recall pretest by performing at a higher confidence interval in the posttest in comparison to Control group which performed significantly better in pretest and worse in posttest.

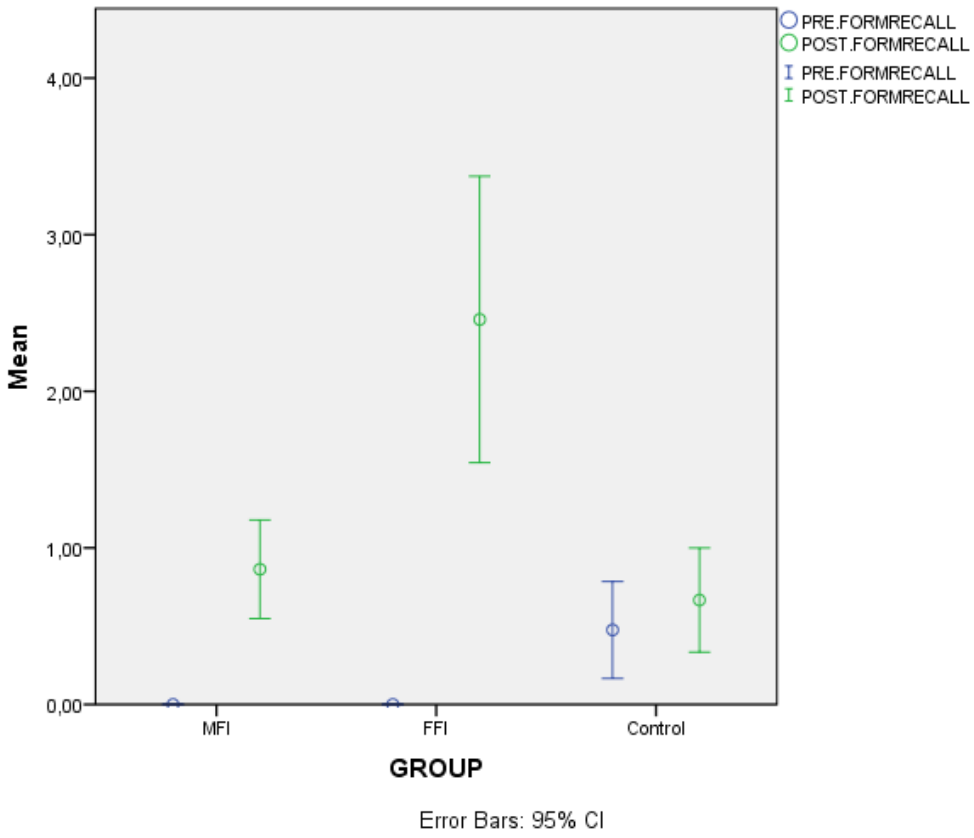

Figure 6. Confidence intervals in form recall test

On the other hand, there was an overlap between MFI and Control group's confidence intervals in form recall posttest despite the treatment MFI group received. Nonetheless, this finding should be approached with caution since it might be due to the fact that Control group had already had significantly higher scores. To break this difference between pretest scores, a gain score analysis was carried out for form recall test to observe the differences between gain scores of the groups. As a result of one-way ANOVA on gain scores, it was found that the difference between groups was still significant with a medium effect size, F (2, 64) = 15.49, $p < .001$, $r = .44$.

Tukey's HSD (homogeneity assumed) and Games Howell (homogeneity not assumed) Post-Hoc analyses were carried out to see which groups differed

significantly from each other. The results demonstrated that FFI group significantly surpassed both Control group ($p < .001$) and MFI group ($p < .01$) in Tukey's HSD and Games Howell tests which is totally in line with results of mix design ANOVA. Interestingly, there was a significant difference between MFI and Control groups terms of their gain scores ($p < .01$) in Games Howell test when homogeneity was not assumed. Since gain score data were not homogenous, Games Howell test was relied on and the results showed a significant advantage of MFI over Control group in their gain scores. Multiple comparisons of gain scores in meaning recall test were presented in Table 23.

Table 23. Multiple Comparisons of Gain Scores in Form Recall Test

			SE	Sig.
Tukey HSD	MFI	FFI	.41	.001*
		Control	.43	.270
	FFI	MFI	.41	.001*
		Control	.42	.000*
	Control	MFI	.43	.270
		FFI	.42	.000*
Games-Howell	MFI	FFI	.46	.005*
		Control	.21	.008*
	FFI	MFI	.46	.005*
		Control	.46	.000*
	Control	MFI	.21	.008*
		FFI	.46	.000*

4.8 Summary of findings

Prior to the interventions, a Vocabulary Size Test (VST) was administered to detect any differences in pre-knowledge of students' vocabulary. As a result of one-way ANOVA, it was found that there were no significant differences in learners' VST scores, which proved them to be comparable as experimental groups.

In order to measure collocation gains across three groups, several pretests and posttests were administered in three levels of mastery, namely form recognition, meaning recall and form recall. In the degree of form recognition, COLLEX test was given and the results of mix design ANOVA showed a significant advantage of FFI group over MFI and Control groups whereas there were no significant differences between MFI and Control groups. After interaction effect was detected between group and time factors, pretest and posttest comparisons were made to break down this interaction. It was revealed that MFI and FFI groups improved significantly from pretest to posttest while there was a non-significant decrease in Control group's scores in time.

A gain score analysis was conducted on COLLEX scores since groups' performances were different from each other in the pretest and it was necessary to measure collocation gains. Outcomes obtained from gain analysis through one-way ANOVA revealed that MFI group also outperformed Control group in terms of gain scores and MFI and FFI group were not significantly different from each other in gain scores.

In the meaning recall test, FFI group had higher scores than MFI and Control groups according to the outcomes of mix design ANOVA carried out to see within and between subject effects. The difference between FFI and Control was statistically significant whereas the scores of FFI and MFI groups did not yield statistically significant differences. Likewise, MFI and Control groups were not significantly different from each other. Interaction effect was also observed in meaning recall test. When pretest and posttest scores were compared across groups, the results revealed that FFI and MFI groups promoted their scores while the scores of Control group diminished on a small scale. However, only statistically significant

mean difference was that of FFI group. Another gain score analysis was run on meaning recall test scores and the results were mainly in line with mix design ANOVA. However, it was discovered in the gain score analysis that MFI group was also significantly better than Control group in terms of collocation gains in the meaning recall test.

Finally, in the level of form recall, it was revealed by mix design ANOVA that FFI group produced higher scores than MFI and Control groups and the results were statistically significant. MFI group also outperformed Control group but there was no statistically significant difference. What is more, all the groups improved their performances from pretest to posttest. While MFI and FFI groups made significant improvements, Control group's increased performance did not reach statistical significance.

Gain score analysis was also run on form recall test because Control group had performed significantly better in pre-tests. Nonetheless, this superiority disappeared after the treatments and gain score analysis revealed that both experimental groups outperformed Control group in terms of their gain scores. These results will be discussed in relation to relevant ISLA literature in the following chapter.

CHAPTER 5

DISCUSSION

5.1 Introduction

The present study explored comparative effects of meaning-focused and form-focused instruction in L2 collocation learning. The findings uncovered that FFI group performed better than MFI and Control group in all measures. This chapter provides a discussion of the results of the present study in relation to the relevant ISLA literature. Overall results showed that groups having undergone any kind of instruction (MFI or FFI) significantly improved from pretests to posttests whereas there was no significant difference in Control group's scores from any pretest to posttest, which supports the position that instruction created an improvement regardless of its type. In addition, collocation learning was measured in three levels of mastery and MFI and FFI groups outperformed Control group in all levels. FFI group also performed significantly better than MFI group in form recognition and form recall tests which pointed out to the vitality of attention to form to master formal aspects of word knowledge. These results will be discussed with regard to FFI and incidental vocabulary learning studies.

5.2 Recognition versus recall tests

Collocation gains were measured via three tests at three levels of mastery, that is to say, form recognition, meaning recall and form recall. These tests represent three levels of word knowledge. In previous studies (Laufer, 2005; Laufer & Goldstein, 2004; Teichroew, 1982; Pellicer-Sanchez, 2017; Webb, 2005), it was found that acquiring word knowledge at the level of recall was a more challenging task than

acquiring words in recognition level. This is mainly because recognition requires receptive knowledge whereas recall necessitates mastering at productive knowledge. Webb (2005), for instance, propones that vocabulary learning instruction usually boosts receptive knowledge since receptive activities are easier to design and receptive knowledge is easier to develop. In line with the previous literature, students got higher scores in the form recognition test (COLLEX) than in meaning and form recall tests regardless of time and group factor. It could be said that their higher scores in the recognition tests were due to easiness and lack of depth of vocabulary in the level of recognition. Nevertheless, these high scores in the recognition tests might also be a result of the test format of the recognition tasks. Almost all recognition tests including COLLEX adopted in the current study possess a multiple-choice format. Multiple choice test format is open to guessing and students might have got higher scores than they could actually have.

5.3 Collocation learning at form recognition level

Learning of verb-noun collocations at the degree of form recognition was measured through COLLEX. As a result of mix design ANOVA and gain score analyses, it was observed that both MFI and FFI group scored significantly better than Control group. This finding stresses the importance of instruction in L2 vocabulary learning.

When the difference between MFI and FFI groups is considered, FFI group had higher scores in form recognition test. This result is parallel to the findings of previous research investigating and proving effectiveness of FFI under various conditions (Choi, 2017; De la Fuente, 2006; Hill & Laufer, 2003; Laufer, 2003, 2006; Laufer & Girsai, 2008; Laufer & Rozovski-Roitblat, 2011; Lupescu & Day, 1993; Mason & Krashen, 2004; Sonbul & Schmitt, 2009; Szudarski, 2012) The most

similar study to the current one was that of Szudarski (2012), who also measured comparative effects of MFI and FFI although with different conceptualizations.

The focus of Szudarski's (2012) study was to measure L2 collocation gains as a result of MFI and FFI. This study bears various similarities to the current study. Firstly, both had an aim to compare MFI and FFI and made use of recall and recognition tests. The major difference between these studies, though, underlies in the way they define FFI. In Szudarski's (2012) study, FFI was operationalized as Focus on FormS whereas we adopted a Focus on Form approach in the present study. When it comes to the results obtained in terms of form recognition, Szudarski (2012) tested form recognition of the verb in verb-noun collocations and found that FonFs yielded better results than MFI. The results of current study support this position partially. That is, FFI group got higher scores in terms of form recognition as revealed by mix design ANOVA results. However, when gain score analyses were conducted, it was observed that the superiority of FFI over MFI group was not statistically significant. There might be two interpretations of these results. Firstly, form recognition does not tap the deepest level of knowledge (Sonbul & Schmitt, 2009) and thus MFI only condition may have been sufficient for learners to recognize form of target collocations. The second interpretation of the results of form recognition test is associated with the operationalization of FFI. It is likely that FFI activity could have created a significant advantage over MFI group in terms of form recognition of collocations if FonF was more explicit, which means adopting a FonFs rather than FonF approach could have produced significant results supporting the superiority of FFI in vocabulary learning. If explicit word focused activities such as fill in the blanks or matching were used in addition to textual enhancement and dictionary use, then FFI might have created a bigger and stronger advantage on MFI.

Thus, different operationalization of FFI as FonFs in Szudarski's study (2012) might have been the reason why the difference between MFI and FFI groups was significant in recognition of collocating verbs. Nonetheless, the idea of providing explicit Focus on Form is actually in contrast with Long (2017) who opines that FonF should be as subtle and implicit as possible in order not to obtrude the meaning-oriented task. However, in a limited amount of time and with limited opportunities to be exposed to English vocabulary, it would be a luxury not to benefit from, any kind of instruction FFI in our case, that could provide vocabulary learning gains.

All in all, both MFI and FFI groups performed significantly better than Control group in form recognition test, which stresses the necessity of providing meaning oriented vocabulary instruction ideally supported via form-focused activities. FFI group's higher scores in comparison to MFI group, despite lack of statistical significance, suggest that the more focus on form provided, the better vocabulary learning outcomes we get.

5.4 Meaning recall of collocations

Meaning recall test measured learning of L2 collocations via translation from English to Turkish. The results indicated that FFI and MFI groups improved their scores while Control group's scores dropped down. The increase in FFI group's scores was significant; however, the increase in the scores of MFI group and decrease in the scores of Control group lacked statistical significance. In relation to the effect of group, both MFI and FFI groups surpassed Control group, had more gains and the differences were statistically significant with medium effect size. There were no significant differences between MFI and FFI group in terms of their meaning recall

scores but still FFI group had higher scores than MFI group. Lack of statistical significance may be due to the aspect of word knowledge tested since meaning recall taps knowledge of word meanings which might be easier to learn through reading. While leaners were reading the texts and answering comprehension questions, they might have acquired word meanings incidentally without any trouble. However, this does not overlook the superiority of FFI group in the degree of meaning recall. FFI group outperformed all groups in all tests regardless of the type of word knowledge tested. Thus, it can be said that FFI caters for learning all aspects of word knowledge.

A number of other studies measured collocation gains in the degree of meaning recall (Hill & Laufer, 2003; Laufer, 2005; Laufer & Girsai, 2008, Laufer & Rozovski-Roitblat, 2011; Sonbul & Schmitt, 2009; Szudarski, 2012). Sonbul and Schmitt (2009) found that the group provided with explicit vocabulary instruction outperformed reading only group in meaning recall test and all other tests, which indicated that incidental learning of vocabulary items was fostered by explicit vocabulary teaching in comparison to reading only condition. In line with Sonbul and Schmitt (2009), the present study also uncovered that FFI group improved significantly and performed better than MFI group even though FFI provide in the present study was not explicit but incidental, which is less obtrusive according to Long (2017).

As another study comparing MFI and FFI thorough reading and with parallel results to the current study, Mason and Krashen (2004) also found that the group carrying out supplementary activities in addition to reading doubled their vocabulary gains and performed better than reading only group. Even though Mason and Krashen (2004) expounded that it was not worth the effort, the present study and Sonbul and Schmitt (2009) revealed that it was of great use for learners and it made a

good contribution to their vocabulary knowledge in the short run. Similarly, Laufer (2005) advanced that regardless of its operationalization as FonF or FonFs, form focused activities fostered noticing and internalization of vocabulary. Laufer and Rozovski-Roitblat, (2011) also highlighted that word focused activities, especially dictionary use facilitated learning of L2 words. The present study also supports their findings since it provides evidence for effectiveness of FFI over MFI condition. Therefore, even less obtrusive FonF as operationalized in the current study rather than FonFs can actually produce better outcomes in comparison to MFI.

5.5 Form recall of collocations

Results of the form recall test demonstrated that instructional groups increased their scores significantly while there was almost no change in Control group's scores. This finding suggests that instruction has a highly facilitative role in learning of collocations as also evidenced by Benati and Nuzzo (2017) in the broader context of L2 acquisition. At this point, the term "facilitative" might underestimate the effects created by the interventions in the current study. Both experimental groups had considerable and statistically significant improvements only in three weeks' time period as opposed to Control group with no improvement. At this point, the improvement achieved by interventional groups can be "notable" or "decisive" rather than "facilitative".

A profusion of studies pinpointed that mastering vocabulary in the degree of recall required deeper learning and knowledge (Teichroew, 1982; Pellicer-Sanchez, 2017; Webb, 2005). Hence, outcomes of the form recall test was expected to exhibit deeper collocation knowledge. According to the findings, FFI group outran both MFI and Control groups and these findings were statistically significant, which leads to

the conclusion that Focus on Form is a prerequisite to tap collocation learning at the deepest level of word knowledge, which could not have been achieved through MFI.

Research also provided evidence for the advantage of FFI condition over MFI condition in terms of efficacy in form recall (De la Fuente, 2006; Laufer & Girsai, 2008; Shintani, 2013; Szudarski, 2012). De la Fuente (2006) probing into differential effects of PPP, TBLT and TBLT with explicit FonF observed that the group receiving explicit FonF surpassed other groups in form recall test. In a similar vein, Laufer and Girsai (2008) comparing MFI, FFI and Contrastive Analysis (CAT) instruction argued that FFI group performed better in immediate and delayed form recall (active recall) tests. Szudarski (2012) who defined FFI as FonFs also stressed that FonFs instruction yielded better results than MFI. At this point, the difference in operationalization of FFI is a concern because Shintani (2013) denoted that FonF produced better results than FonFs instruction in form recall test measuring the acquisition of adjectives in contrast to Laufer (2006) revealing significant results in favour of FonFs over FonF. In the present study, FFI was operationalized as FonF and FFI group scored significantly better than MFI group in form recall test. Therefore, it can actually be inferred that less intrusive FonF instruction is perfectly sufficient to produce significantly better collocation gains in the mastery level of form recall which is the deepest and the most difficult mastery level to achieve. All in all, all the aforementioned studies confirmed the results of the present study showing superiority of FFI over MFI.

5.6 A discussion of overall results

The overall results uncovered that both experimental groups, MFI and FFI improved and outperformed Control group in all measures. This finding supports the claim that

instruction has a facilitative role in second language acquisition by Benati and Nuzzo (2017) because it created notable significant differences in all measures in the present study. Thus, it could be said that intentionally or unintentionally, even one hour of English instruction makes difference even in the short run. In fact, we assert that this contribution of instruction is much more than being "facilitative". Especially in EFL contexts as in our case in Turkey where exposure to English is limited to in-class instruction, one hour of exposure could create meaningful differences between the groups receiving instruction and those who do not.

From another aspect, not only presence but also type of instruction make a difference in acquisition of lexical items. Much research (Derin, 2002; Godfroid et al., 2010; Malone, 2018; Pellicer-Sanhez, 2017; Peters & Webb 2018; Webb, Newton & Chang, 2013) supported role and efficacy of incidental vocabulary learning through reading. For instance, Pellicer-Sanchez (2017) examined effectiveness of collocation learning through reading. Nonetheless, learners in this study recalled only 11% and recognized 50% of the target collocations. Webb, Newton and Chang (2013), on the other hand, investigated the effects of repetition on bimodal collocation learning. They sought to determine the number of encounters needed to acquire a collocation incidentally through extensive reading practice. They concluded that collocations could be learnt incidentally if they were repeated enough through extensive reading. A likely pitfall of their study could lie in the way they presented input. They provided language input bimodally though reading and listening to the texts at the same time. The treatment they provided may not be solely incidental learning since listening to the texts simultaneously while reading may have provided a Focus on Form through seeing words while listening. Thus, their study might have actually supported the use of FonF in vocabulary learning.

In contrast to those aforementioned studies arguing for the effectiveness of incidental learning only (Godfroid et al., 2010; Pellicer-Sanhez, 2017; Peters & Webb 2018; Webb, Newton & Chang, 2013), the present study investigating effectiveness of Form-Focused Instruction in comparison to Meaning-Focused Instruction in collocation learning through reading revealed that incidental learning of collocations only through reading (MFI condition) did not prove as effective as incidental collocation learning supported with a Focus on Form (FFI condition). This is mainly because many collocations went unnoticed under MFI condition. Many researchers (Cobb, 2007; Huckin & Coady, 1999; Ördem & Paker, 2016; Paribakht & Wesche, 1999; Szudarski & Carter, 2016) also asserted that words might be overlooked if the learner's attention was not drawn on them, which is in line with the results obtained in the current study. These results provoke thoughts about necessity of bringing FonF into front by training learners to use strategies such as dictionary use or making use of typological enhancement to focus their attention to form. Chapter 6 is a concluding chapter with an overview of the study, pedagogical implications, limitations and suggestions for future research.

CHAPTER 6

CONCLUSION

6.1 Summary and conclusions

This quasi-experimental classroom study examined the comparative effects of Form-Focused and Meaning-Focused Instruction in incidental L2 collocation learning. Despite the fruitfulness of studies conducted on collocation learning and teaching (Choi, 2017; Daskalovska, 2015; Durrant & Schmitt, 2010; Laufer, 2011; Laufer & Carter, 2016; Macis & Schmitt, 2017; Peters, 2016; Sun & Wang, 2003; Webb & Kagimoto, 2009; Webb, Newton & Chang, 2013), there are not so many studies investigating learning of collocations from the perspective of Form-Focused Instruction, to my knowledge.

Among these very few studies and the most relevant to the current study is Szudarski's (2012) study focusing on differential effects of MFI and FFI in learning of L2 collocations. Szudarski (2012) operationalized FFI as FonFs carried out through explicit word focused activities. Nevertheless, explicit word focused activities are thought to be intrusive in language learning (Long, 2017). Therefore, the current study adopted an unobtrusive way of providing FFI which is Focus on Form (FonF) accomplished through textual enhancement and dictionary use in the current study. Secondly, considerate attention was paid, and a systematic corpus-informed approach was adopted in the selection of target items. Moreover, this is one of the very few, if any, collocation studies exploring comparative effects of MFI and FFI in the Turkish EFL context. For all these reasons, the current study carries significance for research.

Participants of the present study were 93 students studying English at a university in Turkey. They had elementary level of proficiency and performed at 2000-3000 word level in Nation and Beglar's (2007) Vocabulary Size Test. The study was carried out in five consecutive weeks. The learners who were from three intact classes took all the pretests and completed the background questionnaire and consent forms on the first week of the study. Three tests adopted and designed for the current study were COLLEX, a multiple-choice test measuring form recognition of collocations, a meaning recall translation test and a form recall translation test. Then, on the following three weeks, interventions were carried out with the materials specifically designed for the present study. On the fifth week of the study, posttests were administered, and results were obtained.

Overall findings showed that any kind of instruction, MFI or FFI made significant contributions to students' collocation learning, which is deduced from experimental groups' superiority over Control group. Also, all learners performed better in recognition test (COLLEX) in comparison to recall tests. This reveals that acquiring collocations in the level of recognition is much easier than acquisition in the degree of recall, which is in line with previous research (Laufer & Goldstein, 2004; Webb, 2005). Findings also revealed that FFI group outperformed MFI group in all tests and the results were significant for Form recognition and Form recall test, which taps the deepest level of word knowledge. It is also interesting to highlight that Focus on Form yielded significant result when formal aspects are tested. Therefore, these results supported previous research, which substantiates the effectiveness of providing Focus on Form (De la Fuente, 2006; Laufer & Girsai, 2008; Laufer & Rozovski-Roitblat, 2011; Shintani, 2013; Sonbul & Schmitt, 2009; Szudarski, 2012).

6.2 Pedagogical implications

The present quasi-experimental study is conducted under the framework of Instructed SLA. (ISLA). With its all-encompassing framework, ISLA research is of great importance for language pedagogies because it has considerable implications to inform language teachers on what works better in their classes. In its nature, the methodology that ISLA research makes use of provides implications for language teaching and learning. Under ISLA perspective, the present study investigated relative effects of MFI and FFI on incidental L2 collocation learning in the mastery levels of form recognition, meaning recall and form recall. The results favoured teaching collocations via a focus on form. From a pedagogical point of view, this finding may inform language instructors about the use of unobtrusive techniques to draw language learners' attention to form while they are carrying out meaning focused reading activities. As also stated by Storch (2018), providing comprehensible input only is not thought to yield effective learning gains anymore and drawing learners' attention to form has become an indispensable part of language learning. What is more, achieving Focus on Form is as simple as enhancing texts via boldfacing and training learners to use dictionaries more efficiently and every teacher can design activities and tasks to provide Focus on Form without obstructing precious magical moments of language learning as also proved and set as an example by the current study.

Secondly, target collocations in the present study were contextualized in short reading passages. Seeing vocabulary items in a context where they can be associated with the surrounding words is highly crucial for collocation learning. That is why, most vocabulary studies (Çakmak & Erçetin, 2018; Godfroid et al., 2018; Laufer & Hulstijn 2001; Malone, 2018; Pellicer-Sanchez, 2017; Watanabe, 1997; Webb et al.,

2013) centralize around vocabulary learning through reading especially when they aim at incidental learning of vocabulary through less intrusive ways. This is mainly because reading provides a space for incidental learning by creating a context for words, which is of paramount importance for collocation learning.

From another perspective, corpus studies offer a road map for language educators and teachers to select which words to teach especially while designing a syllabus or curriculum. Thus, corpus informed studies like the current study help teachers to determine the timing and scope of teaching words/multi-words since frequency lists like Nation's (2011), for example, guide teachers about what to teach and when to teach. Corpus is also rich in terms of concordances which facilitate learning of collocations via various contexts where collocating pairs appear. These contexts create valuable opportunities to observe their natural usage. Furthermore, collocations posit difficulty on the part of the learner (Brown, 1974; Chanell, 1981; Leśniewska, 2006; Peters, 2016; Philip, 2007; Shei & Pain, 2000) and it makes up a substantial part of word knowledge (Nation, 2001). Therefore, it is pivotal to teach collocations and this study sheds light on practitioners' way as to equip them with two techniques (MFI and FFI) to teach collocations incidentally through reading without intruding in the flow of activities. As a humble suggestion, teachers may make more room for activities where they can draw learners' attention to form either implicitly via dictionary use and textual enhancement or explicitly via word focused activities, which will increase the likelihood of noticing and learning in turn.

Finally, the current study sheds light on the work of course book developers and publishers by integrating a theoretical concept, Focus on Form, into materials design and activity planning. As the importance of dictionary use and textual enhancement in L2 vocabulary/collocation learning has been revealed, it will be

fruitful and beneficial to design and make use of activities including these techniques and other kinds of Focus on Form activities in English course books to draw learners' attention to form. Materials and course books which are culturally appropriate and which are modified to be word-level appropriate can be designed or adapted to serve this pedagogical purpose. This way, we can find better course books that are research informed and that leads and motivates teachers better to make their learners focus on different aspects of word knowledge and language.

6.3 Limitations and recommendations for further research

There are several limitations of this study that could formulate suggestions for further research. Firstly, this study was carried out in five successive weeks including pretests and posttests. Posttests were administered on the following week immediately after the interventional weeks. Thus, we did not test the long-term retention of the target collocations. It would be more informative about acquisition of collocations if a delayed posttest was given to the learners. In addition, the present study targeted learning of 20 verb-noun collocations only since verb-noun collocations were considered more challenging to acquire (Peters, 2016). However, including collocations from different parts of speech such as adjective-noun and adverb-adjective, verb-adverb could be have produced different results and could have been more fruitful for future research.

Another aspect of this study which could be improved is the number of encounters learners had with target collocations. In this study, target collocations were recycled at least twice in the reading passages of the previous or following weeks. Nonetheless, encountering target collocations only twice might not be enough to remember these collocating words in the long run. Webb, Newton and Chang

(2013) asserted that the higher the number of encounters, the more vocabulary gains learners had. There were significant differences between encountering vocabulary one, five, 10, and 15 times and the group encountering vocabulary items 15 times learnt the highest number of words. Hence, it would also be enlightening to carry out extensive studies which could increase the number of encounters by 15 times or even more.

Moreover, collocation gains as a result of MFI and FFI instruction were investigated in this study but we did not dwell into how these lexical units were processed in the learners' mind. Understanding cognitive processes would help researchers and educators to develop better ways of teaching vocabulary. Hence, in order to tap cognitive processes that are going on in the learner's mind while learning vocabulary and specifically collocations, techniques such as eye tracking and stimulated recall protocols were developed, and they were utilized in many studies such as Godfroid et al. (2010; 2018). In the breath of the current study, we did not focus on cognitive processes underlying collocation learning but it would be enlightening for future research to examine how node words and collocates are processed in learners' brain.

Finally, the present study was carried out under quantitative paradigm and reported descriptive and inferential statistics. Nevertheless, by nature, language is a living organism and as language researchers and instructors, our job contains a human factor. Thus, it could be ideal to involve all other parties while deducing different interpretations. To give a more comprehensive and in-depth account of collocation gains, qualitative data via retrospective or focus group interviews could be collected to observe what learners think about the effectiveness of the two kinds of instruction (MFI and FFI) in focus.

APPENDIX A

TARGET COLLOCATIONS

1. Accept a proposal
2. Achieve goals
3. Adopt a position
4. Boost income
5. Conduct research
6. Draw conclusions
7. Drop a hint
8. Get impression
9. Give instructions
10. Invest money
11. Launch a product
12. Make an appointment
13. Make an attempt
14. Make commitment
15. Make observations
16. Make profit
17. Sense tension
18. Set targets
19. Steer conversation
20. Trust instincts

APPENDIX B

INSTRUCTIONAL MATERIALS FOR MFI CONDITION

A love story

I am Anna and I will tell you my love story. I fell in love with Anton when I met him. It was love at first sight. I knew that he was the love of my life. At first, I was not sure if my love was returned or not. I tried to understand if he loved me or not. I dropped some hints to show my love for him. Also, I followed him wherever he goes. I made observations on his behaviors. Sometimes, he was so cold. I got the impression that he didn't love me. Within a few days, however, he told me that he loved with me too. A couple of weeks later, we understood that we wanted to make a commitment to each other. So, we promised to be together until we die. When Anton asked me to marry him, I immediately accepted his proposal. I said that I wanted to marry him, too. I'm sure we will always love each other. Neither of us would ever consider having an affair with someone else.

Read the text and mark the statements as True or False.

1. Anna knew very well that Anton loved her at the beginning. ___
2. Anna followed and observed Anton a lot. ___
3. After Anton told that he loved Anna, they promised each other. ___
4. Anna rejected Anton's proposal. ___
5. Anton and Anna will never get married. ___

Things you might do at work

Bella has a job as a personal assistant. Her role is to help her boss. He is not a very organized person. Bella and her boss trust each other. They made a commitment when they met and now they always support each other. Her boss has a lot of work to do. He gives instructions and Bella does the work. With the help of Bella, nothing goes wrong. She makes appointments for her boss and she makes sure he keeps his appointments. She spends a lot of time answering the phone. When her boss has to travel, she makes the reservations for him. When her boss has a presentation, she makes all photocopies of papers. She arranges meetings for him and she takes notes at the meetings. Bella is a very well-organized person. She keeps a record of everything she does at work. She sets targets for herself. For example, she says "I will finish this work by Monday". She is very hard-working. She does everything to enhance her performance. She works hard to achieve her goals. Every morning, she makes a list of everything she needs to do. Today, the first thing on her list is 'Hand in my notice'! She's got a new job. Thanks to her, his boss boosted his income and he really loves Bella. In the future, Bella will be the boss and will have her own assistant.

Read the text and mark the statements as True or False.

1. Bella is a boss in her company. ___
2. Her boss is very busy, and Bella arranges his meetings. ___
3. Bella sometimes makes travel arrangements for her boss. ___
4. Bella is a messy person. ___
5. Bella has goals and she works for these goals. ___

Going into business

Interviewer: When did you first start business?

Jeffries: I set up a small business selling office in 2001. Then, in 2003, I started a partnership with my old friend, Ethan Smith. We invested a lot of money in our company. We made a loss for the first two years. But we believed in our company. We trusted our instincts. We set targets and we worked for them. Then, things got better. After three years, we started to make profit. Now, we have more money. But, there were bad times, too.

Interviewer: In what way?

Jeffries: Well, during the economic crisis, a lot of small businesses had difficult times. All around us, small firms were going bankrupt. But in 2010, we won a contract to supply the local offices. That was very important for us. We hired staff and grew. We created jobs for local people. Our sales figures improved. We achieved our goals.

Interviewer: So, what's the secret of your success?

Jeffries: Well, we are quite careful. For example, we always conduct research and learn about the market before we launch a new product. But, we also believe in customer service, especially after-sales service. But at the end of the day, having a successful business needs hard work and luck.

Read the text and answer the following questions.

1. Who is Jeffries' partner?

_____

2. What happened in 2001?

_____

3. What happened during economic crisis?

_____

4. What do Jeffries and his partner do before launching their products?

_____

5. What do we need to be successful in work?

_____

Arguments

The book *The Eye of the Universe* shows that the birth of the universe and lottery are similar. It makes you think about the space. The writer, Patrick Rivaux, says that the universe is like this because we are here looking at it. He conducted a lot of research and then wrote the book *The Eye of the Universe.* In this book, the writer adopts the position that the universe cannot have any beginning or end. He also says that the universe has a special nature. He also talks about famous physicists and mathematicians. At the end, he draws conclusions about the universe and says that universe is very big and science alone cannot show the mystery of the universe. If you want to learn more about the universe, you can attend Patrick Rivaux's training. But first, you should make an appointment and join a class.

Glossary:
Argument: *iddia*
Universe: *evren*
Lottery: *loto*

Read the text and answer the following questions.

1. What is similar to the birth of universe?

_____

2. What did Patrick Rivaux do before writing his book?

_____

3. What kind of scientists does the writer talk about?

_____

4. What is recommended to you if you want to learn more about universe?

_____

Business conversation

Olivia: Can we talk about our new office assistant, David?

David: Mm. Yes. I also talked to Mel yesterday; I think there are problems.

Olivia: Can we talk now? I know it's an important subject, but I don't think everybody should know about it.

David: Well, I'm happy you raised the subject. Yes, let's talk.

Olivia: Well, every time you give instructions to her, she never understands. And if you ask her questions directly, she just says "Sorry". The other assistants are complaining. They say that they are always doing her work. One of the assistants dropped a hint that she can quit if nothing is done about it. I think we should talk to her.

David: Oh dear. I'll talk to her. We should be tolerant. It is too early to draw conclusions about her performance, but I think she has to improve.

Olivia: Thanks, David. Anyway, let's change the subject. We launched our new product. How's the sales plan going? Do you think we will make profit?

David: Oh, not bad, but I have to tell you the truth, I am very busy with other things. Can you help me?

Olivia: Of course!

Glossary:
Quit: *işi bırakmak*

Read the text and answer the following questions.

1. Who are Olivia and David talking about?

_____

2. What doesn't the new assistant understand?

_____

3. Why do other assistants complain?

_____

4. What does David think about the new assistant's performance?

_____

Advice column- Ask Chloe

Dear Chloe,
Starting a conversation with new people is very difficult for me. Also, when I make an attempt and talk to someone, I feel as if I'm boring them. I like meeting people and I want to get to know them. When I join a conversation, usually, other people steer the conversation. What can I do?
Sophia T.

Dear Chloe,
A friend of mine made interesting observations the other day. She said I always address people too politely. I always apologise if I do something wrong. Why am I like this? I wanted to marry my girlfriend. I asked her "Will you marry me, please". She laughed but accepted my proposal. Why can't I relax and be informal?
Cooper M.

Dear Chloe,
I was at a party two days ago. I heard my friend Margie having a conversation with a handsome man. Then, after a while, I joined them. I heard her whisper to him that she was not married. But, she is married! At that moment, I was shocked. Margie steered the conversation and changed the subject. But, the man also sensed the tension between us. Why did she tell a lie? Should I tell the man?
Madison C.

Glossary:

Address: *hitap etmek*
Politely: *kibarca*
Apologize: *özür dilemek*
Informal: *informal*
Whisper: *fısıltı*

Read the text and fill in the blanks according to the text.

1. To start and lead a conversation is _____ for Sophia.

2. Sophia loves _____ and _____.

3. Cooper is too much _____ to people.

4. Margie told the handsome man that she was not_____.

5. Margie told a _____ to the man.

Sensing

When I first met my new boss, I got the impression that he might be a difficult person to work for. I don't know why. I sensed some tension between us. Now I have a feeling that he is trying to make things difficult for me. I don't know. Maybe, I should trust my instincts and give my resignation. Maybe, I am over-sensitive.
Kim T.

For the last few weeks, I am very sensitive to heat and light. I always had sensitive skin and sensitive teeth, but this is much worse. My hands have also started to go numb in cold. I don't hear or smell well. Is there a problem? I have a couple of friends who are doctors. Some of them say it is normal. But, some of them adopt the position that it needs medical solutions.
Jan P.

Glossary:

Resignation: *istifa*
Over-sensitive: *fazla hassas*
Go numb: *uyuşmak*

Read the text and fill in the blanks according to the text.

1. Kim's boss is a _____ person.
2. Kim feels a _____ between her and her boss.
3. Kim will hand in her _____ if she trusts her intuitions.
4. Jan's skin is sensitive to _____ and _____.
5. Jan's senses of _____ and _____ don't work well.

Getting money

Henry and his brother grew up in a poor family. Henry hoped that when he grew up, money would be never be problem for him. Henry's brother only wanted to boost his income, but Henry didn't only want having a good salary, he wanted to make big money. He wanted to be very rich. He started making money at school. His mother made sandwiches and he sold the sandwiches to other children. He also worked on holidays to earn money. He wanted to make an attempt to save money. So, he put this money in a bank account. When he left school, he had a lot of money. He wanted to invest money on a shop. He had enough money in the bank to buy his first shop. He found a cheap shop and bought it. At the age of twenty, he made a small fortune and became rich.

Glossary:
Account: *hesap*
Fortune: *servet*

Read the text and fill in the blanks according to the text.

1. Henry's family was _____.
2. Henry's brother desired to _____.
3. When Henry earned some money, he wanted to _____ on a shop.
4. The shop Henry bought was_____.
5. At the age of twenty, Henry became_____.

APPENDIX C

INSTRUCTIONAL MATERIALS FOR FFI CONDITION

A love story

I am Anna and I will tell you my love story. I fell in love with Anton when I met him. It was love at first sight. I knew that he was the love of my life. At first, I was not sure if my love was returned or not. I tried to understand if he loved me or not. I dropped some hints to show my love for him. Also, I followed him wherever he goes. I made observations on his behaviors. Sometimes, he was so cold. I got the impression that he didn't love me. Within a few days, however, he told me that he loved with me too. A couple of weeks later, we understood that we wanted to **make a commitment** to each other. So, we promised to be together until we die. When Anton asked me to marry him, I immediately **accepted his proposal.** I said that I wanted to marry him, too. I'm sure we will always love each other. Neither of us would ever consider having an affair with someone else.

Read the text and mark the statements as True or False. You can use your dictionaries.

1. Anna knew very well that Anton loved her at the beginning. ___
2. Anna followed and observed Anton a lot. ___
3. After Anton told that he loved Anna, they promised each other. ___
4. Anna rejected Anton's proposal. ___
5. Anton and Anna will never get married. ___

Things you might do at work

Bella has a job as a personal assistant. Her role is to help her boss. He is not a very organised person. Bella and her boss trust each other. They made a commitment when they met and now they always support each other. Her boss has a lot of work to do. He gives instructions and Bella does the work. With the help of Bella, nothing goes wrong. She **makes appointments** for her boss and she makes sure he keeps his appointments. She spends a lot of time answering the phone. When her boss has to travel, she makes the reservations for him. When her boss has a presentation, she makes all photocopies of papers. She arranges meetings for him and she takes notes at the meetings. Bella is a very well-organised person. She keeps a record of everything she does at work. She **sets targets** for herself. For example, she says "I will finish this work by Monday". She is very hard-working. She does everything to enhance her performance. She works hard to **achieve** her **goals.** Every morning, she makes a list of everything she needs to do. Today, the first thing on her list is 'Hand in my notice'! She's got a new job. Thanks to her, his boss boosted his income and he really loves Bella. In the future, Bella will be the boss and will have her own assistant.

Read the text and mark the statements as True or False. You can use your dictionaries.

1. Bella is a boss in her company. ___
2. Her boss is very busy, and Bella arranges his meetings. ___
3. Bella sometimes makes travel arrangements for her boss. ___
4. Bella is a messy person. ___
5. Bella has goals and she works for these goals. ___

Going into business

Interviewer: When did you first start business?

Jeffries: I set up a small business selling office in 2001. Then, in 2003, I started a partnership with my old friend, Ethan Smith. We invested a lot of money in our company. We made a loss for the first two years. But we believed in our company. We trusted our instincts. We set targets and we worked for them. Then, things got better. After three years, we started to **make profit.** Now, we have more money. But, there were bad times, too.

Interviewer: In what way?

Jeffries: Well, during the economic crisis, a lot of small businesses had difficult times. All around us, small firms were going bankrupt. But in 2010, we won a contract to supply the local offices. That was very important for us. We hired staff and grew. We created jobs for local people. Our sales figures improved. We achieved our goals.

Interviewer: So, what's the secret of your success?

Jeffries: Well, we are quite careful. For example, we always **conduct research** and learn about the market before we **launch** a new **product.** But, we also believe in customer service, especially after-sales service. But at the end of the day, having a successful business needs hard work and luck.

Read the text and answer the following questions. You can use your dictionaries.

1. Who is Jeffries' partner?

_____

2. What happened in 2001?

_____

3. What happened during economic crisis?

_____

4. What do Jeffries and his partner do before launching their products?

_____

5. What do we need to be successful in work?

_____

Arguments

The book *The Eye of the Universe* shows that the birth of the universe and lottery are similar. It makes you think about the space. The writer, Patrick Rivaux, says that the universe is like this because we are here looking at it. He conducted a lot of research and then wrote the book *The Eye of the Universe.* In this book, the writer **adopts the position** that the universe cannot have any beginning or end. He also says that the universe has a special nature. He also talks about famous physicists and mathematicians. At the end, he **draws conclusions** about the universe and says that universe is very big and science alone cannot show the mystery of the universe. If you want to learn more about the universe, you can attend Patrick Rivaux's training. But first, you should make an appointment and join a class.

Glossary:
Argument: *iddia*
Universe: *evren*
Lottery: *loto*

Read the text and answer the following questions. You can use your dictionaries.

1. What is similar to the birth of universe?

_____

2. What did Patrick Rivaux do before writing his book?

_____

3. What kind of scientists does the writer talk about?

_____

4. What is recommended to you if you want to learn more about universe?

_____

Business conversation

Olivia: Can we talk about our new office assistant, David?

David: Mm. Yes. I also talked to Mel yesterday; I think there are problems.

Olivia: Can we talk now? I know it's an important subject, but I don't think everybody should know about it.

David: Well, I'm happy you raised the subject. Yes, let's talk.

Olivia: Well, every time you **give instructions** to her, she never understands. And if you ask her questions directly, she just says "Sorry". The other assistants are complaining. They say that they are always doing her work. One of the assistants **dropped a hint** that she can quit if nothing is done about it. I think we should talk to her.

David: Oh dear. I'll talk to her. We should be tolerant. It is too early to draw conclusions about her performance, but I think she has to improve.

Olivia: Thanks, David. Anyway, let's change the subject. We launched our new product. How's the sales plan going? Do you think we will make profit?

David: Oh, not bad, but I have to tell you the truth, I am very busy with other things. Can you help me?

Olivia: Of course!

Glossary:
Quit: *işi bırakmak*

Read the text and answer the following questions. You can use your dictionaries.

1. Who are Olivia and David talking about?

_____

2. What doesn't the new assistant understand?

_____

3. Why do other assistants complain?

_____

4. What does David think about the new assistant's performance?

_____

Advice column- Ask Chloe

Dear Chloe,
Starting a conversation with new people is very difficult for me. Also, when I make an attempt and talk to someone, I feel as if I'm boring them. I like meeting people and I want to get to know them. When I join a conversation, usually, other people **steer the conversation**. What can I do?
Sophia T.

Dear Chloe,
A friend of mine **made** interesting **observations** the other day. She said I always address people too politely. I always apologise if I do something wrong. Why am I like this? I wanted to marry my girlfriend. I asked her "Will you marry me, please". She laughed but accepted my proposal. Why can't I relax and be informal?
Cooper M.

Dear Chloe,
I was at a party two days ago. I heard my friend Margie having a conversation with a handsome man. Then, after a while, I joined them. I heard her whisper to him that she was not married. But, she is married! At that moment, I was shocked. Margie steered the conversation and changed the subject. But, the man also sensed the tension between us. Why did she tell a lie? Should I tell the man?
Madison C.

Glossary:

Address: *hitap etmek*
Politely: *kibarca*
Apologise: *özür dilemek*
Informal: *informal*
Whisper: *fısıltı*

Read the text and fill in the blanks according to the text. You can use your dictionaries.

1. To start and lead a conversation is _____ for Sophia.

2. Sophia loves _____ and _____.

3. Cooper is too much _____ to people.

4. Margie told the handsome man that she was not_____.

5. Margie told a _____ to the man.

Sensing

When I first met my new boss, I **got** the **impression** that he might be a difficult person to work for. I don't know why. I **sensed some tension** between us. Now I have a feeling that he is trying to make things difficult for me. I don't know. Maybe, I should **trust my instincts** and give my resignation. Maybe, I am over-sensitive.
Kim T.

For the last few weeks, I am very sensitive to heat and light. I always had sensitive skin and sensitive teeth, but this is much worse. My hands have also started to go numb in cold. I don't hear or smell well. Is there a problem? I have a couple of friends who are doctors. Some of them say it is normal. But, some of them adopt the position that it needs medical solutions.
Jan P.

Glossary:

Resignation: *istifa*
Over-sensitive: *fazla hassas*
Go numb: *uyuşmak*

Read the text and fill in the blanks according to the text. You can use your dictionaries.

1. Kim's boss is a _____ person.
2. Kim feels a _____ between her and her boss.
3. Kim will hand in her _____ if she trusts her intuitions.
4. Jan's skin is sensitive to _____ and _____.
5. Jan's senses of _____ and _____ don't work well.

Getting money

Henry and his brother grew up in a poor family. Henry hoped that when he grew up, money would be never be problem for him. Henry's brother only wanted to **boost** his **income** but Henry didn't only want having a good salary, he wanted to make big money. He wanted to be very rich. He started making money at school. His mother made sandwiches and he sold the sandwiches to other children. He also worked on holidays to earn money. He wanted to **make an attempt** to save money. So, he put this money in a bank account. When he left school, he had a lot of money. He wanted to **invest money** on a shop. He had enough money in the bank to buy his first shop. He found a cheap shop and bought it. At the age of twenty, he made a small fortune and became rich.

Glossary:
Account: *hesap*
Fortune: *servet*

Read the text and fill in the blanks according to the text. You can use your dictionaries.

1. Henry's family was _____.
2. Henry's brother desired to _____.
3. When Henry earned some money, he wanted to _____ on a shop.
4. The shop Henry bought was_____.
5. At the age of twenty, Henry became_____.

APPENDIX D

COLLEX

Choose one of the three word sequences you think is the most correct and common one. (*En doğru ve yaygın olduğunu düşündüğünüz kelime dizilimini seçiniz*.)

1.	a. conduct research	b. make research	c. perform research
2.	a. deliver instructions	b. give instructions	c. transmit instructions
3.	a. understand tension	b. sense tension	c. taste tension
4.	a. make commitment	b. do commitment	c. produce commitment
5.	a. orient conversation	b. route conversation	c. steer conversation
6.	a. get impression	b. take impression	c. earn impression
7.	a. launch a product	b. start a product	c. bring a product
8.	a. succeed goals	b. achieve goals	c. win goals
9.	a. take conclusions	b. get conclusions	c. draw conclusions
10.	a. do appointment	b. make appointment	c. build an appointment
11.	a. receive a position	b. adopt a position	c. get a position
12.	a. make observations	b. form observations	c. produce observations
13.	a. boost income	b. develop income	c. enhance income
14.	a. admit a proposal	b. approve a proposal	c. accept a proposal
15.	a. drop a hint	b. leave a hint	c. abandon a hint
16.	a. credit instincts	b. trust instincts	c. believe instincts
17.	a. enter competition	b. arrive competition	c. take competition
18.	a. build targets	b. found targets	c. set targets
19.	a. continue the peace	b. carry the peace	c. keep the peace
20.	a. make profit	b. do profit	c. create profit
21.	a. grab a glimpse	b. catch a glimpse	c. see a glimpse
22.	a. make an attempt	b. try an attempt	c. cause an attempt
23.	a. lay money	b. invest money	c. place money

APPENDIX E

MEANING RECALL TEST

Translate the following collocations from English to Turkish. (*Aşağıdaki eşdizimlilikleri İngilizce' den Türkçe'ye çeviriniz*.)

1. Give instructions _____
2. Sense tension _____
3. Steer conversation _____
4. Get impression _____
5. Launch a product _____
6. Drop a hint _____
7. Achieve goals _____
8. Make an appointment _____
9. Conduct research _____
10. Adopt a position _____
11. Make observations _____
12. Boost income _____
13. Make commitment _____
14. Draw conclusions _____
15. Invest money _____
16. Accept a proposal _____
17. Keep the peace _____
18. Trust instincts _____
19. Enter a competition _____
20. Set targets _____
21. Make profit _____
22. Catch a glimpse _____
23. Make an attempt _____

APPENDIX F

FORM RECALL TEST

Translate the following collocations from Turkish to English. You must write BOTH A VERB AND A NOUN. (*Aşağıdaki eşdizimlilikleri Türkçe' den İngilizce'ye çeviriniz. Çeviriniz hem bir fiil hem de bir isim içermelidir*.)

1. Ürünü piyasaya sürmek _____
2. Ilişkisi olmak _____
3. Gerginliği sezmek _____
4. Sohbeti yönlendirmek _____
5. Görüş benimsemek _____
6. Bağlılık sözü vermek _____
7. Evlilik teklifini kabul etmek _____
8. Hedef koymak _____
9. Kar etmek _____
10. Ödeme yapmak _____
11. Para yatırımı yapmak _____
12. İpucu vermek _____
13. Randevu oluşturmak _____
14. Komut vermek _____
15. Gözlem yapmak _____
16. Gelirini arttırmak _____
17. Girişim yapmak _____
18. İzlenim edinmek _____
19. Araştırma yürütmek _____
20. Hedeflerini başarmak _____
21. Sonuç çıkarmak _____
22. Kanıt sunmak _____
23. İçgüdülerine güvenmek _____

APPENDIX G

BACKGROUND QUESTIONNAIRE

This survey is being carried out to investigate the types of strategies and activities used by university students to improve their English language skills. All responses will remain anonymous. Please try to answer all the questions.

A. DEMOGRAPHIC INFORMATION

Name/ Surname:
Age:
Nationality:
Current school:
Department:
Gender:
Type of High school:

B. LANGUAGES

Mother tongue:

Second language(s):

1. When did you start learning English?

   _____

2. Where did you start learning English?

   _____

3. Have you ever been in an English-speaking country?

   Yes / No

   If yes; which country (ies)? How long have you been there?

   _____

4. Do you have any additional languages?

   Yes / No
   If yes; which language(s)? What is your level in that language? When and where did you start learning them?

   _____

C. ENGLISH LEARNING ACTIVITIES

1. How frequently do you carry out the following activities in English? Please circle:

	Very Often	*Often*	*Sometimes*	*Rarely*	*Never*
1. Watch TV series/films	5	4	3	2	1
2. Listen to radio channels	5	4	3	2	1
3. Listen to songs	5	4	3	2	1
4. Read newspapers and magazines	5	4	3	2	1
5. Read books/novels	5	4	3	2	1
6. Read academic books/articles	5	4	3	2	1
7. Speak with peers/friends	5	4	3	2	1
8. Speak with family members/significant other	5	4	3	2	1
9. Speak with tourists outside	5	4	3	2	1
10. Surf the internet	5	4	3	2	1
11. Speak with foreign friends in chat rooms	5	4	3	2	1
12. Play computer games	5	4	3	2	1
13. Use social media	5	4	3	2	1
14. Use language learning applications to practice (duolingo, busuu etc.)	5	4	3	2	1
15. Set English as the main language on your mobile device.	5	4	3	2	1

2. Do you do any other activities specifically to improve your skills in English? Please circle:

Yes / No

If your answer is yes, what are these activities and how often do you do them?

_____

D. VOCABULARY LEARNING STRATEGIES

1. How frequently do you use the following strategies to learn English words? Please circle:

	Very Often	*Often*	*Sometimes*	*Rarely*	*Never*
Memorizing word lists.	5	4	3	2	1
Using dictionaries	5	4	3	2	1
Expanding vocabulary simply through reading a lot.	5	4	3	2	1
Using words in real life.	5	4	3	2	1
Making a note of words that seem important.	5	4	3	2	1
Guessing meanings of words from context.	5	4	3	2	1
Making use of the grammatical structure of a sentence when guessing the meaning of a new word.	5	4	3	2	1
Repeating words aloud.	5	4	3	2	1
Writing words repeatedly.	5	4	3	2	1
Associating a new word to a known English word that looks or sounds similar.	5	4	3	2	1

2. Do you have any other vocabulary learning strategies?

If your answer is yes, what are these strategies and how often do you apply them?

_____

Thank you for spending time to answer this questionnaire. Your co-operation is very much appreciated.

This questionnaire is adapted from:

Gu, Y., & Johnson, R. K. (1996). Vocabulary learning strategies and language learning outcomes. *Language learning*, *46*(4), 643-679.

Hyland, F. (2004). Learning autonomously: Contextualising out-of-class English language learning. *Language awareness*, *13*(3), 180-202.

Tonoian, L. (2014). *English language learning inside and outside the classroom in Portugal* (Doctoral dissertation).

APPENDIX H

BACKGROUND QUESTIONNAIRE (TURKISH)

Bu anket üniversite öğrencileri tarafından İngilizce dil yeteneklerini geliştirmek için kullanılan aktivite ve strateji çeşitlerini araştırmak amacıyla gerçekleştirilmektedir. Tüm yanıtlarınız anonim kalacaktır. Lütfen tüm soruları yanıtlamaya çalışın.

A. DEMOGRAFIK BİLGİLER

Adı/Soyadı:
Yaş:
Uyruk:
Şu anki okulunuz:
Bölümünüz:
Cinsiyet:
Okuduğunuz lise:

B. DİLLER

Anadil:

Yabancı dil(ler):

1. İngilizce öğrenmeye ne zaman başladınız?
   _____

2. İngilizce öğrenmeye nerede başladınız?
   _____

3. Daha önce hiç İngilizce konuşulan bir ülkede bulundunuz mu?

   Evet / Hayır

   Evet ise; hangi ülkelerde bulundunuz? Bu ülkelerde ne kadar süre kaldınız?
   _____

4. İngilizce dışında başka herhangi bir dil biliyor musunuz?

   Evet / Hayır

   Evet ise; bunlar hangi dillerdir? Bu dillerdeki seviyeniz nedir? Bu dilleri nerede ve ne zaman öğrenmeye başladınız?
   _____

C. İNGİLİZCE ÖĞRENME AKTİVİTELERİ

1. Aşağıdaki aktiviteleri İngilizce dilinde hangi sıklıkla yapıyorsunuz? Lütfen yuvarlak içine alınız:

	Çok sık	*Sıklıkla*	*Bazen*	*Nadiren*	*Hiçbir zaman*
1. Dizi veya film izlemek	5	4	3	2	1
2. Radyo kanallarını dinlemek	5	4	3	2	1
3. Şarkı dinlemek	5	4	3	2	1
4. Gazete veya dergi okumak	5	4	3	2	1
5. Kitap veya roman okumak	5	4	3	2	1
6. Akademik kitap veya makaleler okumak	5	4	3	2	1
7. Akran veya arkadaşlarla konuşmak	5	4	3	2	1
8. Aile üyeleriyle ya da yakınlarınızla konuşmak	5	4	3	2	1
9. Dışarıda turistlerle konuşmak	5	4	3	2	1
10. İnternette sörf yapmak	5	4	3	2	1
11. Sohbet odalarında yabancı arkadaşlarla konuşmak	5	4	3	2	1
12. Bilgisayar oyunları oynamak	5	4	3	2	1
13. Sosyal medyayı kullanmak	5	4	3	2	1
14. Pratik yapmak için dil öğrenme uygulamalarını kullanmak (duolingo, busuu vb.)	5	4	3	2	1
15. Cep telefonunun dilini İngilizce olarak ayarlamak	5	4	3	2	1

2. İngilizce dil yeteneklerinizi geliştirmek için özellikle başka bir aktivite yapıyor musunuz? Lütfen yuvarlak içine alınız:

Evet / Hayır

Evet ise, bu aktiviteler nelerdir ve ne sıklıkla yapıyorsunuz?

_____

D. KELİME ÖĞRENME STRATEJİLERİ

1. İngilizce kelimeleri öğrenirken aşağıdaki aktiviteleri ne sıklıkla yapıyorsunuz? Lütfen yuvarlak içine alınız:

	Çok sık	*Sıklıkla*	*Bazen*	*Nadiren*	*Hiçbir zaman*
Kelime listeleri ezberlemek	5	4	3	2	1
Sözlük kullanmak	5	4	3	2	1
Çok okuyarak kelime haznesini genişletmek	5	4	3	2	1
Kelimeleri günlük hayatta kullanmak	5	4	3	2	1
Önemli görünen kelimeleri not etmek	5	4	3	2	1
Kelimelerin anlamlarını bağlamdan çıkarmak	5	4	3	2	1
Yeni bir kelimenin anlamını tahmin ederken cümlenin yapısından faydalanmak	5	4	3	2	1
Kelimeleri yüksek sesle tekrar etmek	5	4	3	2	1
Kelimeleri defalarca yazmak	5	4	3	2	1
Yeni kelimeleri yazılışı veya okunuşu benzer İngilizce kelimelerle ilişkilendirmek	5	4	3	2	1

2. Başka kelime öğrenme stratejileriniz var mıdır?

Evet / Hayır

Var ise, bu stratejiler nelerdir ve bunları ne sıklıkla uygularsınız?

_____

Bu anketi yanıtlamak için ayırdığınız zaman ve işbirliğiniz için çok teşekkür ederiz.

Bu anket aşağıdaki kaynaklardan uyarlanmıştır:

Gu, Y., & Johnson, R. K. (1996). Vocabulary learning strategies and language learning outcomes. *Language learning*, *46*(4), 643-679.

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APPENDIX I

ETHICS COMMITTEE APPROVAL

T.C.
BOĞAZİÇİ ÜNİVERSİTESİ
İnsan Araştırmaları Kurumsal Değerlendirme Alt Kurulu

Sayı: 2018_28

16 Mayıs 2018

Gülşah Sobucalı
Yabancı Diller Eğitimi

Sayın Araştırmacı,

"Eşdizimlilik öğreniminde anlam odaklı ve biçim odaklı öğretim yöntemlerinin etkilerinin karşılaştırılması" başlıklı projeniz ile ilgili olarak yaptığınız SBB-EAK 2018/33 sayılı başvuru İNAREK/SBB Etik Alt Kurulu tarafından 16 Mayıs 2018 tarihli toplantıda incelenmiş ve uygun bulunmuştur.

Doç. Dr. Mehmet Yiğit Gürdal

Doç. Dr. Gül Sosay

Doç. Dr. Ebru Kaya

Dr. Öğr. Üyesi Nur Yeniçeri

Dr. Öğr. Üyesi Bengü Börkan

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