THE EFFECTS OF EXPOSURE FREQUENCY AND GRAMMATICAL CLASSES OF WORDS ON RECEPTIVE AND PRODUCTIVE VOCABULARY KNOWLEDGE OF EFL LEARNERS

ZEYNEP ÖZDEM

MA THESIS

English Language Teaching Program

Advisor: Assisstant Prof. Dr. Aysel BAHCE

Eskisehir

Anadolu University

Institute of Educational Sciences

March, 2010

KELİMEYE MARUZ KALMA SIKLIĞI VE SÖZCÜK TÜRLERİNİN İNGİLİZCE'Yİ YABANCI DİL OLARAK ÖĞRENEN ÖĞRENCİLERİN AKTİF VE PASİF KELİME BİLGİSİNE ETKİSİ

ZEYNEP ÖZDEM

YÜKSEK LİSANS TEZİ

İngiliz Dili Eğitimi Anabilim Dalı

Danışman: Yrd. Doç. Dr. Aysel BAHÇE

Eskişehir

Anadolu Üniversitesi

Eğitim Bilimleri Enstitüsü

Mart, 2010

YÜKSEK LİSANS TEZ ÖZÜ

KELİMEYE MARUZ KALMA SIKLIĞI VE SÖZCÜK TÜRLERİNİN İNGİLİZECE'Yİ

YABANCI DİL OLARAK ÖĞRENEN ÖĞRENCİLERİN AKTİF VE PASİF KELİME

BİLGİSİNE ETKİSİ

Zeynep ÖZDEM

İngiliz Dili Eğitimi Anabilim Dalı

Anadolu Üniversitesi Eğitim Bilimleri Enstitüsü, 2010

Danışman: Yrd.Doç. Dr. Aysel BAHÇE

Sözcük öğrenimi dil öğreniminin önemli bir parçasıdır. Bu nedenle yabancı dil sınıflarında sözcük öğretimi için yoğun zaman ayrılmakta ve öğrencilerin aktif ve pasif sözcük hazinelerinin geliştirilmesi için çalışılmaktadır. Ancak yine de bazı kelimeler öğrencilerin aktif kelime hazinesinde yer alırken bazılarının pasif kelime hazinesinde kaldığı, bazılarının ise hiç öğrenilmediği gözlemlenmektedir. Bu sonucu doğuran nedenler farklı çalışmalarda araştırılmıştır. Bu çalışma da benzer bir amaçla düzenlenmiştir.

Bu doğrultuda, bu çalışmanın birinci amacı, kelimelere maruz kalma sıklığı ile bilme düzeyi arasında bir ilişki olup olmadığını araştırmaktır. Diğer bir amacı ise sözcük türleri ile aktif/pasif öğrenme veya öğrenememe arasında bir ilişki olup olmadığını belirlemektir.

Bu amaçla Niğde Üniversitesi Hazırlık programında okuyan orta altı düzeyde İngilizce bilen 20 öğrenci ile bir çalışma yapılmıştır. Veri toplama aracı olarak 63 kelimeden oluşan bir "Kelime Bilgisi Ölçeği" kullanılmıştır. Bu ölçeği oluşturan 63 kelime, 3 farklı maruz kalma

sıklığından seçilen 21'er kelimeden oluşmuştur. Herbir 21 kelimelik grup 7 isim, 7 sıfat ve 7 fiilden oluşturulmuştur.

Verilerin analizinde betimsel ve istatistiksel analiz yöntemleri kullanılmıştır. Sonuç olarak kelimeye maruz bırakılma sıklığı ile bilme düzeyi arasında bir ilişki tespit edilmiştir. Öğrencilerin en az maruz bırakıldıkları sözcükleri bilmediği, en çok maruz bırakıldıkları sözcükleri ise aktif olarak bildikleri saptanmıştır. Pasif olarak bildikleri sözcüklerin oranının da maruz bırakılma sıklığına göre değişmediği tespit edilmiştir.

Sözcük türü ve bilme düzeyi arasındaki ilişki incelendiğinde ise sıfatların aktif bilgi düzeyinde olduğu, fiillerin de daha çok pasif bilgi düzeyinde olduğu bulunmuştur.

ANAHTAR SÖZCÜKLER: Aktif ve pasif kelime bilgisi, kelimeye maruz kalma sıklığı, sözcük türleri

M.A. THESIS ABSTRACT

Zeynep ÖZDEM

Anadolu University

Institute of Educational Sciences

English Language Teaching Programme

Advisor: Assist. Prof. Aysel BAHÇE

Vocabulary learning is an important part of learning a language. Therefore, in foreign language classes important amount of class time is allocated to vocabulary teaching and it is aimed to improve learners' productive and receptive vocabulary knowledge. However, it is observed that while some words are productively known, some of them are receptively known and some others are not known at all by the learners. The reasons of this have been the focus of different studies.

The present study aims at finding out the relationship between the exposure frequency and grammatical class of words and the level of knowing words. With regard to this, the first aim of the study was to investigate whether there was a relationship between exposure frequency and levels of knowing words. The second aim of the study was to find out whether there was a relationship between the level of knowing words and the grammatical class of words.

To achive these aims, this study was conducted with 20 pre-intermediate level students studying at Nigde University Preparatory program. For gathering data, a "Vocabulary Knowledge Scale" which included 63 words was used as an instrument. These 63 words consisted of 21 words chosen from each of 3 exposure frequency band. Each set of 21 words were made up of 7 nouns, 7 verbs and 7 adjectives.

The data were analyzed descriptively and statistically. The findings indicated that there was a relationship between exposure frequency and levels of knowing a word. It was found out that the students did not know majority of the words they were exposed to up to 5 times and they knew productively majority of the words they were exposed to more than 11 times. It was also found out that the percentage of the words known receptively were close in each of three exposure frequency bands.

The findings indicated a significant relationship between grammatical classes of words and levels of knowing them. Adjectives were found to be known mostly productively; whereas, verbs were found to be mostly known receptively.

KEYWORDS: Receptive and Productive Vocabulary Knowledge, Exposure Frequency, Grammatical Classes of Words

ACKNOWLEDGEMENTS

It is a great pleasure for me to acknowledge the intricate contributions of those without whose help this thesis would not be completed. My wholehearted thanks go to my thesis committee, Prof. Gül Durmuşoğlu Köse, Assoc. Prof. Hülya Özcan , Assist. Prof. Mine Dikdere, and Assist. Prof. Hasan Çekiç. I am specifically grateful to my thesis advisor Assist. Prof. Aysel Bahçe for her conscientious and meticulous guidance and never ending encouragement.

I owe many thanks to lecturer Bülent Batmaz and my dear friend Kadir Kozan for helping me in the analyses of the research.

I owe deepest thanks to my friend Gülçin Özlü and Betül Canıdar who were with me throughout this challenging process, who shared their homes and their precious ideas with me. To be with them was a chance for me as they were a source of encouragement when I felt desperate.

I would like to express my thanks to my dear colleagues Eda Gözüyeşil and Elçin Turgut who helped in the design of the study.

I am also indebted to my dear friends and colleagues Ayça Çelikbaş, Buket Soylu, Mustafa Özdere, Rasim Kayı, and Yakup Karataş as they were always great supporters of this study with their endless friendship, encouragement and patience.

My special thanks also go to the participants of this study who made the research part possible and without whom it was impossible to complete the overall thesis.

As for my beloved family, I cannot deny their contributions to the work I have done to complete this study. I am totally indebted to them to patience, encouragement, support and love.

TABLE OF CONTENTS

Page

CHAPTER 1

INTRODUCTION

1.1. Introduction

Vocabulary has a very important place in every language (Coxhead, 2006; Horst et al., 2005; Lee & Munice, 2006). As it is stated by Thornbury (2002), all languages have words and languages emerge first as words. With this perspective, he emphasizes two different points about words. The first one is the historical development of languages; he indicates that the main elements of languages are words. The second one is in terms of L1 and L2 development. He claims that each of us learned our first language by starting with its words and we learn the subsequent languages in the same way. Words' importance in a language is expressed by Read (2000) as "the basic building blocks of the language" from which larger structures such as sentences, paragraphs and whole texts are formed. In other words, it is seen as an element that links four language skills - speaking, listening, reading and writing all together. Learners' lexical knowledge may determine the quality of their listening, speaking, reading and writing performances (Mokhtar, 2010). As a result, learners of a foreign language should acquire an adequate number of words and should know how to use them accurately in order to communicate well (Huyen & Nga, 2003). Wilkins (1974) emphasizes the importance of vocabulary by stating "Without grammar very little can be conveyed, without vocabulary *nothing* can be conveyed." (cited in Chen, 2009, pp.95) This saying about the importance of vocabulary has been welcomed by teachers for many years. Not only teachers, but also students have acknowledged the importance of vocabulary in foreign language education as the following statements by them indicate;

- First, vocabulary is very important. It measures a man's English level.

- My problem is that I forget the words soon after I have looked in the dictionary. And I cannot recognize them whenever I come across in reading English books.

- I want to enlarge my vocabulary. I have the feeling that I always use the same expressions to express different sort of things. (Chen, 2009, pp. 96)

As the prominent role of vocabulary knowledge in foreign language learning has been increasingly recognized (Rodriguez & Sadoski, 2000), traditional ways of vocabulary teaching has been criticized (Kang, 1995). Traditionally, vocabulary is taught in isolation with a word list which contains English definitions, L1 meanings, example sentences, synonyms or antonyms. Especially with the advent of Communicative Approach, the role of vocabulary for researchers, teachers, and coursebook writers has changed (Chen, 2009). Many researchers have suggested various vocabulary teaching techniques or instructional strategies such as teaching prefixes, suffixes, and roots, teaching collocations, polysemous words, words in context, guessing unknown words from context, teaching culture, translation, songs and dictionary skills to help students learn vocabulary (Nation, 1990; Parry, 1991; Lewis 1993; Kang, 1995; Sökmen, 1997; Vanniarajan, 1997). These studies have led teachers use these techniques and strategies for teaching vocabulary and also helping students develop strategies for independent vocabulary learning (Öztürk, 2005). For coursebook writers, vocabulary is no longer treated as an "add-on"; they have started to organize the books in which vocabulary items are recycled in various parts. They give more attention to the grammar of words, collocation and word frequency (Chen, 2009). In terms of word frequency, they use word lists for allowing learners learn the high frequency words of the language.

1.2. Statement of the Problem

As it is realized that vocabulary has such an important role in learning a foreign language in terms of all the skills - reading, writing, listening and speaking, some researchers have also aimed to find the vocabulary sizes of learners (Nation, 1990; Waring, 1997; Laufer, 1998; Laufer & Paribakht, 1998; Meara & Fitzpatrick, 2000; Webb, 2008). They have made a difference between receptive (passive) and productive (active) vocabulary knowledge while measuring learners' vocabulary sizes. In these studies, the difference between receptive and productive vocabulary have been investigated by using words from different frequency bands according to word lists. The findings of these studies show that receptive vocabulary of learners is larger than their productive vocabulary. The results of these studies have raised the importance of the factors that affect students' learning vocabulary items (Webb, 2008). Factors that affect vocabulary learning and acquisition are the linguistic features of language items, the influence of first and other languages, the incremental nature of vocabulary acquisition, the role of memory, the organization and development of the L2 mental lexicon, the individual differences, the role of teacher, vocabulary teaching and learning strategies and exposure to linguistic input (Takač, 2008).

One of the important points in vocabulary teaching/learning is exposure to linguistic items. A number of researchers have indicated that when learning vocabulary, if it is not seen in different contexts, forgetting is quite normal (Nation, 1990; Schmitt, 2000; Waring, 2001). Moreover, as forgetting is natural and vocabulary learning is incremental, words are learned gradually from numerous exposures (Schmitt, 2000). In other words, it is believed that the number of times learners come across with the new words affect their learning. Studies mostly have investigated the effect of exposure frequency in reading (Day et al., 1991; Dupuy and

Krashen, 1993; Pitts et al., 1989) and they have only dealt with receptive vocabulary gain. In terms of receptive vocabulary it is found that being exposed to words have a positive effect. However, these studies have not assessed productive vocabulary gain. On the other hand, Hulstijn et al. (1996) have observed that multiple exposures often fail to have a positive impact on productive vocabulary gain. Although learners more readily recognized the words they had encountered three times during reading than words they had encountered only once, they often were not able to infer the correct meaning at any of the three encounters. As it can be seen, Hulstjin et al. (1996) have not found an effect of exposure frequency on productive vocabulary gain. Rotts (1999) has also investigated the effect of exposure frequency on receptive and productive vocabulary gain in reading. The results of her study show that vocabulary growth through reading has a measurably stronger effect on receptive than on productive vocabulary knowledge. In all these studies, it is aimed to find the effect of exposure frequency on learners' receptive and productive vocabulary knowledge in terms of the words they encounter while reading. In other words, they focus on incidental vocabulary learning through reading.

As it can be seen, studies which have investigated the receptive and productive vocabulary knowledge uses either word frequency according to word lists or exposure frequency through reading. The first group of studies focuses on general receptive and productive vocabulary knowledge while the second one focuses on receptive and productive vocabulary gain through reading. The present study neither tries to find out the general receptive and productive vocabulary size of learners as in the first group of studies nor does it focus on a specific activity, for example reading, as in the second group of studies. It aims to reveal the effect of exposure frequency on receptive and productive knowledge in terms of the words which are encountered in the learning environment and divided into bands according to their exposure times.

1.3. Purpose of the Study

As exposure frequency is thought to be effective in terms of vocabulary learning, this study attempts to explore whether exposure frequency has an effect on receptive and productive vocabulary knowledge of EFL learners at Nigde University prep class. In addition to it, it also tries to find out the effect of grammatical classes of words on receptive and productive vocabulary knowledge of the same group of students. This inquiry will help to shed some light on to the effect of exposure frequency and grammatical classes of words on lexical knowledge. It will also help teachers to raise their awareness in terms of vocabulary teaching.

1.4. Research Questions

As stated above, the study aims to find out whether exposure frequency and grammatical class of words have an effect on receptive and productive vocabulary sizes of EFL learners. In order to reach this aim, the following research questions are intended to be answered:

1. Is there a relationship between exposure frequency and the words' being in receptive and productive vocabulary of EFL learners?

2. Is there a relationship between grammatical class of words and the words' being in receptive and productive vocabulary sizes of EFL learners?

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

This chapter presents the background research and theories that prepare the ground for the current study. First, the role of vocabulary in language teaching and learning is mentioned. Then, what it means to know a word, the features that should be known for having knowledge of a word, is explained. After that, vocabulary sizes of language learners are presented by talking about some threshold levels. Next, the difference between receptive and productive vocabularies is given and the relationship between them, whether it is dichotomous or continuous is discussed. In addition to them, how the words in receptive vocabulary size can be helped to be transformed to the productive one is discussed. The effect of exposure frequency and grammatical classes of words on receptive and productive vocabulary knowledge is presented as well. Finally, the studies that have been conducted up to now on this topic and their results are discussed in this chapter.

2.2. The Role of Vocabulary in Language Learning

As it was stated in introduction section, vocabulary has a very important place in every language. Words' importance in a language is expressed by Read (2000) as "the basic building blocks of the language" from which larger structures such as sentences, paragraphs and whole texts are formed.

In terms of vocabulary development, it is stated that for native speakers, the most rapid growth occurs in childhood (Read, 2000). However, the coining of new words or the acquisition of words never stops. Even in our first language, new words or new meanings for old words are

continually learnt (Thornbury, 2002). In other words, there is not an end point at which someone knows the whole words of a language. The grammar of a language is made up of a limited set of rules and is "largely in place by the time a child is 10 years old, but a person is unlikely to ever run out of words to learn" (Schmitt, 2000). Read (2000) states that vocabulary knowledge develops naturally in adult life in response to new experiences, inventions, concepts, social trends and opportunities for learning for native speakers. On the other hand, for second or foreign language learners, he points out that vocabulary development is a more conscious and demanding process. At each level, even at the advanced one, learners are aware of limitations in their knowledge of second language words. Read (2000) states that they have "lexical gaps". He uses this term for the situation in which learners read the words but they simply cannot understand them or they cannot express themselves clearly as they can do in their first language. These kinds of problems lead them to think that second language acquisition is essentially a matter of learning vocabulary, because of this, they spend a great deal of time by memorizing lists of L2 words and they rely on their bilingual dictionaries as a basic communicative resource.

In terms of the importance of vocabulary in language teaching and learning, it is seen that there are some differences between past and present practices. Nation clarifies this situation by stating;

> There was a time when teaching and learning a foreign or second language was viewed primarily as a matter of controlling its grammar. "Methods" as different as Audio-Lingual Method and Grammar Translation had mastery of structures as their main goal, and vocabulary development was approached as some kind of auxiliary activity, often through memorizing decontextualized word lists. The relatively minor importance attached to the lexicon was also visible in the scant attention paid to it by second language acquisition researchers until the last decade. (Nation, 2001. p. xiii)

As it is clearly given above, vocabulary teaching was not something as important as grammar in language teaching in the past. Read (2000) states that applied linguistic researchers and language

teachers now generally recognize the importance of vocabulary learning after spending a lengthy period of time for developing grammatical competence and they are exploring ways of promoting it more effectively. McCarthy emphasizes the importance of vocabulary in language teaching by defining it as "the single, biggest component of any language course" (1990). He expresses that students' learning grammar of a language well enough or their mastering successfully the sounds of L2 is not enough for communication's being in a meaningful way in an L2 without words to express a wide range of meanings.

Although, vocabulary often seems to be the systematized and the least well catered for of all the aspects of learning a foreign language (McCarthy, 1990), from various points of view, vocabulary can be seen as a priority area in language teaching. And it requires tests to monitor the learners' progress in vocabulary learning and to assess how adequate their vocabulary knowledge is to meet their communication needs (Read, 2000). However, it is not something that can be easily done, because words often represent complex and multiple meanings. Furthermore, these complex and multiple meanings of words need to be understood in the context of other words in the sentences and paragraphs of texts (Hayes, Wolfer and Wolfe, 1996). Because of these reasons, attention should be paid to vocabulary in language teaching and learning.

2.3. Knowing a Word

Before dealing with the features that are involved in knowing a word, it is helpful to understand what a word means. However, it is not easy to define what a word is either for theoretical terms or for various applied purposes (Read, 2000). In terms of word counts in a text, there are some different concepts and it is necessary to spell out these points here.

The first distinction is between *tokens* and *types*. About tokens Nation states that it is "simply to count every word form in a spoken or written text and if the same word form occurs

more than once, then each occurrence of it is counted"(Nation, 2001. p. 7). So, he gives the sentence "It is not easy to say it correctly." as an example and expresses that there are eight words in this sentence even though two of them are the same form, *it*. As *it* is counted twice in this sentence, then the unit of counting is the token, and it is sometimes called as "running words" as well (Nation 2001). On the other hand, types are the different word forms, so any word which is repeated many times is counted only once (Read, 2000).

Except for the difference between type and token, there is a difference between *lemma* and *word family*. In short, it can be said that "the base and inflected forms of a word are collectively known as a lemma." (Read, 2000. p. 18). On the other hand, a word family includes a head word, its inflected and derived forms.

In addition to them, there is a difference between *function* and *content* words. Articles, prepositions, pronouns, conjunctions, auxiliaries, etc. are called as function words and instead of being seen as belonging to the vocabulary of a language, they are seen as belonging to the grammar of the language (Read, 2000). Function words do not have a meaning on their own; they provide links within sentences and they modify the meaning of content words. On the other hand, nouns, "full" verbs, adjectives and adverbs which have meaning on its own are called content words (Read, 2000). It is problematic whether to count function words or not while deciding on vocabulary size.

As it can be seen "words are not isolated units of language, but fit into many interlocking systems and levels." (Nation, 2001. p. 23). Because of this, it is difficult to define a word and there are many things to be known about any word. Of course, there are different levels of knowing. At the most basic level, knowing a word involves knowing its form and meaning (Thornbury, 2002). In addition to form and meaning, Nation also talks about use of the word as

well (2001). Under these three headings, there are some subtitles, the main points that are related to knowing a word;

- The meaning(s) of the word

- The written form of the word

- The spoken form of the word

- The grammatical behavior of the word

- The collocations of the word

- The register of the word

- The associations of the word

- The frequency of the word

(Nation, 1990, p.31)

Knowing a word involves very different points. First of all, the meanings of the word should be known. Secondly, the word should be spelled correctly. Thirdly, the word should be pronounced correctly as well. Fourthly, the word should be used correctly in a sentence in terms of its grammatical features. For clarifying this point, Brewster, Ellis & Girard (2002) gives the example of "She dances very well." not "She dances very good." (p.82). Fifthly, the collocations of the word should also be known. Brewster, Ellis & Girard (2002) define knowing collocations as "knowing which other words it can be used with" and they give the example of "a *fast* bike, not a *quick* bike". Sixthly, the register of the word should be known. It includes the knowledge of in which situation a word can be used and in which it cannot be used. For example, in terms of formality, some words that are used with friends cannot be used with teachers. Seventhly, the associations of the word should be known. A word can have positive or negative associations and they should be known clearly. Trying to use a word with a negative association while

complimenting can result in offense. For this situation Brewster, Ellis & Girard (2002) this example; "Smarty has negative connotations of someone who is clever but conceited. Clever has positive connotations." And lastly, the frequency of the word should be known. It emphasizes again the importance of knowing the words that are frequently used in a language. However, Schmitt (2000) emphasizes that these different kinds of word knowledge are interrelated. He gives the example that frequency is related to formality and formality is a part of register. The words that are used frequently tend to be less formal and the ones that are used less frequently are more formal. He claims that learners become aware of these kinds of relationships and use them consciously or unconsciously while learning words. Nation gives the items that are related to the points form, meaning and use in terms of what is involved in knowing a word in Figure.2.1.

From	Spoken	R	What does the word sound like?
		P	How is the word pronounced?
	Written	R	What 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 the 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?
	Collacations	R	What words or types of words occur with this one?
		P	What words or types 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?

Note: In column 3, R = receptive knowledge, P = productive knowledge

Figure. 2.1. What is involved in knowing a word (Nation, 2001. p.27)

In short, it can be said that it is not easy to know everything about a word or learning everything about a word at once. For deepening the knowledge of a word, coming across with it is really important. Another important point is that while preparing tests for assessing vocabulary size the points that are mentioned in knowing a word should be kept in mind and which of them are expected to be known by the learners must be clearly identified.

2.4. Vocabulary Sizes of Native Speakers and Language Learners

As it is stated by Schmitt (2000) it is impossible to master the complete lexicon of English (and probably any other language) not only for second/foreign language learners, but also for native speakers. However, the number of words a language learner needs to have for particular activities should be known by language researchers and teachers for language learning. For answering the question how many words a language learner needs, Nation (1990) shows two different ways. The first way is to look at the results of frequency counts and the practical experience of second/foreign language teachers and researchers and decide how much vocabulary is needed for particular activities. The second and the more helpful one is to look at the vocabulary of native speakers of English and consider that as a goal for second/foreign language learners. Coady (1997) claims that having an idea about the vocabulary size of native speakers helps teachers for their philosophy about vocabulary instruction. He clarifies the situation with the following example:

> For example, if one believes that educated university native speakers tend to know 50,000 to 100,000 words, then it seems useless to try to teach a tiny subset of that amount. On the other hand, if one believes that university students tend to know about 16,000 words, then teaching a thousand or so words does not seem like such a bad idea. (p.285)

As it can be seen, knowing the measures of vocabulary size of native speakers of English not only helps teachers to improve their philosophy about vocabulary instruction, but also helps them analyze which and how many words are needed by second or foreign language learners for particular activities. Before dealing with the studies that show the number of words a language learner needs, the estimates of the vocabulary size of native speakers of English are given.

2.4.1. Word Knowledge of Native Speakers

There have been a lot of attempts to assess the vocabulary size of native speakers of English with various motivations, but behind most of them the idea that vocabulary size is a reflection of how educated, intelligent or well read a person is lies (Nation, Waring, 1997). However, as it is stated by some researchers the major methodological problem about the measurement of the vocabulary size of native speakers of English is "What should be counted as a word" (Coady, 1997; Nation, Waring, 1997).

The words can be counted as lemmas or words families. Nation (2001) defines a lemma as "consisting of a headword and some of its inflected and reduced ('nt) forms." (p. 7) However, he adds that using lemmas as the unit of counting has some problems. The first one is about the irregular forms. He gives the example of mice, brought, beaten etc. and states that it is difficult to decide whether to count irregular forms as a part of the same lemma as their base word or to put them in separate lemmas. The second problem about forming lemmas he indicates is lemma's "separating closely related items such as the adjective and noun uses of words like *original,* and the noun and verb uses of words like *display*." (p. 8)

Another counting unit used for measuring vocabulary size is word families. A word family is defined by Nation (2001) as consisting of "a headword, its inflected forms, and its closely related derived forms." (p.8). As an example for the "closely related derived forms" he gives the affixes of *–ly, -ness* and *–un*. However, the problem about word families is to decide what should be included in a word family and what should not be included, because people's knowledge of prefixes and suffixes are different from each other (Nation, 2001). There should be a clearly set scale of word families, but it seems really difficult to decide on it.

Goulden, Nation and Read (1990) estimate that an average college-educated native English speaker has a vocabulary of 13,200 - 20,700 base words, with an average of 17,200 base words. The study conducted by Zechmeister, Chronis, Cull, D'Anna and Healy (1995) shows that the vocabulary size of a college-educated native English speaker is about 17,000 word families, about 40% more than first year college students, who know about 12,000 word families. However, Nation and Waring (1997) estimate that the receptive vocabulary size of a university-educated native English speaker is around 20,000 word families. They expect native speakers to add roughly 1000 word families a year to their vocabulary size. In addition, they interpret this as a five-year old beginning school will have a vocabulary of around 4000 to 5000 word families.

Of course, there are some differences between the results of the studies that are conducted for assessing the vocabulary size of native speakers of English. The first reason of these differences is the items included in counting units and how a word family is defined (Nation & Waring, 1997). In some studies just the base form and its derived forms are included in a word family as in Goulden, Nation and Read' (1990) study. However, as defined by Nation (2001), a word family can include inflected forms as well in addition to base and derived forms. The second reason of these differences is the way how the vocabulary size is assessed. If a multiple choice test is used for assessing the vocabulary size, it can be said that it is possible to guess the correct answers without having any idea about the word. For example, Zechmeister, Chronis, Cull, D'Anna and Healy (1995) caution us about the numbers and they express that there may be overestimations of the actual vocabulary sizes, as they used a dictionary-sampling method and multiple choice testing of word knowledge, which is permissive of a certain amount of guessing. The third reason is the difference between the proficiency levels of individuals. Some of them have a large range of vocabulary knowledge, while the others have a wide one (Nation, 1990 & 2000). Although, there is not a clear answer for how many words a native speaker of English

knows, the studies help language teachers and researchers for having an idea and they make use of these estimates for deciding on the vocabulary needs of second or foreign language learners.

2.4.2. Necessary Word Knowledge for Non-native Speakers

Having estimates about the vocabulary size of native speakers of English, some researchers found the least number of words that should be known by non-native language learners. Nation states that studies of native speakers' vocabulary knowledge seem to suggest that foreign or second language learners need to know very large numbers of words (2001). However, he also emphasizes that this is not an essential short-term goal, but may be useful in the long term. It cannot be a short-term goal, because the quality and quantity of input that L1 and L2 learners receive is not equal, of course. Native speakers have a natural environment in which they are exposed to language input however, for foreign language learners the language input is only the one that is given through classroom instruction (Thornbury, 2002). As a result, vocabulary development can be a long-term goal in a foreign language environment.

When the point is the number of words needed for language learners, frequency comes on the stage. Nation and Waring (1997) declare that non-native learners need to know the 3000 or so high frequency words of the language. They also add that "these are an immediate high priority and there is little sense in focusing on other vocabulary until these are well learned." (Nation & Waring, 1997. pp. 11). In another study, Nation (2001) states that receptive knowledge of the 2000 most frequent word families allows participants to understand 90% of the words in spoken discourse. Laufer (1998) agrees with Nation and Waring and she claims that for English a threshold of 3000 word families (5000 lexical items) is necessary for minimal comprehension. In addition to them, Thornbury also emphasizes the importance of high frequency words' being learnt by non-native learners, but the number of the words he thinks that non-native learners need

is 2000 (2002). He shows this as the threshold level, in other words as "core vocabulary" that is used in most situations.

Nation and Thornbury have some suggestions about the number of words needed for reading comprehension for non-natives. Hirsh and Nation (1992) claim that knowing at least 5000 word families is necessary for reading to be enjoyable. On the other hand, in terms of reading comprehension, Thornbury just talks about familiarity and suggests a less amount of words (2002). He states that a passive knowledge of the 2000 most frequent words of English provides a reader with familiarity with nearly nine out of ten words in most written texts. For reading comprehension of foreign language learners, Laufer (1992) expresses that at a minimum, having receptive knowledge of the most frequent 3000 most frequent word families is necessary to understand unsimplified texts.

As it can be seen, different threshold levels of vocabulary are suggested for spoken and written discourses. However, the main point all these studies emphasize is the importance of learning the most frequent words of the language. At this point, Nation (1990) suggests that after high frequency words are learnt, teachers should focus on helping the learners develop strategies to comprehend and learn the low frequency words of the language. He does not suggest teachers to teach these low frequency words in class, because he thinks that it is not worth spending class time for them (Nation, 1990).

2.5. Receptive vs. Productive Aspects of Vocabulary

Receptive vocabulary knowledge is defined by Nattinger (1988. p. 62) as "the understanding of the meaning of words and storing words in memory." In his definition, he emphasizes the importance of understanding and storing the words in memory. He also described the productive vocabulary knowledge as "the retrieval of words from memory by using them in

appropriate situations" (1988. p. 62). In addition to these definitions, Nation defines receptive vocabulary knowledge as "perceiving the form of a word while listening or reading and retrieving its meaning" (2001. p. 25). In other words, he claims that it is the ability to recognize a word and recall its meaning when it is encountered. He defines productive vocabulary use as "expressing a meaning through speaking or writing and retrieving and producing the appropriate spoken or written word form." (2001. p. 25)

The terms "passive" for receptive vocabulary and "active" for productive vocabulary are also used by some researchers (Meara, 1990; Laufer, 1998). However, some researchers like Crow (1986) object to the use of the term "passive" for receptive vocabulary knowledge. He states that this term makes people think that individuals play a passive role when reading or listening. For instance, while reading, refreshing the background knowledge about the topic and processing some strategies to understand the passage indicates that readers are not passive (Crow, 1986). For avoiding misunderstanding of the term, in the present study the terms "receptive" and "productive" will be used.

For the relationship between receptive and productive vocabulary, there are different points of view. Some researchers assume that they are different from each other. For instance, Clark (1993) states that comprehension precedes production and that children can understand words before they can produce them. In the same way, Meara (1990) suggests that receptive and productive vocabulary are "qualitatively different" in that receptive vocabulary can only be assessed if appropriate external stimulation is available whereas productive vocabulary does not require any external stimulus, but can be activated by other words. However, Nation (2001) criticizes this point of view by stating that language use is not associationally driven, but, more basically, is meaning driven. He also claims that being able to actively name an object using an L2 word can be externally stimulated by seeing the object without necessarily arousing links to

other L2 words. On the other hand, Melka (1997) views the distance between receptive and productive vocabulary along a continuum and states that although reception may precede production, the gap between them is not large and it varies and shifts according to linguistic and pragmatic factors. It should be taken into consideration that vocabulary knowledge is not an all-or-nothing phenomenon and some aspects may have become productive, while others remain at the receptive level (Laufer, 1998).

Nation (2001) describes the difference between receptive and productive knowledge by using the word *underdeveloped* as an example. In terms of receptive knowledge, the word *underdeveloped* involves:

- being able to recognize the word when it is heard

- being familiar with its written form so that it is recognized when it is met in reading

- recognizing that it is made up of the parts *under-*, *-develop-* and *–ed* and being able to relate these parts to its meaning

- knowing that *underdeveloped* signals a particular meaning

- knowing what the word means in the particular context in which it has just occurred

- knowing the concept behind the word which will allow understanding in a variety of contexts

- knowing that there are related words like *overdeveloped*, *backward* and *challenged*

- being able to recognize that *underdeveloped* has been used correctly in the sentence in which it occurs

- being able to recognize that words such as *territories* and *areas* are typical collocations

- knowing that *underdeveloped* is not an uncommon word and it is not a pejorative word (Nation, 2001. p.26)

On the other hand, the same word, *underdeveloped*, involves the following points from the point of view of productive knowledge and use:

- being able to say it with correct pronunciation including stress

- being able to write it with correct spelling

- being able to construct it using the right word parts in their appropriate forms

- being able to produce the word to express the meaning "underdeveloped"

- being able to produce the word in different contexts to express the range of meanings of *underdeveloped*

- being able to produce synonyms and opposites for *underdeveloped*

- being able to use the word correctly in an original sentence

- being able to produce words that commonly occur with it

- being able to decide to use or not use the word to suit the degree of formality of the situation (At present *developing* is more acceptable than *underdeveloped* which carries a slightly negative meaning.) (Nation, 2001. p.28)

When the example of "underdeveloped" for receptive and productive vocabulary learning and use is examined, it can be seen that productive vocabulary learning and use is more difficult than receptive learning and use. Several explanations are possible for the reasons of this situation.

The first one of them is "the amount of knowledge" explanation. It means productive learning is more difficult because it requires extra learning of new spoken or written output patterns (Nation, 2001). The second one of them is the "practice" explanation. Both receptive and productive learning require particular practice to happen (DeKeyser & Sokalski, 1996). However, in normal language learning conditions, receptive one takes more practice. As a result, it causes the difference between receptive and productive vocabulary sizes. The last one is "motivation" explanation. According to it, because of a variety of reasons including socio-cultural background, learners are not motivated to use some words productively. Although the word is known productively, as it is not used, it remains in receptive vocabulary (Nation, 2001). These are the possible explanations of why productive vocabulary learning and use more difficult than receptive one.

2.6. Exposure Frequency and Previous Studies

In a foreign language learning environment, unlike a naturalistic setting, there is a limited temporal exposure to the language, as well as other limitations such as the poor quality and quantity of the input received (Miralpeix, 2007). As a result, for improving the quality and quantity of the input given in a vocabulary learning environment, the repetition of the words is important (Nation, 2001). There is so much to know about each word, so one meeting with a word is not sufficient to gain this information, especially in different contexts.

As it is realized that it is important to come across with the words to be learnt with multiple exposures, the time of exposure frequency for learning new words is wondered. Many different research results have been obtained in this regard. The first study conducted in L2 is Saragi, Nation, and Meister's (1978) study (cited in Webb, 2007). They found that after reading Anthony Burgess's A Clockwork Orange, native speakers of English were able to incidentally

acquire 75 per cent of unknown Russian slang words. The result of this study shows that repetition of words affects learning. The study also suggests that for learning unknown vocabulary, it should be met at least ten or more times in a reader for significant gains to occur. This study has also found that learning gains varied considerably from word to word. For example, 70 per cent of the learners demonstrated knowledge for a word which occurred only once, 15 per cent for a word which occurred nine times, and 40 per cent for a word which occurred 42 times.

Another study investigating the effect of exposure frequency in reading is conducted by Horst et al. (1998). They have looked at the number of encounters that are needed to learn unknown words in a graded reader with L2 learners. They suggest that large learning gains are likely to occur for words which were repeated eight or more times. The size of the gains varied considerably from word to word. They have also found that the pictures given in the book and the part of speech of the words affect words' being learned. For part of speech, they think that concrete nouns are learnt better than other parts of speech and this affects their vocabulary gain.

Rott (1999) has searched how two, four, and six encounters affected incidental gains in knowledge of meaning. Her results shows that two encounters with unknown words produce significant gains, and that six encounters produce significantly greater gains than two or four encounters. There is little difference between two and four encounters. Rott's findings have led her to suggest that six encounters may be enough for considerable lexical gains to occur.

In addition to the results gained by these studies, there are some exposure frequency rates. For example, by comparing the results of different studies, Nation (1990) concludes that for learning new words from context, 5-16 exposures are needed. On the other hand, Meara (1997) suggested a 0.01 hypothesis (1 uptake every 100 exposures) for L2 learners, arguing that these

learners are normally unable to be exposed to large quantities of text. A more recent study (Horst, Cobb, & Meara, 1998), which featured low intermediate EFL learners reading a 109-page book over a ten-day period, obtained a 20% pick-up rate. They also observed that words which appeared over eight times in text were more likely to be learned than words that were repeated less. Results so far seem to vary considerably. However, researchers do seem to have come to the conclusion that the number of exposures needed for the mastery of a new word hinges on many other factors such as the salience of the word in context (Brown, 1993), the richness of contextual clues, the learner's interest and the size and quality of his/her existing repertoire of vocabulary (Laufer & Hadar, 1997; Nation & Hwang, 1995).

As it can be seen, the findings have not been conclusive, it is still unclear how many encounters in context are needed to learn a word. One reason of these different results in the studies is that no studies controlled the type of context in which target words were encountered (Webb, 2007). A second reason is that the majority of past research has equated gains in knowledge of meaning with acquisition. Other aspects of knowledge which may also be acquired such as syntax, grammatical functions, association, and orthographical knowledge have largely been ignored. Since context is likely to have an effect on each of these aspects, Webb (2007) states that it is necessary to measure multiple aspects of knowledge to determine the effects of single and multiple encounters with words in context.

2.7. Grammatical Classes of Words and Previous Studies

Grammatical class of a word (alternatively *part of speech*) describes "the category of grammatical behavior of a word (Schmitt, 2000, pp. 59). There are a number of potential word classes like nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunctions, determiners

etc. (Thornbury, 2002). Knowing a word's grammatical class is thought to be a precondition for knowing how to use the word in the language because it determines some factors. Labelle (2005) claims that the grammatical class of a word determines;

1. the position it is allowed to occupy in the clause (e.g., German verbs appear in final position in subordinate clauses and in second position in main clauses)

2. the range of syntactic functions it can occupy (e.g., a noun may be the subject of a clause, but a preposition or an adjective cannot)

3. the types of words with which it co-occurs (e.g., determiners co-occur with nouns, but not with verbs)

4. the types of morphemes it requires or accepts (e.g., verbs inflect for tense, while nouns inflect for number). (Labelle, 2005; pp. 433)

She also adds that we can know the grammatical class of a missing word as in the example "The blue _____ is on the table." We know that the missing word is a noun in this example. We know it not because we look up in a dictionary, but because we know some properties about the grammatical class of words. For example, we know that a noun occupies a typical position in a sentence, it is modified by an adjective, is preceded by a determiner and so on, as in the given example. Thus, people know the grammatical class of words because of the grammatical properties it has like its use of order in a sentence or the prefixes or suffixes it takes. These features are called as "distributional information" (Zyzik & Azevedo, 2009). In addition to it, "semantic information" is also used for realizing the grammatical classes of words. Zyzik & Azevedo (2009) state that in L2 context, finding the L1 equivalent of words means using the semantic information in assigning word classes. In semantic domain, positive transfer is expected

to occur because L1 and L2 equivalents belong to the same grammatical class. While learning the L1 equivalent of a word, learner can learn the grammatical class of the word as well.

Although, there are a number of word classes, the majority of language research has concentrated on four major categories of noun, verb, adjective and adverb. Schmitt (2000) gives the results of the studies that are conducted on learning word classes. The first one of them is Morgan and Bonham's (1944) study which focuses on nouns, verbs, adjectives and adverbs. The results of their study show that nouns are learnt more quickly than the other three word classes and adverbs are the most difficult word class to be learnt. On the other hand, the subjects in Phillip's (1981) study learn the nouns better than verbs or adjectives (cited in Schmitt, 2000). However, the difference decreases with the increase in the learners' proficiency and also they have learnt nouns and adjectives better than verbs and adverbs. Pigada and Schmitt (2006) used 70 nouns and 63 verbs in their study in investigating incidental vocabulary acquisition by using four graded readers in French. They organized the two word classes into six different frequency groups according to the number of encounters and tested three types of word knowledge (meaning, spelling, and grammatical behavior). They found that substantial word learning occurred during the extensive reading, although the improvement was not uniform across the three types of word knowledge. Spelling was enhanced in all noun frequency groups and in all but two verb groups. For meaning, low-frequency nouns and verbs showed limited learning, and verbs were more limited than nouns. Grammatical behavior knowledge was improved in all frequency groups of nouns, while the percentage of grammatical mastery of verbs was much lower than that of nouns. In addition to them, McCrostie (2007) has found by examining learners' vocabulary notebooks that nouns are the most popular grammatical class. 43.25% of the words in learners' vocabulary notebooks were nouns. After nouns, the next popular grammatical class is verbs and then adjectives. Adverbs are the least popular one.

When nouns and verbs are compared, it can be said that while nouns occur in structured categories with hierarchical internal organizations (e.g., *apple–fruit*) that may result in simpler, more predictable semantic relations, verbs and adjectives have less structured and less predictable lexical relations (Markman, 1989, cited in Kweon & Kim, 2008). Verbs may be represented by nonhierarchical relations, such as change, causality, and manner (Miller, 1991). As internal lexical organization for verbs is less structured and less predictable than that for nouns, in child language development, verbs are suggested to be more difficult to learn than nouns and to be acquired at a slower rate (Kweon & Kim, 2008).

CHAPTER 3

METHODOLOGY

This chapter gives information about the setting, subjects, the instrument, data collection procedure and the analysis of the obtained data. In other words, chapter three is about how the present study was conducted.

3.1. Setting

The study was conducted at Niğde University English preparatory program in the spring term of academic year 2008-2009. The students were from Electronical and Electronics Engineering and Mechanical Engineering departments as these are the only departments with compulsory preparatory program. At the beginning of each year, the students are given a proficiency exam and a placement test respectively and they are placed into different proficiency levels according to the results of the placement test. The number of levels is determined by the diversity in the proficiency levels of the students. That is, there can be two or more levels. When the present study was conducted, there were two different proficiency groups called A1 and A2. A1 stands for beginner level students, whereas, A2 stands for elementary level students. The students are placed in these groups at the beginning of the year and stay in the same groups throughout the year although, their English proficiency levels increase. By the end of one academic year, the students in both groups are expected to reach intermediate level of language proficiency. A1 level students have 30 hours of instruction a week; 27 hours of instruction is devoted to main course and 3 hours to reading course. On the other hand, A2 level students have 28 hours of instruction a week; 25 hours for main course and 3 hours for reading. In both of the proficiency groups, although all the skills are thought in an integrated way, extra reading

instruction is given for helping students improve their reading skills and vocabulary knowledge. This reading course is included according to the results of the needs analysis assessment of the students who attended the preparatory program in the previous years.

3.2. Subjects

20 students, 2 females and 18 males, took part in the study as participants. They were in the same class and it was one of the A1 level classes. It means that when the study was conducted they were at pre-intermediate level. Their age range was between 17 and 20. All of the participants were native speakers of Turkish. None of them had an English speaking parent and none of them had been abroad. As English is a foreign language in Turkey, most of the input they receive was given at schools. All of them were graduates of State High Schools, just 3 of them graduated from Anatolian High Schools from different parts of Turkey. They started learning English at the 4th grade of Primary School and it had been at least seven years since they started to learn English as a foreign language.

To select the subjects of the study experts were consulted. In the study, only one class of students took part as participants in order to control the input they receive. As different classes had different instructors, if more than one class had taken part in the study, it would have been difficult to control the type and amount of the vocabulary input given to each class of students by the teachers and the affect of outside activities like assignments. It was assumed that they had similar interests since all of the students had selected the same area of study, engineering. and the same assignments given by the same instructors may have controlled the vocabulary input they take outside the classroom. Although, it was known that it was difficult to control the input they take outside the classroom, choosing only one class of participants restricted the input participants were exposed to inside and outside of classroom.

3.3. The Instrument

The focus of the present study was receptive and productive vocabulary of EFL learners and the factors that may have an effect on them. Review of the pertinent literature indicated that the same tests were used to assess receptive and productive vocabulary sizes, in most of the studies (Fan, 2000; Laufer, 1998; Laufer and Paribakht, 1998 and Waring 1997). In these studies, for assessing receptive vocabulary size, Vocabulary Levels Test (Nation, 1990) and for measuring productive vocabulary size, Productive Vocabulary Levels Test (Laufer & Nation, 1999) were used. The Vocabulary Levels Test is a matching test. For completing it, the subjects are asked to select the correct definition or synonym for three words out of six options. Webb (2008) illustrates it with the example given below in (1).

(1) Vocabulary Levels Test

1. arrange

2. develop   _____ grow

3. lean   _____ put in order

4. owe   _____ like more than something else

5. prefer

6. seize

The Productive Vocabulary Levels Test is a cued recall test (Webb, 2008). In this test, the subjects are expected to complete the word in each sentence. The first letters of the target words are provided in order to limit the possible answers. An example of it is given in (2) (Webb, 2008).

(2) Productive Vocabulary Levels Test

There are a doz_____ eggs in the basket.

Every working person must pay income t_____.

The pirates buried the trea_____ on a desert island.

In addition to the two tests mentioned here, Translation Tests were also used for measuring the receptive and productive vocabulary sizes of students. For instance, in his study conducted in 2008, Webb used Translation Tests. For measuring receptive knowledge of the Japanese participants he gave them 90 English words and asked them to write their Japanese equivalents. For assessing their productive knowledge, he gave them 90 Japanese words and asked them to write their English translations.

At first glance, the Vocabulary Levels Test (Nation, 1990) and Productive Vocabulary Levels Test (Laufer & Nation, 1999) seem appropriate for measuring receptive and productive vocabulary sizes. However, there are some reasons why it can be misleading to use these tests for assessing receptive and productive vocabulary sizes. First of all, the matching test format of Vocabulary Levels Test allows participants a chance to score correctly without any knowledge. Secondly, Productive Vocabulary Levels Test (Laufer & Nation, 1999) is more demanding than Vocabulary Levels Test, because it requires knowledge of grammatical functions as well (Webb, 2008). In the test used for receptive vocabulary size, participants are just expected to match the word with the definition or synonym. However, in the productive one, they need to write the word down and it requires more knowledge than matching. The next problematic point is that the two tests have different formats; the receptive one uses a recognition format and the productive one uses a recall format (Webb, 2008). The difference in format does not provide an accurate comparison. Lastly, it should also be added that providing the first letters of the target item such

as in Productive Vocabulary Levels Test (Laufer & Nation, 1999), might actually test receptive knowledge (Webb, 2008). Although, Vocabulary Levels Test (Nation, 1990) and Productive Vocabulary Levels Test (Laufer & Nation, 1999) were used in most of the studies conducted for assessing receptive and productive vocabulary sizes, because of the points given above, they were not used in the present study. On the other hand, Translation Tests used by Webb (2008) were not used in the present study as well. It was thought that just giving the words' L2 translations does not show that the participant knows the word productively. Knowing a word involves many different points and one of them is "using the word correctly in a sentence in terms of its grammatical features" (Brewster, Ellis & Girard, 2002). With a translation, it cannot be understood whether the participant can use the word in a sentence correctly or not. As a result, none of these three tests (Vocabulary Levels, Productive Vocabulary Levels and Translation tests) were used in the present study. Instead of them, Paribakht and Wesche's *Vocabulary Knowledge Scale* (1993) was used by translating it into Turkish.

Vocabulary Knowledge Scale (1993) is a five-point scale. It combines self-report and performance items. As Paribakht and Wesche (1997) states, it was developed for assessing developing knowledge of particular words. The original form of the scale is given in Figure-3.1.

I	I don't remember having seen this word before.
II	I have seen this word before, but I don't know what it means.
III	I have seen this word before, and I <u>think</u> it means _____ (synonym or translation)
IV	I <u>know</u> this word and it means _____ (synonym or translation)
V	I can use this word in a sentence: _____ (write a sentence)
	(If you do this section, please also do section IV)

Figure-3.1. Vocabulary Knowledge Scale elicitation scale – self report categories

In the present study, this vocabulary knowledge scale was translated into Turkish by using translation-back translation method. This translation was done in order to prevent any kind of misunderstanding for the participants that could affect the results of the research. The translated version of the scale was given for each of the 63 words in the test and the participants were expected to evaluate and present their vocabulary knowledge by using the scale. (See Appendix A for the Turkish version of the scale)

Although all the words that were used in the instrument had been met by the participants before, the first item "I don't remember having seen this word before." was used in order to find any kind of relationship between exposure frequency and not being able to remember the words, if there was any. The second item showed that the participant was aware of the fact that s/he had met the word before, but could not remember the meaning or the translation of it. The participants who gave item III as an answer for any word accepted that they were not sure whether their answer was the correct translation or synonym for the given word or not. For item IV, the participants were expected to show that they certainly know the meaning of the word by

giving correct translation or synonym. Item V was the last point and for completing it, the participants were expected to construct sentences that;

1. reflected the meaning of the word clearly,

2. was grammatically and semantically correct.

For example, sentences like "Somebody inspired me." and "My father prohibit me to go out." were not evaluated as correct. Although, it was grammatically correct, the first sentence did not reflect the meaning of the word *inspire* clearly. On the other hand, the second sentence was grammatically incorrect. However, the sentences "Music inspires me when I do my homework." and "Smoking must be prohibited in cafes." were thought to be grammatically and semantically correct and they reflected the meaning of the words *inspire* and *prohibit* clearly. As a result, instead of the first two sentences, the second ones were evaluated as indicators of productive knowledge of the words.

3.3.1. Selection of the Words

As one of the aims of the study was to find out the effect of exposure frequency on receptive and productive vocabularies of learners, the words were chosen among the ones the participants had met before taking the test. For deciding on the exposure frequency bands, previous studies conducted on how many times learners should be exposed to words for learning them were investigated. The results of the researches varied considerably. For example; Nation (1990) gave the number of repetitions as; "Salling (1959) concluded that at least 5 repetitions were needed to ensure learning. Crothers and Suppes (1967), found 6 or 7 repetitions to be necessary." (Nation, 1990, p. 44). On the other hand, Kachroo (1962) found that words repeated 7

or more times in his coursebook were known by most learners. Saragi et al. (1978) found that 16 or more repetitions were necessary in order to learn a word. In addition to them, Meara (1997) suggested a 0.01 hypothesis (1 uptake for every 100 exposures) for L2 learners. Horst, Cobb and Meara (1998) stated that words which appeared over 8 times were learnt better than the others.

In literature there were really different amounts of repetition that were thought to be necessary for learning to happen so, an exact number of repetitions was not given. However, most of them generally emphasized 5, 6 and 7 times. In the light of these previous studies the words were decided to be divided into three exposure frequency bands as 1 to 5, 6 to 11 and 12 and more.

For choosing the words, the books covered by the participants, *Success* and *Active Skills for Reading* were used. *Success* is a six-level course for students aged 14-20 years. It is thematically organized and claimed to include inspiring and up-to-date topics that are relevant to the age group. It has a syllabus that focuses on communication in real-world contexts. It has activities that help students both understand and internalize the rules of the language. It also helps students avoid common mistakes by giving them in sections called "Mind the Trap". The beginner level of it has 12 units and the other levels have 14 units. All the levels are also supported with their workbook exercises. Before the test was administered, *Success'* beginner, elementary and pre-intermediate levels were completed. In addition to them, the first six units of intermediate level were completed as well. The other book *ACTIVE Skills for Reading* uses a thematically organized syllabus as well and it includes non-fiction reading passages to teach reading comprehension and vocabulary skills. It aims to help learners become more confident, independent and active readers. The first level of this book (intro) and the first six units of the second level (book one) had been covered by the participants before they took the test. As a result, all the student books covered until the test was given, their workbooks and listening tapescripts from the teacher's

book were included in the test coverage. All these materials were scanned and transformed to Microsoft Word. By using this program, how many times these words were encountered in the books was counted. Then, by paying attention to the target vocabulary lists given in the two books, grammatical class of the words and previously decided frequency bands the words were chosen. While choosing the words some points were paid attention as well. Firstly, cognates were not chosen for avoiding the positive or negative effect of L1. Secondly, proper names and function words were not chosen as it would be a test used for assessing vocabulary size. Thirdly, words that were used in the same meaning in different units of the coursebooks were chosen for seeing the effect of exposure frequency better. Since exposure frequency and grammatical classes of the words wanted to be studied, seven words from each grammatical class (verbs, nouns and adjectives) in each frequency band were chosen. As there were three frequency bands, there were totally 63 words in the instrument. In short, by using *Vocabulary Knowledge Scale* a test that aimed to find out the effects of exposure frequency and grammatical classes of words on receptive and productive vocabularies of participants was prepared.

3.3.2. Scoring

To decide on the scoring, firstly the scoring system used by Paribakht and Wesche (1997) was analyzed (see Figure 3.2.).

Self-report categories	Possible scores	Meaning of scores
I	1	The word is not familiar at all.
II	2	The word is familiar but its meaning is not known.
III	3	A correct synonym or translation is given.
IV	4	The word is used with semantic appropriateness in a sentence.
V	5	The word is used with semantic appropriateness and grammatical accuracy in a sentence.

Figure-3.2. Vocabulary Knowledge Scale scoring categories – meaning of scores

According to it, if the learner chooses option I for a word s/he gets 1 point and it means the word is not familiar at all. Option II means the word is familiar but its meaning is not known and it gets 2 points. Option III with a correct synonym or translation gets 3 points, but wrong one gets 2 points. In the same way, IV with a correct synonym or translation gets 3 points, but wrong one gets 2 points. For V, wrong answer gets 2 points, correct synonym or translation gets 3 points, using the word with semantic appropriateness in a sentence gets 4 points and using the word with semantic appropriateness and grammatical accuracy in a sentence gets 5 points.

However, Waring (2002) states that there is a problem with this kind of scales and gives the following situation as an example;

Subject A 1 1 1 1 1 5 5 5 5 5 = 30 / 10 (average 3.0)

Subject B 2 4 1 4 2 3 2 5 3 4 = 30 / 10 (average 3.0)

As it can be seen although the subjects have the same mean score, they have different profiles. In this scoring system, it becomes really difficult to decide which participant's vocabulary knowledge is better than the other.

In addition to this point, Paribakht and Wesche (1997) do not deal with the difference between the receptive and productive vocabulary sizes of the learners, so they evaluate the scale as revealing a total vocabulary score. However, as the difference between receptive and productive vocabulary sizes is the main issue in this study, the evaluation of the results were thought to be done in a different way.

As it is stated by Waring (2002), the basic idea of *Vocabulary Knowledge Scale* (1993) is to measure "progressive degrees of word knowledge". He claims that Level I is not a level at all, but "reflects what the subject does not know" (p.7). Levels II, III, and IV are a measure of "recognition vocabulary" and Level V, one of "productive vocabulary". In the current research, correct synonyms or translations for items III and IV were thought to reflect that the word was in participants' receptive vocabulary. On the other hand, correct synonym or translation with a semantically and grammatically correct sentence (in other words correct answers for item IV and V together or III and V together) showed that the word existed in participants' productive vocabulary. If the participant gave a wrong translation or synonym for the words or chose item I or II, it was thought that the participant did not know the word at all – neither receptively nor productively. In short, while evaluating the data, the wrong answers, item I and II thought to be unknown, item III or IV receptive and items IV and V productive.

3.4. Data Collection Procedure

The data was collected in the 2008-2009 academic year and class hour was allocated for this. In order to familiarize the participants with the instrument, before its administration, the participants were given exercises of the same type during the regular class hours.

Besides, on the data collection day, they were given an example just to remind what they were required to do. For this purpose, the word "school" was used. It was explained that if they did not know the answer of the word "school" and they thought that they had not met with the word before, they would tick item I. If they knew that they had met the word before, but could not remember the meaning of it, they would tick item II. If they thought that they, in a way, know the meaning of the word, but not sure of it, they would tick item III and write their answer for the synonym or translation of the word. If they thought that they knew the meaning of the word correctly, they would tick item IV and write the correct synonym or translation of the word. In the example, translation of the word "school" was given. For item V they were told that their sentences should represent the meaning of the word clearly and the sentence "I like school" was given as an example which was not going to be evaluated as correct. It was indicated that the example sentence was correct in terms of form, use and meaning, but it does not clearly display the meaning of the word. Instead of it, the sentence "I studied for English exam with my friends at school" was told to be acceptable because it gives details about "school" context and clarifies the meaning in the sentence.

The test was administered one week before the second midterm of the participants. It can be said that the participants were studying for the exam and revising the words they had learnt during the whole year. The test was administered during a regular class hour and any time limitation was not given because they were expected to construct sentences that were correct in

terms of form, use and meaning. Totally, it took 70 minutes for the test to be completed by all the participants.

The participants were told that the test was conducted for a research before they started answering it. To get the consent of the participants an explanation about the research was given at the beginning of the test. They were told that although it was for a research they would be given a quiz grade. This was done to ensure that participants did their best in order to get some extra points.

3.5. Data Analysis

The answers of the students were evaluated by two different raters. Two raters independently evaluated the synonyms or translations and sentences in the test and inter-rater reliability was calculated using Tawny and Gast's (1984) formula:

the n of agreements

_____ X 100

the n of agreements X the n of disagreements

The inter-rater reliability was found to be 96%.

After evaluating the answers of the students, descriptive analyses conducted by calculating how many words were known by each participant in each frequency band receptively and productively. Then, the number of adjectives, nouns and verbs receptively and productively known and the number of them that were not known by each participant were calculated as well. These descriptive analyses helped to find the relationship between unknown, receptively and productively known words within each frequency band. In addition to it, descriptive analyses

helped to see the relationship between unknown, receptively and productively known words for each grammatical class of words. However, for finding out the relationship between three frequency bands in terms of unknown, receptively and productively known words correspondence analysis was conducted. Moreover, for the seeing whether there was a relationship between grammatical classes of words (noun, verb and adjective) and unknown, receptively known and productively known words, correspondence analysis was conducted as well. The findings of these analyses are given in the next chapter.

CHAPTER 4

RESULTS AND DISCUSSION

This study aims to find out the effects of exposure frequency and grammatical classes of words on receptive and productive vocabulary knowledge of EFL learners.

The current chapter provides the results of the analyses utilized to answer the research questions. In order to examine the effects of exposure frequency and grammatical classes of words on those words' being in receptive and productive vocabulary knowledge of EFL learners, both descriptive and statistical analyses were conducted based on the procedures described in the previous chapter. The first research question investigated the relationship between exposure frequency and words' being in EFL learners' productive or receptive vocabulary. The second research question tried to find out whether there was any effect of grammatical classes of words on their being in receptive or productive vocabulary knowledge of EFL learners. To answer these two questions, a translated version of the vocabulary knowledge scale was given to the participants upon completion of 25 weeks of intensive language instruction. The findings of the descriptive and statistical analyses for each research question are given in the following sections.

4.1. Analysis of the Findings for Research Question 1

The first research question of the study tried to find an answer to whether there was a relationship between exposure frequency and words' being in receptive and productive vocabulary knowledge of EFL learners. In terms of exposure frequency, there were three different groups of words according to how many times the participants had met them before taking the test. The first group of words was among the exposure frequency of 1 to 5, the second

group of words was between 6 and 11 and the last group included the words that had been met 12 or more times before the test was taken. The first research question investigated whether the more the learners were exposed to the words; the more likely they learnt the words receptively and/or productively. For answering this research question, both descriptive and statistical analyses were conducted. Before finding of if there was a relationship between exposure frequency and how well the students knew the words (unknown, receptive and productive), the descriptive results are presented for each frequency band. It means for each exposure frequency band, the number of words that were known receptively and productively; and the number of words that were not known by each participant was descriptively analyzed.

The first frequency band included 21 words that had been met before 1 to 5 times. While analyzing the data for the first frequency band, firstly, the highest and the lowest numbers of words that were not known, receptively and productively known were looked into and mean, median and mode were calculated to understand the students' level of knowing words better. (Table 4. 1.)

Table 4. 1. "Levels of Knowing" for the First Frequency Band Words

Students	Unknown	Receptive	Productive
1	10	7	4
2	12	7	2
3	10	10	1
4	10	8	3
E5	4	14	3
6	10	8	3
7	9	9	3
8	8	10	3
9	10	10	1
10	14	7	0
11	10	9	2
12	6	11	4
13	12	8	1
14	9	9	3
15	4	11	6
16	8	11	2
17	5	12	4
18	13	6	2
19	9	9	3
20	5	13	3
	Mode: 10 **Median: 9,5** **Mean: 8,9**	**Mode: 9** **Median: 9** **Mean: 9,45**	**Mode: 3** **Median: 3** **Mean:2,65**

When the data above is analyzed, it can be seen that the highest number of unknown words was 14 and the lowest one was 4. For the words that were receptively known by the participants, the highest number was again 14 and the lowest number was 6. The highest number of productively known words was 6 and there was 1 student who did not know any of the 21 words productively. The highest numbers of unknown and receptively known words were the same but it was lower for productively known words.

Besides the score which was observed more frequently than the others, mode, for the words in each level of knowing (unknown, receptive and productive), was calculated. Mode, the

score which was observed more frequently than the others, of the unknown words for the first frequency band was 10 and that of receptively known words was 9. As it can be clearly seen, the mode values of unknown and receptively known words were slightly different from each other. On the other hand, the mode of the productively known words was 3. It means that in the first frequency band, the number of unknown and receptively known words was close but productively known words were lower than both receptively known and unknown words.

Median, which is defined as "the value of a set of scores which has the same number of observations above and below it when the observations are ranked from highest to lowest" (Nunan, 1992, p. 231) was calculated for each level of knowing, as well. Like their mode values, the median of the unknown and receptively known words was close to each other and they were 9,5 and 9 respectively. However, the median of the productively known words was lower than the other two categories and it was 3. The mean scores of the levels of knowing for the first frequency band showed a similar tendency with the median values. The receptively known words had the highest mean score, 9,45. The unknown words were following the receptively known words with the mean score of 8,9 and among these levels of knowing productively known words had the lowest mean score 2,65.

In conclusion, the calculations of mode, median and mean for unknown, receptively known and productively known words clearly show that the number of productively known words was lower than the number of unknown and receptively known words. In addition, the numbers of receptively known and unknown words were close, there was a slight difference between their numbers.

For analyzing the second frequency band, which included 21 words that had been met by the participants 6 to 11 times before the test, again the highest and lowest numbers of words that

were not known, receptively known and productively known were looked into and mean, median and mode were calculated to understand the students' level of knowing words better. (Table 4. 2.)

Table 4. 2. "Levels of Knowing" for the Second Frequency Band Words

Students	Unknown	Receptive	Productive
1	6	8	7
2	6	7	8
3	1	18	2
4	2	8	11
5	1	11	9
6	7	9	5
7	5	10	6
8	1	12	8
9	3	11	7
10	5	9	7
11	3	11	7
12	4	4	13
13	5	12	4
14	4	10	7
15	0	3	18
16	8	6	7
17	3	11	7
18	3	7	11
19	4	7	10
20	2	14	5
	Mode: 3 **Median: 3,5** **Mean: 3,65**	**Mode: 11** **Median: 9,5** **Mean: 9,4**	**Mode: 7** **Median: 7** **Mean:7,95**

Table 4.2 shows that the highest number of receptively and productively known words was the same and it was 18. However, the highest number of unknown words was 8. The lowest numbers of the unknown words was 0. It meant that there was a student who knew all of the words in this frequency band either receptively or productively. The lowest number of receptively known words in this band was 3 and that of productively known words was 2.

In the second frequency band, among the three levels of knowing, receptively known words had the highest mode and it was 11. The mode of productively known words was lower than that of receptively known words and it was 7. The lowest mode of this frequency band was 3 and it belonged to the unknown words.

The median of the receptively known words was higher than the other groups and it was 9,5. For the unknown words, the median was 3,5 and the median of the productively known words was 7. The rank that is observed in the medians was again valid for the mean scores. The receptively known words had the highest mean score, 9,4. The productively known words were following the receptively known words with the mean score of 7,95 and among these knowing levels unknown words had the lowest mean score, 3,65.

The mode, median and mean values for the second frequency band suggested that the number of receptively known words was higher than the other two levels of knowing. In addition, it can also be said that the number of unknown words were lower than both receptively known and productively known words.

For the third frequency band, which included 21 words that had been met by the participants 12 or more times before the test, the highest and lowest numbers of words that were not known, receptively known and productively known were analyzed; mean, median and mode were calculated. (Table 4. 3.)

Table 4. 3. "Levels of Knowing" for the Third Frequency Band Words

Students	Unknown	Receptive	Productive
1	2	8	11
2	3	6	12
3	0	16	5
4	4	6	11
5	2	10	9
6	3	10	8
7	2	9	10
8	4	10	7
9	0	12	9
10	3	12	6
11	1	6	14
12	0	8	13
13	6	12	3
14	4	7	10
15	0	7	14
16	0	7	14
17	1	3	17
18	3	0	18
19	6	6	9
20	4	11	6
	Mode: 0 **Median: 2,5** **Mean: 2,4**	**Mode: 6** **Median: 8** **Mean: 8,3**	**Mode: 9 & 14** **Median: 10** **Mean:10,3**

The data given above indicate that the highest number of unknown words was 6 and lowest one was 0. For the words that were receptively known by the participants, the highest number was 16 and the lowest number was 0. The highest number of productively known words was 18 and the lowest number was 3. The highest numbers of productively known and receptively known words were close but unknown words' was lower than them.

The calculations of the mode of the unknown, receptively known and productively known words were conducted for the third frequency band, as well. The mode of the unknown words in this band was 0 because there were 5 students who knew all of the 21 words either receptively or

productively. For receptively known words, it was 6. However, there were two different mode values of the productively known words and they were 9 and 14, 3 students had 9 productively known words and 3 students had 14 productively known words. It means that in the third frequency band, the number of productively known words was higher than the number of receptively known and unknown words.

Median was calculated for each level of knowing in the third frequency band, as well. In this band, the median of the productively known words was higher than the other groups and it was 10. For the receptively known words, the median was 8 and the median of the unknown words was 2,5. The rank that is observed in the medians was again valid for the mean scores. The productively known words had the highest mean score, 10,3. The receptively known words were following the productively known words with the mean score of 8,3 and among these levels of knowing unknown words had the lowest mean score, 2,4.

To sum up the third frequency band, it can be said that the mode, median and mean values for the third frequency band suggested that the number of productively known words was higher than the other two levels of knowing. In addition, it can also be said that the number of unknown words were lower than both receptively known and productively known words.

The analyses of the mode, median and mean of the unknown, receptively known and productively known words for each of the three exposure frequency bands are given above. In addition to them, to find out if there was a relationship between exposure frequency and a word's being in students' receptive or productive vocabulary, correspondence analysis was employed. The reason of using this analysis was having three exposure frequency bands and three levels for knowing a word (unknown, receptively known and productively known). To run this analysis, firstly, the numbers of unknown, receptively known and productively known words for each frequency band were calculated by adding up the scores of the students for each and every

category. For example, the scores in the first column in Table 4.1 were added up to find out the number of unknown words in the first frequency band. The same procedure was repeated for each frequency band and knowledge level. The results are presented in Table 4. 4.

Table 4. 4. Correspondence Analysis Results for Exposure Frequency Bands

| Exposure Frequency Bands* Levels of Knowing Words Crosstabulation						
			Levels of Knowing Words			Total
			Productive	Receptive	Unknow	
Exposure Frequency Bands	1 to 5	Count	53	189	178	420
		% within frequency band	12,6%	45,0%	42,4%	100,0%
	6 to 11	Count	157	191	72	420
		% within frequency band	37,4%	45,5%	17,1%	100,0%
	12 & more	Count	207	165	48	420
		% within frequency band	49,3%	39,3%	11,4%	100,0%
Total		Count	417	545	298	1260
		% within frequency band	33,1%	43,3%	23,7%	100,0%

Chi Square=187,459 p=0,001

When Table 4.4 is examined, the relationship between levels of knowing within and between the exposure frequency bands can clearly be seen. As the statistical significance level was used as $\alpha = 0,05$ for all the independent sample findings, there was a relationship between exposure frequency and levels of knowing (unknown, receptively known, productively known) (X^2=187,459 and p=0,001<0,05). The unknown words constituted 42,4% of the words in the first exposure frequency. In the second band, the percentage of the unknown words decreased to 17,1 and in the third band to 11,4. It meant that the more the students were exposed to the words, the better they learnt them either receptively or productively because the amount of unknown words decreased when the exposure frequency increased. For the receptively known words the results indicated that there was not an important decrease or decrease. In the first exposure frequency band receptively known words were 45%, in the second band they were 45,5%, there was a slight difference between the first two bands, and in the third one they were 39,3%. The percentages for

receptively known words in each exposure frequency band showed that there was not a relationship between exposure frequency and receptive knowledge. However, the results were not the same for productively known words. Its percentage in the first exposure frequency band was 12,6%; in the second one it was 37,4% and in the third band it was 49,3%. These percentages clearly revealed that there was a significant relationship between exposure frequency and words' being in students' productive vocabulary. The more they were exposed to the words, the better they learnt them productively.

In short, there was a relationship between exposure frequency and levels of knowing. The amount of unknown words decreased when the amount of exposure frequency increased and the amount of productively known words increased when the exposure frequency increased as well. However, for receptively known words there was not a significant difference between frequency bands. The relationship between exposure frequency and levels of knowing can be seen in Graph 4.1.

Graph. 4.1. The Relationship between Exposure Frequency and Levels of Knowing Words
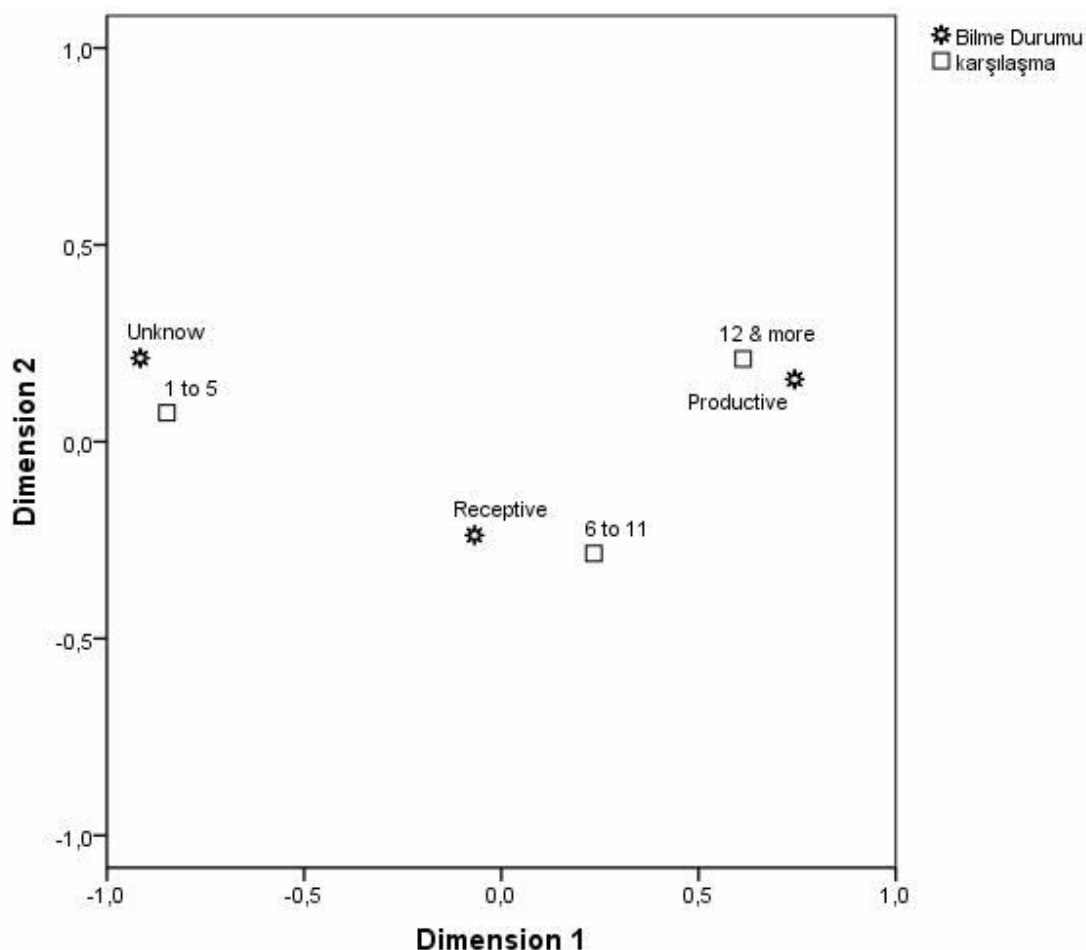
Graph. 4.1 clearly shows that there was a relationship between not knowing a word and being exposed to it from 1 to 5 times as both of them were in row 1 and column 1 (in dimension 1 their values were between -1 and 0; in dimension 2 their values were between 0 and 1). It meant that the students in this study could not learn the words they had met for 1 to 5 times. In other words, most of the unknown words were the ones that had been met 1 to 5 times. In addition to the relationship between unknown and 1 to 5, there was a relationship between learning the words productively and meeting them 12 or more times. Graph 4.1. showed that their values in

both of the dimensions were between 0 and 1 and they took place in the same row and column. It was an indication of the relationship between them. It revealed that the students who took part in the study learnt the words they had met for 12 or more times mostly productively. In other words, for learning the words productively, they needed to see the words 12 or more times. On the other hand, there was not a significant relationship between 6 to 11 times and receptive knowledge although they were very close to each other in graph 4.1. In dimension 1, their values were not in the same column; receptive one was between -1 and 0 while 6 to 11 was between 0 and 1.

In short, the study showed that there was not a relationship between knowing the words receptively and being exposed to them between 6 to 11 times. However, there was a relationship between not knowing the words and seeing them 1 to 5 times and between knowing the words productively and 12 and more exposure frequency rate.

The first research question investigated the relationship between receptive and productive vocabulary knowledge of EFL learners and exposure frequency. After analyzing the results of the test, it was found that the difference between receptive and productive vocabulary knowledge increased as the exposure frequency decreased. Especially, there was a relationship between exposure frequency and productive vocabulary knowledge of EFL learners when the exposure frequency increased, the number of words that participants knew productively increased as well. However, for receptive one, there was not a clear increase or decrease. It was also seen that when the productive vocabulary knowledge increased, the receptive one decreased in a way. This result gives support to the common assumption that receptive knowledge precedes productive knowledge (Aitchison, 1994; Channel, 1988; Melka, 1997). In other words, comprehension precedes production or that simply production is more difficult than reception (Waring, 1997). As Waring (2002) stated there is a continuum between receptive and productive knowledge and "One has to meet a word in reception before it can be produced (2002, pp.1)" These explanations

showed the relationship between receptive and productive vocabulary knowledge in terms of increases and decreases.

Although, Waring (1997) found that for all frequency bands, receptive vocabulary was larger than the productive one, it was not the same in the present study, because especially for the third exposure frequency band, the participants' productive vocabulary was larger than their receptive one. However, it should also be emphasized that Waring's study was based on the exposure frequency bands, as most of the studies that investigated receptive and productive vocabulary knowledge (Nation, 1990; Laufer & Nation, 1999). They were based on word lists. However, the present study was based on exposure frequency and the words that were used in the test were met by the participants in advance. Because of this, it was quite normal for the participants to know more productive words in the third frequency band. However, in Waring's (1997) study, it is not clear whether the participants had met the words used in the test before taking that test. These studies (Waring, 1997; Nation, 1990; Laufer & Nation, 1999) focused on the general receptive and productive vocabulary knowledge of the learners while the present study focused on some of the words that had been met before in the books used for instruction. In other words, this study did not aim to find out the general vocabulary knowledge, all of the words were taught during the courses. As a result, because of these reasons it was thought to be normal that in the third exposure frequency band, the number of productively known words were higher than the number of receptively known words.

4.2. Analysis of the Findings for Research Question 2

The second research question of the study tried to find an answer to whether there was a relationship between grammatical classes of the words and words' being in receptive and

productive vocabulary knowledge of EFL learners. In terms of grammatical classes, there were three different groups of words as nouns, verbs and adjectives. In the each of the three exposure frequency bands, there were 7 nouns, 7 verbs and 7 adjectives. As there were three exposure frequency bands, there were totally 21 nouns, 21 verbs and 21 adjectives in the test. The second research question investigated whether there was any grammatical class of words that was easy for the students to learn productively or receptively. For answering this research question, both descriptive and statistical analyses were conducted, as it was done for the first research question. Before finding of if there was a relationship between grammatical classes of words and how well the students knew the words (unknown, receptive and productive), the descriptive results are presented for each grammatical class. It means for each grammatical class, the number of words that were known receptively and productively; and the numbers of words that were not known by each participant were descriptively analyzed.

The first grammatical class that was investigated in each of three exposure frequency band was verbs. While analyzing the data for verbs, firstly, the highest and the lowest numbers of words that were not known, receptively and productively known were looked into and mean, median and mode were calculated to understand the students' level of knowing verbs better. (Table 4. 5.)

Table. 4.5. Levels of Knowing for Verbs

Students	Unknown	Receptive	Productive
1	6	9	6
2	6	11	4
3	2	16	3
4	7	6	8
5	4	12	5
6	9	9	3
7	5	10	6
8	6	10	5
9	5	11	5
10	6	12	3
11	4	10	7
12	3	12	6
13	10	10	1
14	7	8	6
15	2	9	10
16	6	9	6
17	5	8	8
18	6	7	8
19	8	10	3
20	4	12	5
	Mode: 6 **Median: 6** **Mean: 5,5**	**Mode: 10** **Median: 10** **Mean: 10,05**	**Mode: 6** **Median: 5,5** **Mean:5,4**

When the results of the levels of knowing verbs are analyzed, it can be seen that the highest number of unknown verbs was 10 and the lowest one was 2. For the verbs that were receptively known by the participants, the highest number was 16 and the lowest number was 6. The highest number of productively known verbs was 10 and the lowest number of them was 1. The highest numbers of unknown and productively known verbs were the same but it was higher for receptively known verbs.

The mode of unknown and productively known verbs was 6, while that of receptively known verbs was 10. When the median of three levels of knowing verbs was calculated, it was seen that the median of the receptively known verbs was higher than the other groups and it was 10. The median of the other two levels of knowing verbs was nearly the same; it was 6 for the unknown verbs and 5,5 for the productively known ones. The mean scores of the three levels of verbs showed that the mean of the receptively known verbs was 10,05 and it was higher than the other two groups. The mean of unknown verbs was 5,5 and that of productively known verbs was 5,4.

The mode, median and mean values for the verbs suggested that the number of receptively known verbs was higher than the number of verbs in the other two levels of knowing. In addition, it can also be said that the number of unknown verbs and productively known verbs was nearly the same as the mode, median and mean scores indicated. In short, it can be said that the participants knew the verbs in the test receptively better than they knew them productively.

After verbs, the second grammatical class of words that was analyzed was nouns. For the 21 nouns in the test, the highest and the lowest numbers that were not known, receptively known and productively known were analyzed; mean, median and mode were calculated as well for seeing the distribution of nouns in the three levels of knowing in a detailed way. (Table 4. 6.)

Table. 4.6. Levels of Knowing for Nouns

Students	Unknown	Receptive	Productive
1	5	8	8
2	8	4	9
3	4	17	0
4	6	7	8
5	3	11	7
6	7	10	4
7	6	10	5
8	4	10	7
9	5	10	6
10	8	7	6
11	5	8	8
12	5	5	11
13	7	13	1
14	6	11	4
15	2	7	12
16	6	10	5
17	3	9	9
18	7	3	11
19	8	8	5
20	6	12	3
	Mode: 6 **Median: 6** **Mean: 5,5**	**Mode: 10** **Median: 9,5** **Mean: 9**	**Mode: 5&8** **Median: 6,5** **Mean:6,45**

The data given above indicate that the highest number of unknown nouns was 8 and lowest one was 2. For the nouns that were receptively known by the participants, the highest number was 17 and the lowest number was 3. The highest number of productively known nouns was 12 and the lowest number was 0. The highest numbers of nouns in each level of knowing was different from each other but that of unknown nouns was lower than productively known and receptively known nouns.

For seeing the relationship between levels of knowing nouns, the calculations of the mode, median and mean of the unknown, receptively known and productively known nouns were done as well. Receptively known nouns had the highest mode value and it was 10. The mode of unknown nouns was lower than the mode of receptively known nouns and it was 6. However, there were two different mode values of the productively known nouns and they were 5 and 8; 3 students had 5 productively known nouns and 3 students had 8 productively known nouns.

Median calculations for each level of knowing nouns showed that the median of the receptively known nouns was higher than the other groups and it was 9,5. The median of the other two groups was nearly the same; for productively known nouns, the median was 6,5 and the median of the unknown nouns was 6. The rank that is observed in the medians was again valid for the mean scores. The receptively known nouns had the highest mean score, 9. There was a slight difference between the mean scores of unknown and productively known nouns. The productively known nouns were following the receptively known nouns with the mean score of 6,45 and among these levels of knowing unknown nouns had the lowest mean score, 5,5.

To sum up the distribution of nouns in three levels of knowing, it can be said that the mode, median and mean values for nouns suggested that the number of receptively known nouns was higher than the other two levels of knowing. In addition, it can also be said that the number of unknown and productively known nouns were nearly the same.

In addition to verbs and nouns, the analyses for the third grammatical class, adjectives, were also conducted. As they were done for the first two grammatical classes of words, for the 21 adjectives in the test the highest and the lowest numbers for each of the three levels of knowing were analyzed. In addition to them, mode, median and mean of the unknown, receptively known and productively known adjectives were calculated for a detailed analysis (Table. 4.7.).

Table. 4.7. Levels of Knowing for Adjectives

Students	Unknown	Receptive	Productive
1	7	6	8
2	7	5	9
3	5	11	5
4	3	9	9
5	0	12	9
6	4	8	9
7	5	8	8
8	3	12	6
9	3	12	6
10	8	9	4
11	5	8	8
12	2	6	13
13	6	9	6
14	4	7	10
15	0	5	16
16	4	5	12
17	1	9	11
18	6	3	12
19	3	4	14
20	1	14	6
	Mode: 3 **Median: 4** **Mean: 3,85**	**Mode: 9** **Median: 8** **Mean: 8,1**	**Mode: 6&9** **Median: 9** **Mean:9,05**

The analyses of the highest and the lowest numbers of adjectives according to the three levels of knowing showed that the highest number of unknown adjectives was 8 and the lowest number was 0. In other words, there were 2 students who knew all of the adjectives either receptively or productively. For receptively known adjectives, the highest number was 14 and the lowest number was 3. For the last group, the productively known adjectives, the highest number was 16 and the lowest one was 4. The results of the highest and the lowest numbers of adjectives revealed that most of the adjectives were known either receptively or productively.

The mode, median and mean calculations gave more details about the relationship between the three levels of knowing and adjectives. The mode values of the three levels of knowing showed that the mode of receptively known adjectives was 9 and that of unknown adjectives was 3. On the other hand, productively known adjectives had 2 different mode values 6 and 9. There were 4 students who knew 6 of the adjectives productively and again 4 students who knew 9 of the adjectives productively.

The median of unknown adjectives was lower than the other two groups and it was 4. The median of receptively known adjectives was higher than that of unknown adjectives and it was 8. On the other hand, the median of receptively known adjectives and that of productively known adjectives were very close to each other and both of them were higher than the median of unknown adjectives. The median of productively known adjectives was 9.

The mean scores of the receptively and productively known adjectives were close to each other and the rank of mean scores was the same with the median of the three levels of knowing. Productively known adjectives had the highest mean score and it was 9,05. The mean score of productively known adjectives was followed by the mean score of receptively known adjectives and it was 8,1. The lowest mean score was 3,85 and it belonged to unknown adjectives.

The mode, median and mean scores of adjectives for three levels of knowing clearly showed that most of the adjectives were known either receptively or productively by the students. When the receptively and productively known adjectives are compared, it can be seen that the number of productively known adjectives was slightly higher than the number of receptively known adjectives.

In addition to the analyses of mode, median and mean of the three grammatical classes of words used in the test, to find out if there was a relationship between grammatical classes of words and a word's being in students' receptive or productive vocabulary, correspondence

analysis was employed. By the help of the graphics, correspondence analysis helped to see the relationship between grammatical classes and receptive and productive vocabulary knowledge. To run this analysis, firstly, the numbers of unknown, receptively known and productively known words for each grammatical class were calculated by adding up the scores of the students for each and every category. For example, the scores in the first column in Table 4.5 were added up to find out the number of unknown verbs. The same procedure was repeated for each grammatical class and knowledge level. The results are presented in Table 4. 8.

Table. 4.8. Correspondence Analysis Results for Grammatical Classes of Words

| Grammatical Class * Level of Knowing Crosstabulation						
			Levels of Knowing			Total
			Productive	Receptive	Unknow	
Grammatical Class	ADJECTIVE	Count	181	162	77	420
		% within Grammatical Class	43,1%	38,6%	18,3%	100,0%
	NOUN	Count	129	180	111	420
		% within Grammatical Class	30,7%	42,9%	26,4%	100,0%
	VERB	Count	107	203	110	420
		% within Grammatical Class	25,5%	48,3%	26,2%	100,0%
Total		Count	417	545	298	1260
		% within Grammatical Class	33,1%	43,3%	23,7%	100,0%

Chi Square= 32,963 p=0,001

When the Table 4.8 is examined, the relationship between levels of knowing and grammatical classes of words can clearly be seen. There was a relationship between grammatical classes of words and levels of knowing (unknown, receptively known, productively known) (X^2=32,963 and p=0,001<0,05). Among the three levels of knowing, the unknown nouns and unknown verbs were very close to each other. The unknown nouns constituted 26,4% and unknown verbs 26,2% of the words. The percentage of unknown adjectives was 18,3. These results showed that adjectives were known more than nouns and verbs. When receptively known words are investigated, it can be seen that verbs were known receptively more than the other two

grammatical classes with 48,3%. After verbs, the highest proportion of receptively known words belonged to nouns with 42,9%. The lowest receptively known word percentage was adjectives' and it was 38,6%. As a result, it was found that verbs were known receptively more than the other two grammatical classes. Lastly, the results of the productively known words showed that adjectives were known productively more than nouns and verbs. Productively known adjectives were 43,1%. After adjectives, the second productively known grammatical class was nouns with 30,7% . Verbs were the grammatical class which had the least proportion in terms of being learnt productively with 25,5%.

In conclusion, there was a relationship between grammatical classes of words (verbs, nouns and adjectives) and levels of knowing them. For example, verbs were known receptively more than the other two grammatical classes. Adjectives were known productively more than nouns and verbs. The relationship between grammatical classes of words and levels of knowing them can be seen clearly in Graph. 4.2.

Graph. 4.2. The Relationship between Grammatical Classes and Levels of Knowing Words
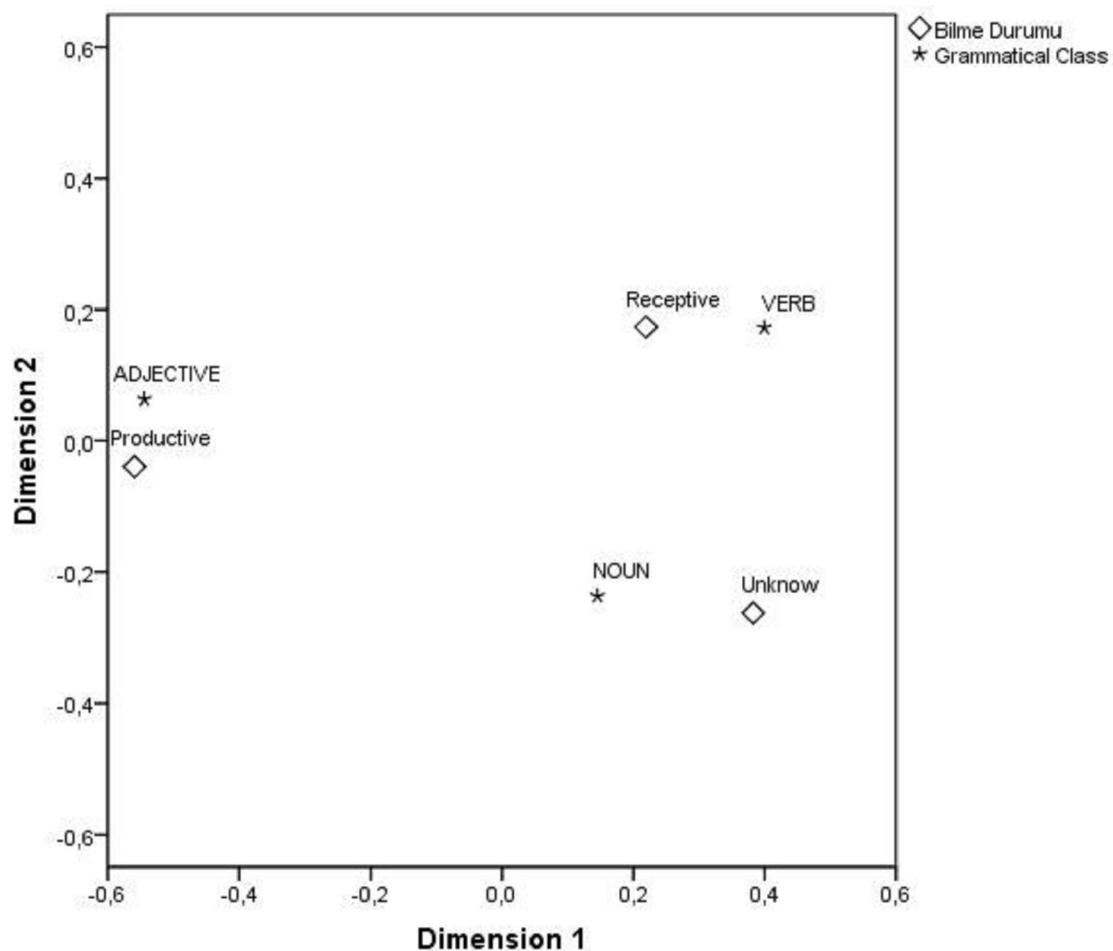
Graph. 4.2 clearly shows that there was a relationship between unknown words and nouns as both of them were in row 1 and column 1 (in dimension 1, their values were between 0,0 and 0,6 while in dimension 2 they were between 0,0 and -0,6). It meant that most of the words that the students in this study could not know were nouns. In addition to the relationship between unknown words and nouns, there was a relationship between learning the words receptively and verbs. Graph 4.2. showed that their values in both of the dimensions were between 0,0 and 0,6 and they took place in the same row and column. It was an indication of the relationship between

them. It revealed that the students who took part in the study learnt the verbs mostly receptively. In other words, most of the receptively known words were verbs. On the other hand, there was not a significant relationship between adjectives and productive knowledge although they were very close to each other in Graph 4.2. In dimension 2, their values were not in the row column; productive one was between 0,0 and -0,6 while adjective was between 0,0 and 0,6.

In short, the study showed that there was a significant relationship between knowing the words productively and adjectives, although they tend to be mostly known productively. However, it was found that nouns were less known and verbs were known receptively.

The second research question investigated the relationship between receptive and productive vocabulary knowledge of EFL learners and grammatical classes of words. There was a relationship between verbs and receptive vocabulary knowledge of EFL learners. In other words, the participants of the present study knew more verbs receptively than they knew them productively. It might show that learning verbs productively is difficult and because of that they knew most of them receptively. It was also found that after verbs, the second grammatical class that was known receptively was nouns. For productive knowledge, it seems that adjectives were better than nouns and nouns were better than verbs.

Although the findings of other studies in the literature show that learning nouns is easier than learning verbs and adjectives (Morgan and Bonham, 1944 & Phillip, 1981) the findings of the present study show that the grammatical class of words which were known most by the participants was not nouns. In the present study, the number of adjectives known productively is higher than nouns and verbs known productively and there is a significant difference. There can be possible explanations for this. Firstly, in the previous studies (Morgan and Bonham, 1944 & Phillip, 1981) the difference between receptive and productive knowledge is not indicated and when they say "nouns were learnt more quickly than others" it is not known whether it is

receptive or productive knowledge or both. However, in the present study, receptive and productive knowledge of each grammatical class is given separately. Thirdly, studies that focus on grammatical classes of words are generally based on incidental vocabulary learning through reading as Pigada and Schmitt (2006) did in their study. In the present study, the words are taught to the students by giving instruction; they were not exposed to words in reading. They were engaged with these words both in receptive and productive skills. For example, in the exercises of the books used by the students, they were expected to use the newly learnt words in writing, or speaking activities. In conclusion, the students' being exposed to these words at different range of frequency, their being used/learned by using different skills together and their not being chosen by word lists may have led to these results. However, to reach conclusive results, further studies are needed.

CHAPTER 5

CONCLUSION

5.1. Summary of the Study

This study investigated the relationship between receptive and productive vocabulary knowledge of EFL learners in terms of grammatical classes of words and exposure frequency. It examined whether there was any difference between nouns, verbs and adjectives in terms of being in participants' receptive or productive vocabularies. In addition to them, the study tried to find an answer to whether there was a relationship between exposure frequency and receptive and productive vocabulary knowledge. In other words, how the increase or decrease in exposure frequency affect words' being in receptive or productive vocabulary of participants. The study was carried out with 20 students of pre-intermediate level at the Department of Foreign Languages at Niğde University because at the time of the research, the researcher worked at Niğde University.

The data was collected through a test designed using the Vocabulary Knowledge Scale of Paribakht and Wesche (1993). The test was conducted with 20 subjects. After that, the responses of the participants were analyzed in order to see the relationship between the receptive and productive vocabulary knowledge of EFL learners in terms of grammatical classes of words and exposure frequency.

After the analyses conducted by two different raters on whether the words are in receptive or productive vocabulary sizes of the subjects, the results were analyzed using descriptive and statistical analyses. For seeing the relationship between receptively known, productively known and unknown words in each of the three frequency band, the numbers of the words in each level

of knowing were calculated. Also, for seeing the relationship between grammatical classes and receptively, productively known and unknown words for each students were descriptively analyzed. For the relationship among exposure frequency bands and among grammatical classes of words statistical analyses were conducted.

5.2. Conclusions of the Study

In this part, the concluding points that have been reached by the help of the present study are presented.

The first research question tried to answer the question how the receptive and productive vocabulary knowledge of the participants change according to exposure frequency. As the proportion of receptive vocabulary decreased when that of productive one increased, the effect of exposure frequency was seen especially on productive vocabulary. As the words in receptive vocabulary are not used actively, they are remembered in a way and it is not important to be exposed to them several times. In terms of productive vocabulary knowledge, the results revealed that there was an important difference between the three frequency bands.

The second research question aimed to find the relationship between grammatical class of words (nouns, verbs and adjectives) and receptive and productive vocabulary sizes. Receptively, verbs were known better than the other two grammatical classes. However, the analyses showed that productively adjectives were known better than nouns and verbs.

5.2. Pedagogical Implications of the Study

Like the previous studies done on the same topic, this study again showed that the receptive vocabulary is larger than the productive one. As stated by Nation (1990), the more words a person knows, the more easily s/he can learn other words. For making the gap between receptive and productive vocabularies narrower, the exposure frequency of the words should be paid attention. Teachers should be aware of the receptive and productive vocabulary knowledge of students and should make sure that the target words are repeated enough to be learnt by students. For making the vocabulary learning happen, the space of repetition should also be given importance. Teachers should repeat the words regularly at first but then less. In addition to them, teachers should also be careful about the frequency of the words while choosing a coursebook. As the amount of time spend for in-class instruction is very valuable and for foreign language learners classroom instruction is the only chance for receiving language input, Nation (1990) reminds teachers not to spend time on words that are not frequently used in the language. If the learners are not exposed enough to the word and also if they are not forced to output, it is not likely for them to learn new words and improve their receptive and productive vocabulary knowledge.

Curriculum developers should identify the words needed to be known receptively or productively by learners according to their needs and make sure that students are exposed to these words sufficiently. For example, in the Nigde University context, with the help of the results of this study, needs analysis can be done by asking the students who are still at prep class and who has already started to their departments; and by asking the instructors at prep class and lecturers in the departments the words that are to be learnt at prep class. In addition to needs analysis, frequency lists can also be used and the prep program can be restructured in terms of vocabulary.

Lastly, this study indicates that being exposed to a word 12 or more times helps the students learn the word productively. It does not give an exact number of exposure frequency for receptive and productive learning, but it shows that teachers should pay attention to the exposure frequency of the words and help learners improve their productive vocabulary by helping them use the words productively.

5.3. Suggestions for Further Studies

This study indicated that there was a relationship between exposure frequency and levels of knowing a word. To verify the findings of this study, a similar study can be conducted with larger number of participants.

The present study was conducted with pre-intermediate level students. To find out if the relationship between exposure frequency and level of knowing a word changes according to language proficiency level, studies with participants at various proficiency levels can be carried out.

In the present study, use of words productively was limited to written language and it was in sentence level. In further studies tasks which require use of words in oral production can be designed. Also, students may be required to produce written and/or oral texts to show their mastery of these words.

REFERENCES

Aitchison, J. (1994). *Words in the Mind.* Oxford: Blackwell.

Channell, J. (1988). Psycholinguistic considerations in the study of L2 vocabulary acquisition. In R. Carter & M. McCarthy (Eds.), *Vocabulary and Language Teaching* (pp.83-96). London: Longman.

Brewster, J., Ellis, G. & Girard D. (2002). *The Primary Eglish Teacher's Guide*. Essex: Pearson Education.

Brown, C. (1993). Factors affecting the acquisition of vocabulary: Frequency and saliency of words. In T. Huckin & M. Haynes & J. Coady (Eds.), *Second language reading and vocabulary learning*. Norwood, N.J.: Ablex.

Chen, Y. (2009). A cognitive linguistic approach to classroom English vocabulary instruction for EFL learners in mainland China. *English Language Teaching 2* (1), 94-100.

Clark, E. V. (1993). *The Lexicon in Acquisition.* Cambridge: Cambridge University Press.

Coady, J. & Huckin, T. (1997). *Second Language Vocabulary Aquisition: A Rationale for Pedagogy.* Cambridge: Cambridge University Press.

Coxhead, A. (2006). *Essentials of teaching academic vocabulary*. Boston, U.S.: Houghton Mifflin Company.

Crow, J. (1986). Receptive vocabulary acquisition for reading comprehension. *The Modern Language Journal 70* (4), 242–250.

Day, R., Omura, C., & Hiramatsu, M. (1991). Incidental EFL vocabulary learning and reading. *Reading in a Foreign Language, 7*, 541–551.

Dupuy, B., & Krashen, S. (1993). Incidental vocabulary acquisition in French as a foreign language. *Applied Language Learning, 4*, 55–63.

Fan, M. (2000). How big is the gap and how to narrow it? An investigation into the active and passive vocabulary knowledge of L2 learners. *RELC Journal 31* (2), 105-119.

Goulden, R., Nation P, & Read J. (1990). How large can a receptive vocabulary be? *Applied Linguistics, 11*(4), 341-363.

Hayes, D.P., Wolfer, L. T. & Wolfe, M.F.(1996). Schoolbook simplification and its relation to the decline in SAT-verbal scores. *American Educational Research Journal, 33,* 489-508.

Hirsh, D. & Nation, I. S. P. (1992). What vocabulary size is needed to read unsimplified texts for pleasure? *Reading in a Foreign Language, 8,* 689-696.

Horst, M., Cobb, T., & Meara, P. (1998). Beyond a clockwork orange: Acquiring second language vocabulary through reading. *Reading in a Foreign Language, 11*, 207-223.

Horst, M. & Cobb, T. & Nicolae, I. (2005). Expanding academic vocabulary with an interactive online database. *Language Learning & Technology,* 9, 90-110. Retrieved on April 20, 2009 from:

http:Ilt.msu.edu/vol9num2/horst/default.html

Hulstijn, J. H., Hollander, M., & Greidanus, T. (1996). Incidental vocabulary learning by advanced foreign language students: The influence of marginal glosses, dictionary use, and reoccurrence of unknown words. *Modern Language Journal, 80*, 327–339.

Huyen, N. T. T. & Nga, K. T. T. (2003). The effectiveness of learning vocabulary through games. *Asian EFL Journal,* 5.

Kang, S. H. (1995). The effects of a context-embedded approach to second-language vocabulary learning. *System,* 23 (1), 43-55.

Kweon, S. & Kim, H. (2008). Beyond raw frequency: Incidental vocabulary acquisition in extensive reading. *Reading in a Foreign Language 20* (2). 191-215.

Lee, S.L. & Munice, J. (2006). From respective to productive: Improving ESL learners' use of vocabulary in a postreading composition task. *TESOL Quarterly*, 40 (2), 295-320.

Labelle, M. (2005). The acquisition of grammatical categories: The state of the art. In H. Cohen & C. Lefebvre (Eds.), *Handbook of Categorization in Cognitive Science.* (pp. 433-452). Netherlands: Elsevier Ltd.

Laufer, B. (1992). How much lexis is necessary for reading comprehension? In P. Arnaud & H. Bejoint (Eds.), *Vocabulary and Applied Linguistics* (pp.126-132). Basingstoke: Macmillan.

Laufer, B., & Hadar, L. (1997). Assessing the effectiveness of monolingual, bilingual, and "bilingualised" dictionaries in the comprehension and production of new words. *The Modern Language Journal, 81*, 189-196.

Laufer, B. (1998). The development of passive and active vocabulary: Same or different?. *Applied Linguistics 19 (2)*. 255-271.

Laufer, B., & Paribakht, T. (1998). The relationship between passive and active vocabularies: Effects of language learning context. *Language Learning, 48,* 365-391.

Lewis, M. (1993). *The Lexical Approach, The State of ELT and a Way Forward.* Boston: Thomson Heinle.

Mokhtar, A. A. (2010). Vocabulary knowledge of adult ESL learners. *English Language Teaching.* 3 (1), 71-80.

McCarthy, M. (1990). *Vocabulary*. Oxford: Oxford University Press.

McCrostie, J. (2007). Examining learner vocabulary notebooks. *ELT Journal, 61* (3), 246-255.

Meara, P. (1990). A note on passive vocabulary. *Second Language Reserach 6* (7), 151-154.

Meara, P. (1997). Towards a new approach to modelling vocabulary acquisition. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, Acquisition and Pedagogy* (pp. 109-121). Cambridge: Cambridge University Press.

Melka, F. (1997). Receptive vs. Productive Aspects of Vocabulary. In Schmitt N. And McCarthy M. (Eds.), *Vocabulary: Description, Acquisition and Pedagogy* (pp. 84-102). Cambridge, Cambridge University Press.

Miller, G. (1991). *The science of words*. New York: W. H. Freeman & Company.

Nation, I. S. P. (1990). *Teaching and Learning Vocabulary*. New York: Newbury House.

Nation, P., & Hwang, K. (1995). Where would general service vocabulary stop and special purpose vocabulary begin? *System, 23*, 35-41.

Nation, P. & Waring R. (1997). Vocabulary Size, Text Coverage and Word Lists. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, Acquisition and Pedagogy* (pp. 6-19). Cambridge: Cambridge University Press.

Nation, I. S. P. (2001). *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.

Nattinger, J. (1988). *Some Current Trends in Vocabulary Teaching*. London: Longman.

Nunan, D. (1992). *Research Methods in Language Learning*. New York: Cambridge University Press

Öztürk, M. (2005). Vocabulary Teaching. *Ankara Universitesi Dil Dergisi,* 133, 20-28.

Paribakht, S and Wesche M. (1993). Reading comprehension and second language development in a comprehension-based ESL program. *TESL Canada Journal* 11, 9-29.

Paribakht, S and Wesche M. (1997). Vocabulary enhancement activities and reading for meaning in second language vocabulary acquisition. In J. Coady and T. Huckin (Eds.), *Second Language Vocabulary Acquisition.* (pp. 174-200). Cambridge: Cambridge University Press.

Parry, K. (1991). Building a vocabulary through academic reading. *TESOL Quarterly,* 25 (4), 629-563.

Pigada, M., & Schmitt, N. (2006). Vocabulary acquisition from extensive reading: A case study. *Reading in a Foreign Language*, *18*, 1–28.

Pitts, M., White, H., & Krashen, S. (1989). Acquiring second language vocabulary through reading: A replication of the Clockwork Orange study using second language acquirers. *Reading in a Foreign Language*, 5, 271–275.

Read, J. (2000). *Assessing Vocabulary*. Cambridge. Cambridge University Press.

Rodriguez, M. and Sadoski, M. (2000) Effects of Rote, Context, Keyword, and Context/ Keyword Methods on Retention of Vocabulary in EFL Classrooms. *Language Learning*, 50 (2), 385- 412.

Schmitt, N. (2000). *Vocabulary in Language Teaching*. Cambridge. Cambridge University Press.

Sökmen, A. (1997). Current trends in teaching second language vocabulary. In N. Schmitt & M. McCarthy. (Eds.), *Vocabulary: Description, Acquisition, and Pedagogy* (pp. 237-257). Cambridge: Cambridge University Press.

Takač, V. P. (2008). Vocabulary Learning Strategies and Foreign Language Acquisition. Clevedon: Multilingual Matter LTD.

Tawney, J. W., & Gast, D. L. (1984). *Single-subject research in special education*. Columbus, OH: Merrill.

Thornbury, S. (2002). *How to Teach Vocabulary*. Essex: Pearson Education Limited.

Vanniarajan, S. (1997). An interactive model of vocabulary acquisition. *Applied Language Learning,* 8 (2), 217-235.

Waring, R. (1997) A Comparison of the Peceptive and Productive Vocabulary Sizes of Some Second Language Learners. The Occasional papers of Notre Dame Seishin University. Retrieved on August 3, 2008 from: http://www.robwaring.org/papers/vocsize.html

Waring, R. (March, 2002) Scales of Vocabulary Knowledge in Second Language Vocabulary Assessment. The occasional papers of Notre Dame Seishin University. Retrieved on August 3, 2008 from: http://www.harenet.ne.jp/waring/papers/scales.html

Webb, S (2007). The effects of repetirion on vocabulary knowledge. *Applied Linguistics, 28*, (1), 46-65.

Webb, S. (2008). Receptive and Productive Vocabulary Sizes of L2 Learners. *SSLA, 30*, 79-95.

Zechmeister, E.B., Chronis, A.M., Cull, W.L., D'Anna, C.A. & Healy, N.A. (1995). Growth of a functionally important lexicon. *Journal of Reading Behavior 27*(2), 201-212.

APPENDIX

Sevgili öğrenci,
Bu çalışma yükseklisans tez çalışması kapsamında kelime öğretiminde maruz kalma sıklığının öğrenme üzerine etkisini belirlemek amacıyla yapılmaktadır. Bu sorulara verdiğiniz cevaplar çalışma kapsamında kullanılacak ve kesinlikle gizli tutulacaktır.
Bu soruları cevaplamanız çalışmaya kabul ettiğiniz anlamına gelecektir.
Çalışmaya verdiğiniz destek için teşekkür ederiz.
Zeynep ÖZDEM

		1. Bu kelimeyi gördüğümü hatırlamıyorum.	2. Bu kelimeyi daha önce gördüm fakat ne anlama geldiğini bilmiyorum.	3. Bu kelimeyi daha önce gördüm. Anlamının _____ olduğunu düşünüyorum. /Anlamını şöyle tarif edebilirim.	4. Bu kelimeyi biliyorum ve anlamı_____	5. Bu kelimeyi anlamını yansıtacak İngilizce bir cümle içinde kullanabilirim. (Bu bölümü yaptıysanız lütfen 4. bölümü de doldurunuz.)
1	prohibit					
2	swallow					
3	submit					
4	inspire					
5	clarify					

		1. Bu kelimeyi gördüğümü hatırlamıyorum.	2. Bu kelimeyi daha önce gördüm fakat ne anlama geldiğini bilmiyorum.	3. Bu kelimeyi daha önce gördüm. Anlamının _____ olduğunu düşünüyorum. /Anlamını şöyle tarif edebilirim.	4. Bu kelimeyi biliyorum ve anlamı_____	5. Bu kelimeyi anlamını yansıtacak İngilizce bir cümle içinde kullanabilirim. (Bu bölümü yaptıysanız lütfen 4. bölümü de doldurunuz.)
6	expel					
7	renovate					
8	coincidence					
9	culmination					
10	extinction					
11	candidate					
12	genre					
13	clown					
14	assassination					
15	lenient					

		1. Bu kelimeyi gördüğümü hatırlamıyorum.	2. Bu kelimeyi daha önce gördüm fakat ne anlama geldiğini bilmiyorum.	3. Bu kelimeyi daha önce gördüm. Anlamının _____ olduğunu düşünüyorum. /Anlamını şöyle tarif edebilirim.	4. Bu kelimeyi biliyorum ve anlamı_____	5. Bu kelimeyi anlamını yansıtacak İngilizce bir cümle içinde kullanabilirim. (Bu bölümü yaptıysanız lütfen 4. bölümü de doldurunuz.)
16	deterrent					
17	awesome					
18	ridiculous					
19	imaginative					
20	artificial					
21	gloomy					
22	rehearse					
23	interrupt					
24	explore					
25	prove					

		1. Bu kelimeyi gördüğümü hatırlamıyorum.	2. Bu kelimeyi daha önce gördüm fakat ne anlama geldiğini bilmiyorum.	3. Bu kelimeyi daha önce gördüm. Anlamının _____ olduğunu düşünüyorum. /Anlamını şöyle tarif edebilirim.	4. Bu kelimeyi biliyorum ve anlamı_____	5. Bu kelimeyi anlamını yansıtacak İngilizce bir cümle içinde kullanabilirim. (Bu bölümü yaptıysanız lütfen 4. bölümü de doldurunuz.)
26	kidnap					
27	accuse					
28	persuade					
29	compensation					
30	engine					
31	earthquake					
32	competition					
33	appointment					
34	disaster					
35	mystery					

	-	1. Bu kelimeyi gördüğümü hatırlamıyorum.	2. Bu kelimeyi daha önce gördüm fakat ne anlama geldiğini bilmiyorum.	3. Bu kelimeyi daha önce gördüm. Anlamının _____ olduğunu düşünüyorum. /Anlamını şöyle tarif edebilirim.	4. Bu kelimeyi biliyorum ve anlamı_____	5. Bu kelimeyi anlamını yansıtacak İngilizce bir cümle içinde kullanabilirim. (Bu bölümü yaptıysanız lütfen 4. bölümü de doldurunuz.)
36	permanent					
37	pale					
38	gorgeous					
39	baggy					
40	huge					
41	fluent					
42	spicy					
43	borrow					
44	replace					
45	retire					

		1. Bu kelimeyi gördüğümü hatırlamıyorum.	2. Bu kelimeyi daha önce gördüm fakat ne anlama geldiğini bilmiyorum.	3. Bu kelimeyi daha önce gördüm. Anlamının _____ olduğunu düşünüyorum. /Anlamını şöyle tarif edebilirim.	4. Bu kelimeyi biliyorum ve anlamı_____	5. Bu kelimeyi anlamını yansıtacak İngilizce bir cümle içinde kullanabilirim. (Bu bölümü yaptıysanız lütfen 4. bölümü de doldurunuz.)
46	belong					
47	include					
48	receive					
49	avoid					
50	tool					
51	victim					
52	attention					
53	alien					
54	climate					
55	pollution					

		1. Bu kelimeyi gördüğümü hatırlamıyorum.	2. Bu kelimeyi daha önce gördüm fakat ne anlama geldiğini bilmiyorum.	3. Bu kelimeyi daha önce gördüm. Anlamının _____ olduğunu düşünüyorum. /Anlamını şöyle tarif edebilirim.	4. Bu kelimeyi biliyorum ve anlamı_____	5. Bu kelimeyi anlamını yansıtacak İngilizce bir cümle içinde kullanabilirim. (Bu bölümü yaptıysanız lütfen 4. bölümü de doldurunuz.)
56	temperature					
57	ugly					
58	curly					
59	convenient					
60	creative					
61	delicious					
62	awful					
63	rude					