T.C.

ULUDAĞ ÜNİVERSİTESİ

EĞİTİM BİLİMLERİ ENSTİTÜSÜ

YABANCI DİLLER EĞİTİMİ ANA BİLİM DALI

İNGİLİZ DİLİ EĞİTİMİ BİLİM DALI

EXTENSIVE READING IN FOREIGN LANGUAGE VOCABULARY LEARNING

(YÜKSEK LİSANS TEZİ)

ZEYNEP SELİN DÜRER

Danışman

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T. C.

ULUDAĞ ÜNİVERSİTESİ

EĞİTİM BİLİMLERİ ENSTİTÜSÜ MÜDÜRLÜĞÜNE

Yabancı Diller Eğitimi Anabilim Dalı, İngiliz Dili Eğitimi Bilim Dalı'nda 800910007 numaralı Zeynep Selin Dürer'in hazırladığı "Extensive Reading in Foreign Language Vocabulary Learning" konulu Yüksek Lisans Çalışması ile ilgili tez savunma sınavı, 31/07/2012 günü 10:30-11:30 saatleri arasında yapılmış; sorulan sorulara alınan cevaplar sonunda adayın tezinin başarılı olduğuna oybirliği ile karar verilmiştir.

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ABSTRACT

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Anabilim Dalı : Yabancı Diller Eğitimi Anabilim Dalı

Bilim Dalı : İngiliz Dili Eğitim Bilim Dalı

Tezin Niteliği : Yüksek Lisans Tezi

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The main purpose of this study is to investigate the effects of extensive reading as a factor on foreign language vocabulary development. In particular, it tries to examine the relation between reading extensively and the progress in three different aspects of vocabulary knowledge: size, depth, word recognition speed and accuracy.

60 intermediate level prep class students participated in the study. 30 students belonged to experimental group and the rest belonged to control group. Both groups attended to traditional language classes, but, as an extra-curricular activity the experimental group was involved in an extensive reading program in which they were required to read one graded reader every week for ten weeks. The programme was carried out in the second term of 2010-2011 academic year. Students' vocabulary development, in terms of breadth, depth, speed and accuracy, was measured.

The results of the three tests revealed that the students who did extensive reading as an extra-curricular activity scored significantly higher than those who didn't. With regard to the results of three tests, learners improved vocabulary size most (57%), then word recognition speed (54%) and vocabulary depth knowledge (46%). With an average of 51% progress in all three aspects of vocabulary knowledge, the present study shows that extensive reading has a relatively positive effect on the vocabulary development of the EFL students.

Keywords: foreign language vocabulary learning, extensive reading, graded readers

ÖZET

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Bu çalışmanın amacı ders dışı okumaların yabancı dilde kelime öğrenimine olan katkısını araştırmaktır. Çalışma özellikle ders dışı okumalarla kelime sayısı kelime bilgisi derinliği ile kelime tanıma hızı ve doğruluğu olmak üzere üç farklı kelime bilgisi alanındaki ilişki ile gelişmeyi incelemektedir.

Otuzu deney grubu ve geri kalan otuzu control grubu olmak üzere orta düzey İngilizce bilgisine sahip altmış öğrenci çalışmaya katılmıştır. İki grup da geleneksel dil derslerine devam etmiştir ve deney grubu öğrencileri ekstra müfredat aktivitesi olarak on hafta boyunca her hafta bir derecelendirilmiş kitap okumak üzere ders dışı okuma programına dahil edilmiştir. Program 2010-2011 akademik yılının ikinci döneminde uygulanmıştır. Öğrencilerin, genişlik, derinlik ile sözcük tanıma hızı ve doğruluğu açısından kelime bilgileri değerlendirilmiştir.

Mevcut üç testin sonuçlarına göre, ekstra müfredat aktivitesi olarak ders dışı okuma yapan öğrencilerin yapmayan öğrencilere göre daha iyi skorlar elde ettikleri görülmüştür. Ders dışı okuma programı sonunda, öğrencilerin bildiği kelime sayısında %57, kelime tanıma hızlarında %54 ve kelime bilgisi derinliğinde ise %46 gelişme olmuştur. Üç kelime bilgisi alanında ortalama 51% oranında ilerleme ile, bu çalışma ders dışı okumaların yabancı dil olarak İngilizce öğrenen öğrencilerin kelime öğreniminde olumlu etkisi olduğunu göstermiştir.

Anahtar Sözcükler: yabancı dilde kelime öğrenimi, ders dışı okuma, derecelendirilmiş kitaplar

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CHAPTER 1

INTRODUCTION

When the babies are born, they first imitate the sounds around. As time passes, the very first thing they acquire is 'the words' - not grammar, neither writing nor speaking fluently. Vocabulary develops with age as the babies get exposed to the language in process of time. Like the babies acquiring the first language, the foreign language learners begin their journey in language learning by learning 'the words'. As Day and Bamford (1998) suggest learning vocabulary is the first step taken in the way of learning a new language. Only with the help of L2 vocabulary, one can make progress in learning a new language. As the vocabulary size increases, language learners improve their proficiency in all skills (listening, speaking, reading, and writing) as well.

Meaningful vocabulary learning is only possible through vocabulary learning in context. In context, learners are exposed to loads of different forms and usage of vocabulary, so they learn more at once, which is tied with their previous learning and in the end as a result, the learners will be able to retain recently acquired vocabulary in their memories more permanently than any other ways of vocabulary learning. The best resource for meaningful vocabulary learning is mostly possible through reading. Through studies with native speakers in first language vocabulary learning, it was verified that reading was an important factor in vocabulary development and that native speakers could improve their vocabulary knowledge by reading (Nagy et al. 1984; Saragi et al.,1987).

Of four skills, reading is the skill that deeply affects foreign language vocabulary knowledge and is mostly affected by it as well. The more words the learners know in a foreign language, the easier they comprehend what they read, and the more they read the larger vocabulary knowledge they have. However, the findings in second language vocabulary improvement are not as high as in first language. Still, reading is effective to vocabulary improvement in second language to some extent as studies on L2 vocabulary learning through reading show the results are statistically significant (Horst et al.,1998; Day et al., 1991; Pitts et al., 1989). Therefore, there is a connection between reading and vocabulary improvement in second language as well (Nagy et al, 1984; Saragi et al., 1978). That's why most language teachers prefer teaching vocabulary in context rather than teaching it directly.

However, reading short texts or following only the texts in course books are not adequate for learners to acquire second language vocabulary because acquiring vocabulary through reading is a 'long and cumulative process' and it requires long texts and repeated exposures to the same words over and over (Laufer, 2003). This kind of reading is often carried out as an out-of-class activity and known under different names like 'extensive reading', 'pleasure reading', 'sustained silent reading', 'uninterrupted sustained silent reading' in different sources (cited in Krashen, 1985, p. 91; Krashen, 1988; Vaughan, 1982, p. 69). For all these reasons, 'extensive reading' is accepted as the most beneficial method and has been used in language classrooms for a long time to increase the vocabulary knowledge of the second language learners by most language teachers and researchers as well.

Extensive reading has always been popular among not only teachers but also researchers. There are many studies on the benefits of extensive reading for overall language learning as well as on vocabulary development. Most of the latter investigate the relation between vocabulary acquisition and reading (Vaughan, 1982; Pitts et al., 1989; Day et al., 1991; Hulstijn, 1992; Mason and Krashen, 1997; Nation and Wang 1999; Horst et al., 1998; Nation, 2001; Horst, 2005; Pigada and Schmitt, 2006; Coxhead, 2010). Some of the studies (Mason and Krashen 1997, Nation and Wang 1999, Pigada and Schmitt 2006) are positive on the benefits of extensive reading on second language vocabulary acquisition and some are not. Especially, studies where learners read a book every week verify the strong relation between the vocabulary acquisition and extensive reading (Pellicer-Sanchez and Schmitt, 2010; Al-Homoud and Schmitt, 2009; Pigada and Schmitt, 2006; Horst, 2005; Cho and Krashen, 1994). Those studies show that enhancement of knowledge occur in meaning, grammatical behavior and mostly in spelling together with improvement in attitudes, reading comprehension, reading and writing speed (Mason and Krashen, 1997).

As mentioned above, there are also some replication studies of a Clokwork Orange (Pitts et al 1989, Day et al 1991, Hulstijn 1992) which suggest improvement of vocabulary acquisition through reading is poor. The findings of those studies show that very little improvement occurs in vocabulary acquisition through reading. In a study by Horst et al (1998), it was highly pointed out that some studies couldn't reach the striking positive results, which is because of the fact that the participants in the replicated study were the speakers of the target language and the ones in the replications were second language learners(Horst et al. 1998 ;Day et.al., 1991; Pits et al. 1989). It can also be emphasized that another reason for the

poor gains of learners is how long the experiment took and how many books/stories the students read during the experiment.

Clearly, the experimental support for incidental vocabulary acquisition through reading in a second language has been inadequate. There are several possible reasons for this. The very first reason of such tiny gains is the limited amount of time the learners are exposed to the target words during the experiment as a result of which the opportunities of the participants to read and encounter target words decreased automatically. To get a useful number of repetitions, more readers need to be read (Nation and Wang, 1999) in a long period of extensive reading treatment so the learners will have the opportunity to encounter a target word more than once in different contexts which will lead retention of target words in the end (Horst et al 1998, Horst and Meara 1999).

Horst (2005) also suggests that some possible reasons why extensive reading studies give little information about the vocabulary expanding effects of reading extensively in a second language are that in most of the studies the participants either take the English classes as well as the extensive reading treatment (they may be learning and practicing the target words during the classes, not through the treatment) or live in an English-speaking country (so they may get exposed to the words regularly and unconsciously in their daily lives) or both. So the extent of extensive reading treatment contribution to the vocabulary acquisition gains stands ambiguous. Additionally, it is stated (Horst, 2005) that in some of the researches other than Robb and Susser (1989) and Cho and Krashen (1994) (the studies in which vocabulary measurements are also included) measurements are only done with the tests of reading comprehension, writing, cloze, speed and oral reading. Some studies (Hafiz and Tudor 1989, Hafiz and Tudor 1990, Lai 1993, Tsang 1996, Mason and Krashen 1997, Bell 2001) ignore the vocabulary measurement which leads the findings on the vocabulary acquisition gains to be small. Another reason is that the tests used in the experiments in general don't vary and mostly address certain aspects of vocabulary knowledge. But a fact goes unnoticed that there may be some improvements in other aspects of vocabulary knowledge which is ignored to be measured. In the end, according to the findings, it is said that reading has little effect on the second language vocabulary acquisition. Also, the measures are claimed not to be sensitive enough (Horst et al, 1998). For sensitive measurement, larger numbers of potentially learnable words in the texts need to be identified and more target words should be involved in the tests as there might be some improvements in other unknown words not included in the tests. In

this way even the smallest amount of learning can be recognized and measured (Day et al 1991, Horst et al, 1998, Nation 2001). So findings will be more reliable and realistic.

The present study examines and compares development in the vocabulary knowledge of two groups of EFL learners one of which was included in an extensive reading treatment as an extra curriculum activity in addition to the regular reading-writing classes. The other group took what curriculum covered and didn't follow any pleasure reading program out-of-class.

The experiment differs from the earlier extensive reading studies in the number of the books being covered as well as the length of the process. It's a longitudinal study in which the learners are required to read 10 reader books (longer texts) in one academic term (10 weeks). The present study will investigate the improvement on three different aspects of vocabulary knowledge: 1) number of words 2) quality of vocabulary 3)word recognition speed and accuracy which have been mostly ignored so far.

CHAPTER 2

LITERATURE REVIEW

This chapter consists of the following four parts: section 2.1. and 2.2. make a general overview of the studies on first and second language vocabulary learning through reading, respectively. In section 2.3., the definition and characteristics of extensive reading are outlined followed by the studies on vocabulary acquisition through extensive reading in second language, the depth and breadth of vocabulary knowledge as well as word recognition speed along with graded readers. The hypotheses related to the study are discussed in section 2.4.

2.1.Vocabulary Learning through Reading in First Language

Learning vocabulary is a very important part of learning a language. The more words a person knows, the more s/he will be able to understand what s/he hears and reads; the better s/he will be able to say what s/he wants to when speaking or writing as extensive vocabulary aids expressions and communication. It has been also highlighted by a number of studies on second language acquisition that reading has a wide impact on the development of various language skills and on learners' attitudes toward foreign language (Bell, 2001; Mason and Krashen, 1997; Cho and Krashen, 1994; Hafiz and Tudor, 1989, 1990; Robb and Susser, 1989). However, reading has the strongest connection with vocabulary knowledge

(Thorndike, 1973; Stanovich, 1986, 2000). As the amount of reading rises, vocabulary competence also goes up and vice versa. It is crystal clear that vocabulary knowledge and reading competence are inextricably intertwined in language learning. This is the case in first language contexts as well as in second language contexts.

There have been several studies that support the positive connection between reading and incidental vocabulary learning in first language acquisition (Jenkins et al., 1984; Nagy et al., 1984). Those investigations indicate that children can learn vocabulary indirectly through reading. The best known study with adults was conducted by Saragi, Nation and Meister in 1978 and provided highly convincing evidence of similar results. In this study, twenty native speakers of English were asked to read an English novel 'A Clockwork Orange' which contained 241 'nadsat' words (slang words of Russian origin). The main purpose of the research was hidden from the participants in order not to affect the result of the study and they were asked to read the whole novel in three days at the most. After a short time the subjects read the novel, their knowledge of 90 nadsat words with varying number of occurrences in the novel ranging from 1 to 208 was tested in a multiple-choice test and the experiment reported that reading resulted in substantial amount of vocabulary learning (the lowest score in 90 items was 50%, the highest score was 96% and the average success rate was 76%).

2.2.Vocabulary Learning through Reading in a Second Language

Due to the fact that the L1 researchers reported strong correlation between reading and vocabulary, there has been an increasing interest on vocabulary acquisition through reading in a second language as well.

Early studies into vocabulary learning from reading in L2 have been replications of 'A Clockwork Orange' and they revealed rather disappointing results in comparison (Horst et al. 1998; Day et.al., 1991; Pits et al. 1989). In a replication of the study by Pitts et al. (1989), the first two chapters of the novel, containing 123 nadsat words, were applied to two experimental and one control groups. The first experimental group consisted of 35 adult second language learners who were the members of an intermediate level course focusing on reading and writing. They were asked to read the two chapters from the novel in 60 minutes. There were 16 adult intermediate college ESL students in the second experimental group who were given some background information about the story through two scenes of the film version of the novel. Then in 40 minutes, the subjects were asked to read the chapters.

Because all of the target words were of Russian origin, all the nadsat words were assumed to be unfamiliar and no pre-test was administered. At the end of reading within the prescribed time, the subjects took a multiple choice post-test. Regarding the results of post-test, because almost half of the subjects could not finish reading, both experimental groups' subjects made significant but tiny gains in vocabulary (6.4% by 60 minute-group, %8.1 by 40 minute-group respectively).

Yet another Clockwork Orange replication study was conducted to 34 foreign language learners by Horst et al (1998). A simplified version of 109-page long 'The Mayor of Casterbridge' by Thomas Hardy was chosen as reading material. The process was completed in classroom environment. While the text was read aloud, all participants followed it along the book which took 6 classroom sessions of about 1 hour each. Two different tests were prepared; one of them was a 45-item multiple choice instrument assessing the definitions of the target words and the other one was a 13-item word association test which required the learners to identify the meaning link between two words by removing the odd one out. Both tests were administered before and after the treatment. It was found that out of 45 words only 23 were unfamiliar to the learners. Therefore, gain measurement was done through 23 words. In the multiple choice test, the experimental group had vocabulary gains of about 22% which was approximately 5 words. The results of words association test showed that there was only a little more than 1 word gain out of 7.5. The results of both tests showed that there was little but significant gain in vocabulary knowledge of learners. It was assumed if the texts were longer, the learners would pick up more words as the number of the meetings with the unfamiliar words in longer texts would be many more than those of shorter texts.

Day et al. (1991) investigated whether the Japanese EFL students could learn vocabulary through silent reading in classroom using a Clockwork Orange methodology. A short story titled 'Mastery of the African Mask' was adapted by shortening the number of words it covered from 1.502 to 1.032 so that the subjects could finish it in 30 minutes. 17 target words were picked up and a multiple choice vocabulary meaning test was designed with 1 key, 3 distractors and 1 choice 'I don't know'. Results showed that the reading group scored higher on the vocabulary test than the subjects in a control group who didn't read the story (30.5% and 24.1% words, respectively). The researchers strongly concluded that if learners could have gains in vocabulary knowledge in only one story, then reading more would provide them with more opportunities to encounter unfamiliar words which would lead

to more gains in vocabulary knowledge. Still, the 6% advantage of the reading group does not seem very large

In a study by Dupuy and Krashen (cited in Horst, 2005), without a pre-test, 42 college students of French watched a video excerpt and then were asked to read a 15-page part related to the video. Later, 30 colloquial words from the test were measured on a vocabulary test after reading. When compared to the performance of control group, the subjects in experimental group were found to acquire 7 more target words in French.

Compared to the results of the original A Clockwork Orange study (96% highest, 50% lowest, 76% average score) by Saragi et. al. (1978), the results of the replication studies are quiet low 6.4% and 8.1% by Pitts et al.(1989); 22% by Horst et al. (1998); 30.5% and 24.1% Day et al. (1991). There are several reasons effective in such poor gains. First of all, in all replication studies the subjects were given a restricted time to read the whole novel or certain chapters. Thus, they couldn't reach the chance to complete reading the novel or chapters assigned. Secondly, such small gains are based on limited amounts of reading either only a single book, some chapters of a book or a short story. However, Nation and Wang (1999) claim that learners should read large amounts of text, at least one simplified material in a week, in order to increase their vocabulary knowledge. If learners only read one book in a restricted time, they may not have adequate opportunities to meet the target words regularly and they may not infer and retain the meaning of unfamiliar words. In those replication studies, subjects were asked to do small amounts of reading which resulted in tiny gains in vocabulary knowledge. Another reason is that the original study was administered to English language speaking people reading an English novel, and the foreign nadsat words appeared in a context which the participants could totally comprehend However, in replication studies the subjects were second language learners being asked to read unsimplified material in a foreign language. But this kind of unsimplified material might be too difficult for learners to understand the meanings of unfamiliar words they encounter (Horst, 2005). The context which is supposed to aid comprehension of the target vocabulary might itself contain other unfamiliar vocabulary. As Nation claims (2001) in order to have good comprehension over the text and to infer the unknown words within the text, at least 95% of the running words should be familiar to the reader. Nation and Wang (1999) also indicate that 95% familiar words can be met if the learners, extensively, deal with simplified materials suitable to their

comprehension level. Learners' knowledge of the context words were not strictly controlled in replications studies.

Yet another reason for findings of such little growth in vocabulary competence is the fact that the results are based on testing learners on their knowledge of just two or three dozen words occurring in a book or some chapters of it (Horst, 2005). But, for learners to deliver reliable mean gains, a great deal more target words are needed to test. In this way, even tiny growth in vocabulary knowledge can be recognized in the analyses. But this was not the case for the replication studies of A Clockwork Orange. For all these reasons, reading resulted in disappointingly small gains in vocabulary knowledge.

As a response to one problematic area causing low success in replication studies of A Clockwork Orange, Krashen (1989) claimed that reading would result in second language vocabulary acquisition as long as learners read materials suitable to their levels. His claim is based on the Input Hypothesis in which comprehensible input is required for second language acquisition. For input hypothesis to come true and to obtain large gains from reading, learners should be exposed to large amounts of comprehensible input to improve their overall target language proficiency which is, according to Nuttal (cited in Yu, 1993) , possible through two ways : either living among the target language's speakers or reading extensively in it.

2.3. Extensive Reading

Extensive reading is an alternative approach to language learning in L1 and L2, by means of a large amount of reading (Cobb, 2007). The term 'extensive reading' was first applied in foreign language pedagogy by Harold Palmer (cited in Day and Bamford, 1998). Palmer (1969) explains extensive reading as being rapid and a reading book-after-book process by paying attention on the meaning rather than the language of the text.

This approach involves students reading long texts for general understanding with the intention of enjoying it. As it aims to derive pleasure from reading, students are allowed to select the materials they read depending on their interests and comprehension levels in the target language (Day and Bamford, 1998) because the more interesting the texts are, the more the students will like reading. As the fundamental goal is having 'pleasure', a number of different names have been given to extensive reading by different researchers so far. Mikulecky (cited in Day and Bamford, 1997) calls it 'pleasure reading', Grabe (1991) uses

the terms ‘sustained silent reading’, Mason and Krashen (1997) name it ‘free reading’, West (1926) ‘supplementary reading’ and Hill and Holden (1990) ‘free voluntary reading’. No matter what name it is called, Palmer (1969) states that the goal of reading extensively is one: reading for ordinary real world purposes of pleasure and information by ‘taking care of individual differences and encouraging the reading habit’ (West, 1931).

A number of researchers have implemented extensive reading in their research. Even though they give the process different names, they mostly involve the top ten principles of extensive reading laid out by Day and Bamford (1998):

1. Students read as much as possible, perhaps in and definitely out of the classroom.
2. A variety of materials on a wide range of topics is available
3. Students select what they want to read.
4. The purposes of reading are usually related to pleasure, information and general understanding.
5. Reading is its own reward. There are few or no follow-up exercises after reading.
6. Reading materials are easy and well within the linguistic competence of the students in terms of vocabulary and grammar.
7. Reading is individual and silent, at the student's own pace, and, outside class, done when and where the student chooses.
8. Reading speed is usually faster rather than slower.
9. Teachers orient students to the goals of the program.
10. The teacher is a role model of a reader for the students.

If these principles are closely followed, there are loads of benefits of extensive reading in language learning. It provides massive comprehensible input through which the learners, especially those who don’t live in an L2 environment, are exposed to the target language a great deal and thus improve general language competence (Horst, 2005; Day and Bamford, 1998). Extensive reading can be done in and out of the classroom and thus it increases time spent for learning. Furthermore, several aspects of extensive reading serve to remove affective barriers and increase learners’ motivation. Since reading is an individual activity, there is no time or page limitation. It totally depends on the students’ pace and their decision where and how much to read. In classrooms where extensive reading is done, there are few or generally no follow-up exercises after reading and no grading system in extensive reading because ‘reading is its own reward’ as Day and Bamford (1998) suggests. In this way, motivation

increases and conversely, the effects of affective factors, stress and fear, preventing the students from developing language skills decrease to a minimum degree by letting them have fun and focus on meaning of what they are reading. Last but not least, extensive reading is a quite beneficial reading approach which shows that learning doesn't always require a teacher or a classroom and that it can take place out of classes where there is no teacher monitoring the learning process. Since it is not an 'only in-class reading activity' and is done by the learners themselves independently, it also helps them gain their autonomy. When they gain their autonomy, extensive reading turns out to be a life-long learning process where there is no time or place restriction and learners select their reading material considering their own interest. Consequently, they enjoy what they read which leads permanent learning (Day and Bamford, 1998).

2.3.1. Vocabulary Learning through Extensive Reading in a Second Language

Although there have been many studies on learning vocabulary through reading (Rott, 1999; Dupuy and Krashen, 1993; Hulstijn, 1992; Day et al., 1991; Pits et al., 1989), the number of the studies on vocabulary learning through reading extensively is relatively few when compared to the former. One of the most important reasons is that extensive reading requires a great deal of reading which covers a long process.

Since extensive reading requires a longer period of reading of longer material, the results of studies in vocabulary knowledge gain through extensive reading are more positive than those of short-term studies. In extensive reading, learners get more opportunities to meet the target words persistently, which results in high word gains.

Horst (2005) investigated the claim that extensive reading leads to substantial vocabulary gain in a study with 23 adult ESL students. She supplied the whole group with about 150 books at various levels of simplification in approximately 70 different titles in her research. The participants were asked to check the books freely they wanted to read. Therefore, the number of the books selected by each varied a lot. One student chose 33 books while one selected 3 to read. The average number of the books checked to be read was 10.52 which meant 1.75 average number of books per student each week (10.52 books/6 weeks= 1.75). The four graded readers were scanned entirely to explore how much coverage the

lexical items in the first 20 pages had on the whole book. Then, it was found out that scanning the first 20 pages seemed to capture a sizable proportion of the less frequent words of the books (32 words out of 35 total in 42 pages/ 67 words out of 113 total in 48 pages /37 words out of 108 total in 79 pages /79 words out of 278 total in 112 pages). 100-item word knowledge pre-test with three options (Yes, Not Sure, No) was prepared covering 50 infrequent words which were operatinolized as 'off-list' ('the words which do not appear on lists of 2.000 most common word families of English (West, 1953) or on the AWL (Coxhead, 2000). The other 50 words came from the list of 1.001-2.000 frequency range chosen randomly from the first 20 pages of 12 readers- two from each six levels of simplifications. Next, 100-item word knowledge post-test was prepared by scanning the first 20 pages of 37 titles selected by two or more participants, which meant two-third of the materials (149 out of 222 books checked= 67.12%) to be read during the six-week extensive reading treatment. In the end, all subjects scored higher in both off-list and 1.001-2.000 most frequent wordlist sections. They had gains of 10.29 words among 16.70 unknown off-list and of 6.59 words among 9 unfamiliar words of 1001-2000 most frequent list in pre-test. In both sections, the participants learned over half (50%) of the unfamiliar words in the test. The participants filled out an individualized self-assessment measure, and regarding their responses, growth was also found in the knowledge of target words which were reported as 'unknown' in pre-test. With this study, it was showed that the vocabulary gains through extensive reading is rather high both statistically significantly and in size/number in contrast to earlier studies by Pitts et al. (1989) (statistically significant but small gains), Horst et al. (1998) (4.62 average word growth in multiple choice test, 1.28 in word association test), Shin (2006) (only 9% gain in 40 unknown words at all).

Cho and Krashen (1994) have also found substantial vocabulary gains from extensive reading in L2 comparable to gains in L1. They claimed that increasing the amount of the books the learners read was only possible if they read the right texts. Even though simplified materials are thought to be the right and comprehensible texts for second language learners, they are not interesting enough to capture learners' attention and get them involved in reading process voluntarily with pleasure for a long time. Contrarily, authentic materials are quite interesting but not easily comprehensible unless the learners' language competence is high enough, obviously. But combining simplification with interest, high comprehension can be obtained through easier and more entertaining teens or kids series containing same characters at an earlier age. In this study, four subjects (1 Spanish, 3 Korean) were provided with highly

popular books from Sweet Valley Kids series each containing about 70 pages and written for second-grade level children. They were not requested to read specific amount of reading for a certain length of time. The learners decided individually on the volumes and the amount of the books as well as of the time they were going to read (S1 -8 books-1 month, S2-18 books-2 months, S3-23 books-less than 1 month, S3-10 books-2weeks). As the amount of reading differed from subject to subject, number of the target words also changed. The pre- and post-test were prepared separately for each individual according to the underlined words by the subjects on the first seven volumes of the series. Each participant was asked to define words orally. As a result, using Nagy, Herman and Anderson's (1985) calculation, the participants' gains were compared to those of native speakers per year from reading one million words. The results of this calculation revealed that one of the readers acquired vocabulary (over 5.000 per million) at much greater than the native speaker rate (about 3.000), another one (2.500 per million) just under the native speaker rate, the others well under the native speaker rate (about 1.100 per million).

While studies discussed above have indirectly shown the superiority of the extensive reading approach by comparing their findings to those of other studies, Al-Homoud and Schmitt (2009) explicitly compared vocabulary learning from extensive reading and intensive reading. In their longitudinal study of ten weeks, they worked with 70 male EFL students in Saudi Arabia. Subjects were divided into two groups as extensive and intensive reading groups. All participants had at least 6-year of English education in secondary and high schools. However, the learners' overall language proficiency was very weak and their levels varied a lot. Therefore, a very rich library of 150 graded readers of all levels from three major publishers was organized in order to cover the discrepancy in the language proficiency of the extensive reading subjects. The classification was done according to the number of the words the readers covered. Thus, the readers of different levels of different publishers where the difference was only around 200 words were put together in the same level. Also, as extensive reading is a matter of pleasure, in order to cater for the participants' interests a number of different titles of graded readers were chosen. At the end of the experiment, according to the measurements of 3 sections (2000-3000-Academic) of Vocabulary Levels Test (Schmitt et al. 2001), the extensive reading group gained as many words as the intensive reading on 2000-word level of the Vocabulary Levels Test (gain scores of extensive group: 5.85, of intensive group: 6.90) whereas for 3000-word level, the gain scores of each group were similarly lower than the 2000-word level as most of the learners were reading from readers below 2000-word

level. But still the difference in the amount of gain between the two groups on the 3000-word level was not significant (no of words learned by ER group: 140, by IR group: 142). Likewise, no significant difference was recorded in the difference of academic vocabulary gains between the ER and IR groups (gains of extensive reading group: 1.71, of control group: 2.30). Yet, both groups did significant vocabulary improvement. So still, extensive reading works at least as well as intensive reading on the vocabulary improvement.

All these studies show that extensive reading and vocabulary knowledge have a direct relationship. Extensive reading serves to improve three different dimensions of vocabulary knowledge: size, depth, and speed. Reading extensively in a second language impresses new vocabulary learning significantly. As the amount of reading increases, and the period and the texts get longer, readers learn more new vocabulary. For this reason, learners' vocabulary size automatically and substantially develops. The studies cited above deal with this dimension of vocabulary improvement.

2.3.2. Extensive Reading and Vocabulary Depth

Additionally, extensive reading contributes to the development of other aspects of vocabulary knowledge other than form and meaning, which is 'depth of knowledge'. It refers to 'how well is a word known' by the learners. There are many facets to knowing a word, and depth of knowledge deals not only with meaning and form but also with morphology, phonology, syntax, and sociolinguistic aspects.

Reading extensively also assists learners increase their word recognition speed which in the long-term results in improvement in reading speed as well (Bell, 2001; Walker, 1997; Lai, 1993; Rob and Susser, 1989). Because they are greatly exposed to the language and meet the target words in a repetitive way through extensive reading, learners will have a lot of opportunities to consolidate their previous vocabulary knowledge and gain automaticity in word recognition.

Vocabulary depth knowledge (how well is a word known) has been ignored mostly for a long time by the researchers because developing measures of size is easier than those of depth (Qian, 2002). However, it has been recently considered to be the second component in vocabulary knowledge, after the breadth or size (how many words are known) (Qian and Schedl, 2004). Laufer and Goldstein (2004) suggest that the vocabulary depth measures make

up the deficiency of the vocabulary size tests in measuring the quality of learners' knowledge. In depth tests, rather than the quantity, quality of the knowledge on several components through a single lexical item is measured. Depth of vocabulary knowledge defines the learners' level of knowledge of various aspects of target words (Shen, 2008). In his collective work, Qian (2002) suggests that depth knowledge covers a number of components such as morphological, syntactic, collocational and phraseological properties as well as pronunciation, spelling, meaning, register, frequency and association.

As depth knowledge includes a number of aspects, it is very difficult to learn each one by one through direct learning. Learners can improve their depth knowledge by lots of exposures to the same word in different contexts. This is mostly possible through reading extensively because learners meet different usages of the same word in different language contexts. As they get exposure to those usages continuously, the incidental learning occurs and they improve their vocabulary depth knowledge

Among few studies measuring depth of vocabulary knowledge in relation to extensive reading, Pigada and Schmitt (2006) carried out a case study on a learner of French. The main goal was to find out whether reading extensively would enhance lexical knowledge in terms of spelling, meaning and grammatical characteristics of target words. It took the learner one month to complete the extensive reading treatment. In this period, as Day and Bamford (2002) as well as Nation and Wang (1999) suggest, he –every week - read a graded reader out of four which he chose and were suitable for his level so as to implement a successful extensive reading program and to have adequate encounters with the target words to reinforce previous meetings. 133 (70 nouns, 63 verbs) target words were picked up in the graded readers. Three different tests were used to measure learner's knowledge of spelling, meaning and grammatical behavior of these words. After the pre- and post- tests the learner was interviewed by the researchers. Firstly, the spelling test was implemented. The researcher read the target words aloud and the learner was expected to write each of them on a piece of paper. As a result of the extensive reading treatment, the participant had quite strong enhancement in the spelling of the words even of those with few occurrences. Out of 266 total spelling points he improved from 98 in the pre-test to 159 in the post-test. After the spelling test, the meaning and grammar tests were conducted at the same time. In the meaning test, the subject was asked to find out how much he knew about the words' meanings. He reported any kind of knowledge he had about the words' meaning on the list. At the end of one-month extensive

reading period there was no learning on some of the single-exposure words as well as very limited learning on some low-exposure nouns (i.e. single-, 2-3 exposures). However, overall improvement in the score of the rest of the words on the list was apparent with about 15% increase in the meaning knowledge at the end of the treatment. As to the grammar test, the researchers measured the grammatical mastery of nouns in terms of the knowledge of appropriate article and of verbs in terms of the knowledge of appropriate preposition. The subject was asked to indicate any prepositions that followed some specific verbs and the articles for the nouns (masculine article vs feminine article). The researchers categorized the results by dividing the words into two groups in terms of nouns and verbs. The enhancement in the grammatical mastery of nouns of all frequency levels moved up from 18 to 60 points out of 140 total score. However, for the verbs the enhancement was little and the percentages were lower than those of nouns (5 out of 126 in the pre-test and 26 out of 126 in the post-test).

With regard to the results, there appeared gain in spelling, meaning and grammatical knowledge of target words at the end of the four-week extensive reading treatment. It was also found out that the enhancement was not the same in all aspects of word knowledge. Orthography became the mostly affected aspect from extensive reading. It was also pointed out that if there was gain in word knowledge with a 4-week treatment, more gain could occur in an extensive reading treatment of more readers over a longer period.

Another study that looked at the acquisition of aspects of depth through exposure is Pellicer-Sanchez and Schmitt (2010) who studied incidental vocabulary learning of 20 Spanish advanced learners of English from an authentic novel *Things Fall Apart.* The novel was in English. It was about 150 pages long, interesting and appropriate for the subjects' competence levels. 34 African-origin words that appeared in the novel were picked as target words after some considerations such as their frequency, possible collocations, and meanings. Additionally, words whose context doesn't give any clue about its meaning were not included in the study. Four different tests were prepared to measure the different aspects of the target words: the knowledge of word-class, spelling, and meaning. Both recognition and recall were tested. A ten-item open-ended questionnaire regarding the subjects' attitudes towards the study was also included in the end. Apart from the questionnaire, all other tests were administered through one-to-one semi-structured interview. No pre-test was given to the participants as all target words were African and they had no chance to know any of them. Reading process took approximately one month. At the end of this period, more than one

fourth of target words were acquired through reading and 28% learning occurred in all aspects of all target words which meant 9.39 words out of 34 were learned through reading an authentic novel. The largest gains were made on meaning recognition with 14.4 words out of 34 (43%), then spelling recognition with about 12 words (34%). The least gains occurred in word class recall test with about 7 words (20) and meaning recall about 5 words (14%). Meaning recognition was the best learnt aspect because subjects read for meaning. Compared to the gain rates through explicit exercises in previous studies, vocabulary gains based on this study are low. But, regarding the questionnaire findings, most participants' attitudes turned out to be similar and positive. So, learners' positive attitudes towards extensive reading and the interesting material they were dealing with might be ranged as one of the reasons for this study to be successful.

2.3.3. Vocabulary Recognition Speed

Researches on the vocabulary acquisition through extensive reading have studied mostly the improvement of vocabulary breadth and depth (Pigada and Schmitt, 2006; Horst, 2005; Rott, 1999; Dupuy and Krashen, 1993; Hulstijn, 1992; Day et al., 1991; Pits et al., 1989). A limited number of the studies have investigated the reading speed (Bell ,2001; Robb and Susser, 1989).

One of the studies on reading speed is by Robb and Susser (1989). The study done with 125 Japanese learners of English as a foreign language assessed the improvement in the language competence and vocabulary knowledge of learners. The subjects read an average of 640 pages and one third of the students read more than 700 pages during the year. As a result, it was discovered that extensive reading group did better in reading comprehension and guessing unfamiliar words from context than the control group who only followed the classes in the school curriculum. There also occurred gains in the mean score of learners' reading speed in first minute from pre-test of 79.31 words to post-test of 86. According to the attitude questionnaire regarding the learning class each group signed, it was pointed out that even though there was no huge praise on extensive reading process by experimental group, their attitudes were more positive about having more interesting homework and being fast in reading after the treatment than the group who signed in skill-based language learning class.

Williams (1984:96) has argued for extensive reading as a way to develop adequate general reading speed. Bell (2001) supported William's claim in his study. He examined

reading speed and reading comprehension of two groups of young adult students following intensive and extensive reading programs, respectively. The extensive reading group (n=14) was exposed to a number of graded readers whereas intensive group (n=12) only studied short texts followed by various reading activities such as cloze test, gap-fills, multiple choice and true-false items. The study was conducted in Yemen over a period of two semesters. At the end of the study, the number of words read per minute by the extensive group increased from 68 to 127 (87% growth in reading speed) whereas it was only from 78 to 93 (19% growth) for the group who wasn't exposed to extensive reading. As claimed in the hypotheses, there occurred large and significant differences between the reading speeds of the two groups.

A more detailed study entirely related to the impact of extensive reading on vocabulary recognition speed was named Digame Project by Meara (1986). It is a longitudinal study which covered almost 4 semesters and ran a series of four experiments. In this study, the acquisition of Spanish words by English learners was examined. Including the volunteer audiences participating in radio or television courses in various languages carried out by the British Broadcasting Corporation (BBC) for some 6 hours a week, Digame Project tried to handle with small numbers of participants, a shortcoming common in most psycholinguistics researches. For more accurate data, microcomputers and an encrypted and self-developed testing material were used in the study. 24 English words and 24 Spanish words taught in the first five lessons of Digame were tested in the experiments. The words were picked of the same length and similar frequency. Each word was presented in a string of 20 letters in a line with a target word embedded in. The remaining letters were random but chosen to reflect the likely occurrence of letters in the target language. In pilot studies, it was discovered that native speakers generally took 1 or 2 seconds to recognize a word presented in the same way above.

The study compared the progress in the Spanish vocabulary knowledge of the learners in weeks 7, 12 and 17 of the twenty lesson course. Results showed that the response time for Spanish words decreased with time (2.15 - 1.74 - 1.55, recognition times in the 7^{th}, 12^{th}, 17^{th} weeks respectively). The analysis presented clearly that there occurred a statistically significant difference between the first test in the 7^{th} week and the next two tests (week 12^{th} and 17^{th}). The difference got smaller, though, as time passes and no significant difference was recorded between the latter two tests (1.74 secs, 1.55 secs). Furthermore, response times in the third experiment (1.55) turned out to become nearly parallel with those of English words

(1.47). The results showed that the Spanish word recognition speed increased in the long run as the subjects exposed to the language more.

Reading speed studies give clues about the word recognition speed of the learners. In order to increase the reading speed, one needs to improve his/her recognition speed over the words. Most studies above (Bell. 2001; Robb and Susser, 1989) are related to reading speed, and positive about the relation between the extensive reading and reading speed. As the amount of time spent on reading decreases, automatically word recognition speed increases, or vice versa. Nevertheless, no matter how related reading speed and word recognition speed are, they are not the same. Although there are studies on reading speed and extensive reading, the only study measuring the word recognition speed is Digame Project (Meara, 1986), which makes the present study important.

2.4.Graded Readers

Graded readers are reading books which are specially prepared for language learners. They contain language adjusted to the level of the learner in the sense of vocabulary and grammatical structures. Compared to authentic texts, they have fewer pages, shorter paragraphs and sentences, fewer unfamiliar words and at least some illustrations, which makes reading and understanding the text easy for non-native speakers of the target language.

Simplified materials, especially graded readers, were found out to be ideal and more beneficial for learners as they covered target language within controlled grammatical structures and vocabulary of that level as well as restricted number of pages (Nation and Wang, 1999). Learners are exposed to the grammatical structures and vocabulary in target language over and over again which are appropriate to their comprehension level and reading competence. This repetitious comprehensible input leads to the acquisition of grammatical structures and vocabulary as well over time. One study of 42 graded-readers from one scheme (Oxford Bookworms) of graded readers by Nation and Wang (1999) confirms this claim by examining the coverage, density and repetitions of vocabulary at each level. As a result, it was pointed out in the study that graded readers provided some support for unknown words through good coverage and repetition of the vocabulary list of the reader scheme helping the prediction of unfamiliar vocabulary from context. Reading more at one level, and especially following higher levels, could result in many vocabulary gains - although not all of the new words since words at lower levels got more repetitious at later levels. Authors conclude that

learners should read at least 3 books at each level and more at higher levels to get a useful number of meetings. In order to meet words often enough to be beneficial for their vocabulary growth, learners need to read at least one reader a week, which provided a very good chance of gaining strong receptive knowledge of 2.000 high frequency words of English. But, even though learners reached the highest level of a graded reader scheme, it was found out that they would still encounter so many words in authentic materials that it would make the text too ambiguous to understand (1 unknown word in each line which is too heavy a vocabulary load for comfortable reading and incidental learning to occur). Being controlled for grammar and vocabulary used in contexts, graded readers are found to be the most beneficial reading resource for foreign language learners.

2.5.Hypotheses

On the basis of the assumption that vocabulary range, depth and recognition speed over the target words can be improved through extensive reading treatment, the following hypotheses are formed:

1. Learners who participate in the extensive reading program will gain a greater number of words than those who do not participate.
2. Learners who participate in the extensive reading program will gain greater depth of vocabulary knowledge than those who do not participate.
3. Learners who participate in the extensive reading program will improve their word recognition speed and accuracy more than learners who do not participate.

CHAPTER 3

METHODOLOGY

This chapter consists of three sections. In section 3.1., information about the subjects,in 3.2. explanation about the materials used in the study and in section 3.3. an overview of the data collection procedure has been presented.

3.1.Participants

The study was carried out with 60 EFL prep class students attending Düzce University 30 of whom were included in experimental group whereas the remaining 30 learners were used as a control group. 27 participants were female and the rest 33 were male. The majors of the subjects were mixed (Tourism and Hotel Management, Forest Industry or Forestry Engineering, Computer – Electrics and Electronics Engineering, Business Administration etc.). The age range of the participants in the study was 18 to 22.

The learners who participated in the study were in intact groups to which they were assigned according to the results of the placement test administered as school procedure at the beginning of the semester. All of the students were required to take the placement test of 30 items covering vocabulary, paraphrasing, sentence/dialogue completion and comprehension questions of reading passages as well as a writing section. The students' current language abilities were assessed through the placement test to match them to the most suitable groups to their levels. Then, the levels were determined by the amount of points that the students scored. There were 13 'A' groups and 2 'B' groups in total. The least successful students were A1-1 and the rest -according to the points they got in the placement test- were placed into better levels in the order of A1-2, A1-3, A1-4 …. A1-13. The pupils who got higher scores than those placed in the class 'A1-13' in the placement test took another test. In that exam whoever outperformed was matched to 'B1-1' and the others who scored less were placed into the class 'B1-2'.

Table 3.1. shows the placement scores of classes used in the study. The subjects in the study belonged to four different groups whose levels were close to each other. Three groups were labeled as 'pre-intermediate level' (A1-10, A1-11 , A1-12) and the other was 'intermediate level' (B1-2).

Table 3.1: Average % score in placement test

		No of Correct Answers	Avg. % Score in Placement Test
Exp. G	A1-12	16	53.3
	B1-2	18	60
Control G	A1-10	14	46.6
	A1-11	15	50

Table 3.1 presents the average scores of each class in the placement test at the beginning of the term. Of 30 multiple choice questions in the test, the subjects in B1-2 class marked 18 correct answers which was the highest score among the classes. With 16 answers, A1-12 followed B1-2 in the second place. Then came A1-11 with 15 answers and with 14 correct responses A1-10 was in the last place in the test. The subjects in B1-2 class marked the 60% of all questions correct and the lowest score among the participant groups was 46.6% correct answers of A1-10 class. The percentage discrepancy between the scores of the most proficient group B1-2 and the least one A1-10 in placement test is high (60%, 46.6% respectively). But, the difference in the scores of the groups was very small as there were not many questions in the test (4 between the highest level group and the lowest level group). Thus, it is acceptable to see such difference between the groups of the same proficiency level. That is, there is not a significant difference between the groups proficiency levels. Yet, because the subjects' individual test scores were not available, statistical comparison of the assessment cannot be done among the participants.

3.2.Materials

3.2.1. Graded Readers

The graded reader scheme used in the present study was the Oxford Bookworms Library. This scheme was chosen because it was one of two publishers' graded-reader series the wordlist of which were available to access (Oxford Bookworms Wordlist and Cambridge English Readers). The scheme consisted of six difficulty levels, one being the easiest. It was important in the present study to choose readers at the right level of difficulty for the learners. It is emphasized by Day & Bamford (1998) that 'I minus 1' level reading materials -which

means below students' current level of language competence- expanded students' range of vocabulary by both letting them have fun and understand. Laufer (1989) also found out in her study that 95% coverage of the running words in a text was likely to be the threshold for a standard of minimally acceptable reading comprehension whereas Hu and Nation (2000) suggest that 98% coverage is required to understand a text well enough. Additionally, Day and Bamford (1998) offer that no more than 5 unfamiliar words per page are tolerable in an extensive reading program. In the light of the study by Laufer (1989) and suggestion by Day and Bamford (1999), and Hu and Nation (2000), the following procedure was used to decide the appropriate level for the present students. Initially an informal evaluation was made of the learners' current level. After the students' class levels, scores in quizzes, ongoing teacher evaluation and their progress in English were taken into consideration, books from level 1 and 2 were determined to be too simple for them as unfamiliar words were limited for their levels and they were going to learn fewer unknown words. Level 5 and 6 were too difficult for their comprehension levels to cover 95% running words in the overall text as Laufer (1989) suggested. To decide between levels 3 and level 4, the students were, randomly, handed out one page of a book from each of the levels in order to choose the right books suitable to their comprehension levels. Then, they were asked to read one page from level 3 and 4 books, and mark the unknown words to figure out which level was convenient for their reading comprehension.

Table 3.2. presents the average number of unknown words of experimental and control groups on one page of reader from both level 3 and 4, separately. In level 3, one page from the book 'Frankenstein ', and in level 4 one page from 'A Tale of Two Cities' were handed out. According to the analysis, average unknown words in one page from level 3 was found to be 4.5 whereas in level 4, it was 7.4.

Table 3.2: Average % unknown words on randomly chosen one page of a *graded reader*

	Lev. 3	Lev. 4
60 students	4.5	7.4

Thus, referring to Laufer's study (1989) which showed the requirement of minimum %95 knowledge over the running words in a text, Table 3.2. revealed that subjects in in the study are likely to meet the essential amount of words in level 3 (96.1 % coverage) while the number of unknown words in level 4 appears to be relatively more than the comprehension

level of the learners (93%). So, comparing the underlined items in level 3 to level 4, it was figured out that level 4 stories were far above the participants' linguistic competence and level 3 graded readers were the most suitable to their understanding levels with average 4.5 words on one page.

In the level 3 series of Oxford Bookworms, there are 40 graded readers (See Appendix I for the full list of titles) in total, the types of which are 'crime-mystery, fact files, true stories, classics, human interests, thriller-adventure, world stories, and fantasy-horror'. 10 graded readers are bestsellers and 6 of all readers are classics and 5 are fact files. Furthermore, in the level 3 pack, there are 2 crime-mystery, 6 fantasy-horror, 7 human interest, 8 thriller and adventure, 2 true stories and 3 world stories. 22 out of 43 books have audio CDs together with them. The readers cover 10.000 running words and 1.000 headwords on average. The story length is an average of 56 pages.

In order to choose the 10 titles among the 40 which are of most interest to most learners in the study, the following procedure was followed. 30 subjects in extensive reading group were handed out booklets of Oxford Bookworms Library. It includes the pictures of the front cover of the graded readers on the top. Below the picture is the type, name and the author of the book, and a short excerpt from the book. The subjects were asked to read the information about the graded readers and mark 5 books at most and 3 at least which they wanted to read during the semester. They were requested to put a check near the title they would like to read. At the end of this process, there were 162 checks on 40 books in total, and among all of the graded readers in level 3, top ten were determined with 126 checks. According to the preferences of 35 subjects in extensive reading group, Table 3.3. presents the list of the books ordered from the most desired to the least.

Table 3.3: Number of the participants preferring the top ten graded readers

Name of the Book	**Type of the book**	**No of students**
The Last Story of Sherlock Holmes	Crime & Mystery	18
Kidnapped	Thriller & Adventure	17
On the Edge	Thriller & Adventure	16
Chemical Secret	Thriller & Adventure	16
Secret Garden	Human Interest	14
Lovestory	Human Interest	11

The Call of the Wild	Classics	11
Railway Children	Human Interest	8
Moondial	Fantasy & Horror	8
The USA	Fact Files	7

The most preferred ten books are 'The Last Story of Sherlock Holmes, The USA, Kidnapped, On the Edge, Chemical Secret, Secret Garden, Lovestory, The Call of the Wild, Railway Children, Moondial, and The USA'. Among the top ten graded readers are 3 thrillers & adventures, 3 human interests, 1 classics, 1 fact files, 1 fantasy & horror and 1 crime & mystery. It is obvious from the first four preferences in the table that the extensive reading subjects are mostly interested in books of crime and mystery as well as thriller and adventure. The rest of the books and the votes are presented in Table 3.4. below.

Table 3.4:Number of students preferring other books

Name of the Book	**Type of the book**	**No of students**
A Christmas Carol	Classics	6
As the Inspector Said and Other Stories	Crime & Mystery	5
Frankenstein	Fantasy &Horror	4
The Crown of Violet	Thriller & Adventure	4
Go Lovely Rose and the Other Stories	Human Interest	3
The Prisoner of Zenda	Thriller & Adventure	3
The Star zoo	Fantasy &Horror	3
Tales of Mystery and Imagination	Fantasy &Horror	2
Wyatt's Hurricane	Thriller & Adventure	2
A Pair of Ghostly Hands and Other Stories	Fantasy & Horror	1
Goldfish	Crime & Mystery	1
Martin Luther King	Factfiles	1
Ethan Frome	Classics	1

Apart from the top ten books, 36 votes were given to 13 readers. In the eleventh place comes A Christmas Carol with 6 votes, then As the Inspector Said and Other Stories with 5 votes, and Frankenstein with 4 votes. A pair of Ghostly Hands and Other Stories, Goldfish, Martin Luther King, and Ethan Frome brought up the rear with 1 vote. 17 books were not voted at all.

3.2.2. Target Words

In the research, the level 3 wordlist for graded readers was obtained as the target list. In a very early phase of the study, Oxford University Press was asked for the general wordlist of graded readers. When no answer was received, it was decided to contact Paul Nation via e-mail in relation to the study 'Comparing the vocabulary of different graded-reading schemes' by Udorn Wan-a-rom whose PhD advisor was Paul Nation. He kindly answered back and sent the general OUP wordlist straightaway.

The general wordlist sent by Paul Nation contains 6 wordlists for six different levels. The words in the general list are ordered alphabetically. So, the words are mixed in terms of their levels. On the left side of the words, the level is given (e.g. 3 grand [adj.]. On the right side of each word, there is information about the word category (e.g. [det.], [mod], [v.], [n.], [adj]). For the words with more than one category, example sentences written in italic are given to clear the meaning as below:

1 about [adv. prep]
It costs about $ 100.
Don't talk about money.

The words of different levels but same word category with more than one meaning are also accompanied with short definitions and level labels as below:

age [n.]
4 =*length of life*
5 =*period of time*

The example word is 'age' which both belongs to level 4 and level 5, and it means 'length of time' in level 3 and 'period of time' in level 5.

Since all the words of different levels are mixed, firstly, the level 3 words were sorted out among all of them and level 3 wordlist was obtained. In the wordlist of level 3, there was a total of 391 words of which 192 were nouns, 151 were verbs and 60 were adjectives. Then

all of the multi word units like ‘care about [v.]’,’cassette player [n.]’ and function words like ‘each other [pron.]’, ‘enough [det. pron.]’ were removed from the level 3 wordlist. There were 160 nouns, 92 verbs and 59 adjectives left, and the final list included 311 words despite the publishers’ claims that there were 300 words in the level 3 wordlist. Regarding the students’ achievement in class and language proficiency, 60 single words (adjectives, nouns, verbs) were chosen from the final list which were unlikely to be known by the participants to test in the experiment. The distribution of target words in terms of grammatical category was in proportion to the distribution of words in the OUP list. There were 31 nouns, 17 verbs, 12 adjectives in the test. All the words in the experiment varied between three and ten letters in length (e.g. dig and mysterious).

For the target vocabulary with two or more meanings given under the same word category with explanation in the list, the first meaning stated was taken as the target. For instance, the verb ‘beat’ was included in the list with meanings ‘win’ and ‘hit’ (beat [v.]=win; hit), since ‘win’ is the first meaning stated as the explanation for the verb ‘beat’, that sense was selected to be included in the tests. If there is no extra information about the meaning of a polysemous word, then the most typical sense was taken, as for the word ‘blow’ (blow [v.]) which is ‘wind moving’ in the first sense.

3.2.3. Tests

3.2.3.1.Yes-No Test

Yes-no test (see Appendix II) was built up in order to measure the students’ vocabulary knowledge in level 3 graded readers from Oxford Bookworms Library. The custom-made test includes 90 items -60 real words and 30 non-words- in total.

With 60 target words tested in the study, almost 15% of the pre-intermediate level wordlist was covered. In total, 31 verbs, 17 nouns and 12 adjectives were tested. The numbers of the word categories to be included were decided in proportion to the total number of the verbs, nouns and adjectives in the level 3 wordlist.

In the test, 30 non-words -as many as half of the target real words in the study- were included in the test to decrease the degree of the students’ correct answers by chance. They were randomly chosen from among the 100 English plausible non-words devised by Paul Meara and his colleagues to use in Yes-No Tests. The list was obtained from Tom Cobb’s website “the Complete Lexical Tutor”.

(http://www.lextutor.ca/freq/lists_download/pnwords.html). As they were plausible non-words, they are likely to look like the existing English words to the participants. The real words and non-words were mixed together in the test. The items were presented in groups of 5 words for students to focus on them easily and not to get confused. There were 18 word groups in the test. The instruction was given in students' native language. It was emphasized in the instructions that the learners were not to leave any word unchecked. They were expected to check 'yes' for the words they knew the meaning of, and check 'no' for the unknown ones and check 'unsure' if they saw the word before but actually couldn't remember the meaning whereas in standard yes-no tests they were expected to check only the words whose meanings (meanings of which) they knew. Actually, in the standard Yes- No tests, the 'Unsure' part does not exist but the whole class and single subject pilot administration of the test suggested that the inclusion of this option would be appropriate. The students in the pilot were observed to check 'Yes' for the words they had seen before, but the meaning of which they didn't know. So, to prevent the misleading information in the study, it was needed to add the option 'Unsure' in the test.

3.2.3.2.Depth Test

Depth test (Appendix III), based on the model of 'Word Associate Test' (Read, 1998) covering the academic words and adjectives, was constructed to assess the students' knowledge to associate the target word with its semantic relations. The subset consisting of 45 items administered in Recognition Speed Test was used in Depth test.

In the self-designed vocabulary depth test, 3 types of different relationships were measured: 1. *Sense Relationship*, which covered antonyms (thick X thin), synonyms (grand=great) and co-hyponyms (shape > square), 2. *Collocation* (lend + money) and 3. *Association* (valley/river, tongue/taste). Initially, each target word had 8 options then reduced to 6 consisting of 3 distractors and 3 keys, and finally to 5 with an uneven number of keys and distractors. The number of options was reduced for two reasons. First, as the students' proficiency level was taken into account, they were foreseen to have some problems to identify the unrelated words as well as the associations. For example, as the test gets longer, it causes boredom and inattention on the items. Moreover, the subjects might mistake in following the distractors and keys on the right line of the items. Second, because of the difficulty for the researcher to find 3 related words- one for sense relationship (antonym-synonym or co-hyponym), one for collocation and the other for association- per item in the

test, the number of the choices was, finally, reduced to 5. However, the number of correct options per item was not always kept the same. Of the 5 options, for each target word, at least 1 and at most 4 alternatives were chosen to be correct associations.

'The Edinburgh Associative Thesaurus' (http://www.eat.rl.ac.uk)- empirical association data- was used to obtain the most frequent associations of the target words. It is a set of word association norms showing the counts of word association as collected from native English-speaking subjects. In the website, there are two boxes: one is named 'stimulus' and produces associations for the given word and the other is 'response' and provides the word for an association. The associations return the number of different answers, the count of all answers, and the list of associated types, their frequencies, and proportion of occurrence to the total count of all answers. For example, if the word 'beautiful' is entered as the stimulus, the first three associations appear as: UGLY 16 0.16, GIRL 10 0.10, PRETTY 9 0.09 for which the number of different answers is 52 and total count of all answers is 98. The results show that 16 out of 98 responded with 'ugly' with the proportion of occurrence of 0.16. The test was piloted with a different group of the same proficiency level. The associations above the students' level were exchanged with easier ones.

On the other hand, the distractors were chosen from among the words in the students' 'Listening and Speaking' as well as 'Reading and Writing' course books so that all of them were familiar to the participants. In this way, the possibility of the unknown words to appear in the choices was eliminated and of the participants to make mistakes because of the unfamiliar distractors in the test was removed. When the distractors and associations to be included in the test were determined, their frequencies were also checked in the BNC (http://www.lextutor.ca/vp/bnc/) to make sure if they were among the first 1000 words in English as most studies in Turkey and all over the world claimed that the vocabulary size of those whose major was not English was around 1000. The high-frequency words, occurring in the first 1000 were used in the test.

In spite of all these precautions, the hesitations still existing about some of the unrelated words were removed with the feedback of a similar piloting group. Upon the positive and negative feedback of the piloting group, distractors and correct associations unknown to the piloting group were exchanged with familiar words. Also, the culturally associated words like 'grand-Canyon' were removed from the test in order not to include students' knowledge of general culture in the study.

Firstly, the items were divided into 5 groups of 9 target words and then the number of the groups was raised to 9 decreasing the number of the target words to 5 in the light of the negative feedback (like, 'It was hard to follow the options of one item' and 'I got confused in the test') of the students piloted about the item organization.

The students were instructed -as it was in Size and Depth test- in Turkish and at the beginning of the test, they were given 2 examples by the instructor to show the different associations and how the number of correct answers changed for each item herein below.

Table 3.5: Samples from Depth Test

1	**Beautiful**	√	girl	√	pretty		radio	√	ugly		cold
2	**employee**		bird		sun	√	work		laugh		see

Those examples were written on the board and students were informed orally as well. 'Beautiful' and 'employee' were introduced as main words and the other five as connected words with the main one somehow. The subjects were asked to think aloud and tell the related words for each main word. While they were talking about their ideas, each correct association and its connection with the main word were explained in detail. For example, the correct associations for 'beautiful' is 'girl', 'pretty' and 'ugly' as each option has a connection with the main word. 'Beautiful' often goes with 'girl' and 'ugly' is antonym and 'pretty' is synonym of the main word. The same procedure was followed for the word 'employee' which has only 1 correct association. The participants were, one more time, reminded that the options could be negatively or positively related to the target ones and the number of the correct associations might change item by item as in the example of 'beautiful' and 'employee'.

3.2.3.3. Recognition Speed Test

Recognition Speed Test (Appendix IV) was organized to test the students' speed of recognition over the selected group of target words consisting of 45 items which is a subset of the target words in the Yes-No Test. The total number of the target words was reduced on purpose as it would be difficult for the participants to focus on 60 words at once and the test would be longer and less reliable. In order to avoid problems of boredom and inattention, the

items were separated from each other and presented in groups of 9 words, so 5 groups, ultimately, emerged in the test. Of 45 items tested were 23 nouns, 13 verbs and 9 adjectives, the proportion of which was kept equal to the one of Yes-No test.

In the test, the target word was embedded within a random collection of unrelated letters (e.g. izx*row*znl). The website http://www.lextutor.ca/id/ was used to arrange the target words with a mixture of the additional letters. The number of unrelated letters were not kept fixed on each side, sometimes more letters and sometimes fewer were placed on the right and left sides of the words in order not to clue the participants in the test. Also, the extra randomly adjusted letters were planned to be twice as many as the number of those in the target word. As the website was not designed to arrange the number of extra letters systematically according to the target words, the random collection of unrelated letters were adjusted by hand to standardize the numbers in each word. For instance, the target word 'pot' was embedded in 'njdqi*pot*j'. It contains 3 letters itself, so 6 unrelated letters, in total, were placed on the two sides of the word, 5 on the left and 1 on the right side. 'wqersymxmhd*mysterious*dchlqhklu' is another target item. The word in this item is 'mysterious' and the extra letters in this word were not as few as those of 'dig' because the number of the letters 'mysterious' and 'dig' have are different from each other. For all these reasons the number of the random collection of unrelated letters in each word are not same. The number of letters to be placed on each side was decided randomly and it was different for each word. Also, the target words were planned to be either in the middle, close to the right or left side randomly and intentionally to prevent the students from thinking that there was a logical order in the embedded words.

The participants were expected and asked to recognize the longest embedded word within the random collection of unrelated letters and circle it as quickly as they could. The instruction was presented in the participants' native language. Two examples were given to have the test made sense to the students and explained in detail both verbally and in written form. First, 'klwrthjklpytr*beautiful*wrthn' was written on the board as an example and participants were asked to find which word was embedded in the series of unrelated letters. After the subjects found the embedded word 'beautiful' it was marked by the researcher on the board. Then, the second example 'skh*owner*klygtua' was written and this time they were asked to see the longest embedded word and 'owner' was underlined on the board. It was explained that 'own' is incorrect because it is not the longest word embedded.

The researcher informed the participants that the test measured their speed of recognition over the target words. So they were required to write down the 'start' and 'finish' time on the right top of the sheet. The students were told that the researcher would write down the time every passing minute on the board cleaning the previous one like from 10:11 to 10:12. When they were done with the test, they were asked to write the last time they saw on the board and wait for the next test. At the end of the instruction, it was one more time emphasized that they were expected to find the longest word as quickly as they could.

3.3.Procedure

3.3.1. Pre-tests

The pre-tests were paper-based administrations and were handed out to students at the beginning of the semester before the experiment. Before the administration, the subjects were informed about the tests and were told that they were to measure their vocabulary knowledge and that they had nothing to do with the scores that they got in prep class. So the instructions of each test (what they were expected to do and how) were given to both groups by the researcher herself in their native language orally and in written form to have the test made sense on the participants. To match the three test papers by the same individual as well as the pre-tests with the post-tests, the students were asked to write their names on the right top corner of all tests. The 3 tests were administered in one session which approximately took 1 class hour (50 min) along with the instruction given in detail. The 3 tests were applied one by one in the following sequence: 1) Recognition Speed Test, 2) Size Test and 3) Depth Test. They could only take one test at a time and could not go back to the previous ones once they took the next test. The participants were given out recognition speed test in the first place to minimize the sequence effects which were noticed in the pilot scheme. In the pilot, the students were first given the yes-no test, then the recognition speed test and finally the depth test. When they took the yes-no test first, the students got familiar with the target words so when the recognition speed test was carried out they did surprisingly well even though they had never come across most target words before or the meanings of which they did not know at all. Their speed of recognition and possibility to circle the unfamiliar target word dramatically rose. As a result, the outcomes were not as reliable as expected, so the application sequence was changed to first recognition speed test, yes-no test and depth test finally.

3.3.2. Experiment

At the beginning of the academic year, the participants were informed that they were going to participate in an extensive reading program which required reading a book every week. After the tests were prepared in the first term, at the beginning of the second semester, the importance of extensive reading was explained and what they should care while they were reading was told in detail. It was overemphasized that they should not look up every single word in the dictionary; but should guess the meaning from the context as it would be tiring and boring to read a book in the former way. In spite of all these suggestions, the participants were observed to check all unknown words in the first weeks of the experiment. But then, probably because of the busy school schedule and extensive reading program as well, they gave up using dictionary so often.

Each week, a hardcopy of one book was provided for the participants. They were given the books generally on Monday and were asked to read it until the next Monday. It was expected from them to finish one book in one week's time. To make the participants take the experiment seriously and read the books regularly every week, they were evaluated with a quiz (Appendix V-XIV) for each book. The quizzes assessed the students' comprehension level over the book. They included open ended questions, true/false questions and multiple choice questions which were totally about understanding the book. No vocabulary question was included. Most quizzes had open ended questions about the participants' opinions and feelings about the book (Write your personal opinions about the book. - What is the most interesting part of the book you remember? etc.) Furthermore, they were told that the scores of the quizzes were going to be added / used as a final grade. All learners were handed out the same book every week to have greater control over the students, the process and the quizzes.

One page-long book opinion forms (Appendix XV) were prepared to make the experiment sound more serious and to follow the process comfortably. The book opinion form included the dates and the names of all books one under another which the students read every week, a large square for students' comment on the book (What new things did you learn?/Write the interesting phrases, sayings etc in the book… What do you think about the book?) and feeling (☺ which stands for 'I like it.' ? which means 'No idea/Not sure' and ☹ for 'I don't like it.'). The book forms were handed out to the students at the beginning of the experiment and the participants were told to fill in the chart immediately after reading a book and keep them as they read the books until the end of the semester. The opinion forms were gathered at the end of the experiment.

CHAPTER 4

RESULTS

In this section, the results of the experiment will be presented under three titles: 4.1. Yes-No Test, 4.2. Depth Test and 4.3. Recognition speed test. Section 4.1. demonstrates the findings of Yes-No post-test while the results of Depth Test are presented under the section 4.2. Section 4.3. introduces the results of Recognition speed testof experimental and control groups on the duration of test completion as well as the number of the correct responses.

To analyze the data, first, the mean scores and standard deviations for the two participant groups were calculated. The computer program SPSS was used. Statistics was applied on the differences between pre-test and post-test scores because the levels of the students in the experimental and control groups were not the same at the beginning of the experiment. Independent and dependent samples *t*-tests were used to analyze the data and the results are reported in tables below.

4.1. Yes-No Test

In this part, the mean scores for the pre- and post-test administrations and gain scores of experimental and control group on Yes-No Test are presented. To assess the learning gains, the number of words rated 'Yes' (I know the meaning of this word) on pre- and post-tests was counted and compared. Words in the category 'Unsure' were not included in these counts.

During the Yes-No Test administration, the subjects were told not to mark 'Yes' for words when they do not know the meaning and asked to write the meanings of the words nearby in their native language to prevent the unreliable data from the research. So, according to the analysis on the number of 'Yes' responses to non-words (30 in total) in the pre- and post-test administrations, the guessing rates of each group's subjects were relatively low (Yes to non words for exp gr. M-pre=1.6, M-post=1.5, for control gr. M-pre=2.3, M-post=2.1) which increases the reliability of the results on both test administrations for each group. Expressed in percentages, the experimental group marked 'Yes' to 5.3% on pre- test and 5%

on post-test while the control group marked 7.6% on pre-test and 7% of non words on post-test. It is apparent that warnings worked and the guessing rates (yes to non words) were relatively low for each group on both tests, which let the Yes-No Test administration had reliable results during the pre- and post- test administrations.

It was hypothesized that the experimental group subjects would have greater enhancement in the number of yes responses to real words at the end of the extensive reading treatment than the control group. The results of the pre- and post test administrations related to the vocabulary improvement of the experimental and control groups appear in Table 4.1.

Table 4.1 Yes to real words on Yes-No Test

	Pre-Test Yes to Real Words		**Post-Test Yes to Real Words**		**Difference**	
	M	**SD**	**M**	**SD**	**M**	**SD**
Exp	**12.5**	**7.4**	**39.8**	**7.95**	**22.76**	**12.28**
Control	**24.0**	**9**	**28.1**	**8.55**	**3.20**	**13.28**

As can be seen in Table 4.1, for experimental group there is an important change in the mean score of vocabulary knowledge from pre-test of 12.5 to post-test of 39.8. During the extensive reading period, the experimental group subjects improved their vocabulary knowledge and on post-test they circled about 27 target words more than pre-test. As a result, it was found that the experimental group showed statistically significant improvement on post-test administration ($t(29)=-10.154$, $p=.000<0.05$).

The control group scored 24.0 on pre-test. In Table 4.1, an important difference in the mean scores of known target words on pre-test between the experimental and control groups is observed (M=12.5, M=24.0, respectively). It is clearly seen that the score of the control group on pre-test is twice as much as the score of the experimental group. That is ,most probably, because the control and experimental groups' subjects adopted different criteria while they were marking 'Yes' on the Yes-No Test administration, which is a quiet common problem in Yes-No Tests. In spite of all warnings, the control group marked Yes for the words the form of which they were familiar with before, but the meaning of which they didn't know. Also they might have confused some target words with words which are similar in

form. After the analysis, the subjects were interviewed about their answers on Yes-No Test and it was found that the most subjects confused the target words with other words, e.g. 'chase' with 'cheese', rubbish with rubber, beat-bite/belt, shape-sharp, pleasant-pregnant, heat-head, luggage-language. It was also found out that there occurred/appeared some confusion between the non-words and real words such as 'culon-clone', 'suddery-suddenly', 'channing-changing' etc. But the participants in experimental group were more modest than the control group's subjects and so, the number of the items voted 'Yes' by the control group's subjects increased and as a result the discrepancy between the two groups got bigger.

It's also indicated from post-test scores (M=28.1) the subjects in the control group had little improvement (about 4 target words) in the end. There was no statistically significant difference between the pre- and post-test scores of control group subjects on Yes-No Test ($t=(29)= -1.228$, $p=.230 >0.05$).

When the groups are compared it is seen that the gain scores of the control group is not as high as those of experimental group. There was an important increase of about 23 target words rated 'Yes' for experimental group subjects while it's just an increase of about 3 words on post-test for control group. The independent-samples t-test has shown that the difference was significantly greater for the experimental group than the control group ($t(29)= 5.92$, $p=.000< 0.05$). That is, the gains made by the experimental group were greater than the gains made by the control group on Yes-No Test.

4.2. Depth Test

The total number of target words tested on Depth Test is 45 and the maximum score a subject can have is 104. The results and comparison of the correct associations that experimental and control group's subjects marked on pre- and post-test administrations are presented in Table 4.2.

Table 4.2 Comparison of correct associations on Depth Test

	Pre-Test		**Post-Test**		**Difference**	
	M	**SD**	**M**	**SD**	**M**	**SD**
Exp	**24.5**	**11.17**	**61.4**	**10.88**	**33.63**	**15.00**

Control	**24.6**	**10.67**	**31.2**	**10.19**	**6.66**	**13.82**

Table 4.2 reveals that in both groups, the scores on post-test administration were higher than the pre-test. According to the scores, it's indicated that the experimental group subjects had better mean scores on post-test (M=61.4) than pre-test (M=24.5). Namely, the extensive reading treatment had positive results on depth knowledge of experimental group subjects and there is a statistically significant improvement on associating the target words for experimental group subjects ($t(29)=-12.276$, $p=.000<0.05$).

Table 4.2 presents that the control group scored average of 24.6 on pre-test and 31.2 on post test. The subjects could just improve themselves by an average of 6.6 target words' associations on Depth Test. The difference was not statistically significant ($t(29)=-2.568$, $p=0.168> 0.05$).

On pre-test administration, apparently, both groups did equally well. After the extensive reading period, an important discrepancy occurred between the groups. As expected, control group subjects had lower post-test scores (M=31.2, SD=10.19) than experimental group (M=61.4, SD=10.88). But according to the table, clearly, for experimental group subjects there is a sharper increase in mean scores of correct associations from pre-test of 24.5 to post-test of 61.4. The difference in gain scores between the control and experimental groups was statistically significant ($t(59)=7.23$, $p=.000<0.05$).

Of the four hypotheses formulated at the end of chapter 2, none was falsified. As to Hypothesis 1, it was found that the experimental group had more correct responses on Recognition speed test than the control group. The difference was as much clear-cut as had been expected. The extensive reading treatment let the experimental group have better scores on the number of target words they recognized than the control group.

The results pertaining to Hypothesis 2, not surprisingly, met the expectations as well. The amount of time the experimental group spent to complete the Recognition speed test was shorter than the control group. A significant improvement occurred in the duration of Recognition speed test by experimental group's subjects.

Hypothesis 3 stated that the experimental group would gain more words as measured by the Yes-No test than the control group in the end. According to the findings, the results were positive so the expected increase was found and this hypothesis was also confirmed.

The last hypothesis addressed to the depth knowledge of subjects turned out to come true in the end. The experimental group made more associations with the target words and their gains were statistically significantly greater than the control group.

4.3. Recognition Speed Test

The data in Table 4.3 reveals the group statistics and compares the results of experimental and control groups over their correct responses on the Recognition speed test. Table 4.3 shows the results of correct responses on pre- and post- Recognition speed test administrations for the experimental and control groups' subjects, respectively. It provides the mean scores and standard deviations.

Table: 4.3. Correct responses of control and experimental groups on Recognition speed test

	Pre-Test		**Post-Test**		**Difference**	
	M	**SD**	**M**	**SD**	**M**	**SD**
Exp	**27.8**	**5.62**	**35.6**	**4.85**	**8.83**	**5.19**
Control	**24.2**	**4.28**	**27.4**	**6.00**	**3.20**	**6.25**

The subjects of the experimental group improved themselves in the mean score of correct answers on Recognition speed test from 27.8 words in the pre-test to 35.6 words in the post-test. The improvement was statistically significant ($t(29)=-9.316$, $p=.000<0.05$). In other words, the experimental group could recognize more target words on the post-test and had a significantly greater success in word recognition at the end of the extensive reading treatment of 10 weeks.

The subjects in the control group could recognise correctly 24 target words on average on the pre-test whereas they could just improve by approximately 3 more words and

circled an average of 27 on post-test. The change in the mean scores of control group from the pre- to the post-test (t(29)=-2.557, p=.125>0.05) was not significant.

As illustrated in Table 4.3, it is seen that the mean scores of each group on pre-test administration were similar (M=27.8 and M=24.2, respectively) whereas the experimental group subjects scored higher on post-test than the control group subjects (M= 35.6 and 27.4 , respectively). That is, the gains made by the experimental group (about 9 words on average) were greater than the gains made by the control group (about 3 words). The treatment brought the experimental group‘s average vocabulary recognition score from 61% to about 80% whereas for control group it was just from 55% to 60%. So, according to the results in the table above, there is a statistically significant difference between the experimental and control groups’ gains in the mean number of target words responded correctly on Recognition speed test(t(29)= 3.79, p=.000<0.05).

Table 4.4 compares the improvement in the amount of time experimental and control groups took to complete the Recognition speed test. It shows that the experimental group completed the Recognition speed test in 8 minutes on average at the beginning of the treatment whereas on post-test there was an important decrease (about 4 minutes) in the mean scores of duration (M=3.6). That is, the amount of time the experimental group subjects took to complete the Recognition speed test got shorter. In other words, there is a statistically significant improvement for the extensive reading subjects in the mean scores of response time on Recognition speed test (t(29)=10.142, p=.000<0.05).

Table 4.4 Comparison of response time to the words on Recognition speed test

		Pre-Test		**Post-Test**		**Difference**	
	N	**M**	**SD**	**M**	**SD**	**M**	**SD**
Exp	**30**	**7.8**	**2.48**	**3.6**	**1.31**	**-4.06**	**2.19**
Control	**30**	**9.2**	**1.97**	**7.1**	**1.96**	**-2.16**	**2.57**

Table 4.4 shows that the subjects in the control group completed the Recognition speed teston average of 9 minutes on the pre-test while the recognition time decreased to an average of 7 minutes on the post-test administration. The decrease was not statistically significant (t(29)=4.373, p=.135>0.05). These results show that, the subjects in the control

group could recognize only 3 more words accurately in a 2 minute shorter period of time at the end of 10 weeks.

As seen in Table 4.4, the experimental group identified more target words in shorter time than the control group. The experimental group completed post-test about 4 minutes shorter than the pre-test (Mpre=7.8, Mpost=3.6) whereas there had been 2 minutes reduction in the response time of control group (Mpre=9.2, Mpost=7.1) So, there is a greater decrease (by 2 minutes) in response time of experimental group than the control group on post-test administration at the end of a 10 week extensive reading treatment. The difference in decrease in response time between experimental and control groups was statistically significant ($t(59)=-3.07$, $p=.000<0.05$).

According to the results in Table 4.4 and 4.2, the Recognition speed test was completed by experimental group with a result of average 3.5 (27 words in 7 mins, 3.5 words in 1 min) correct responses per minute on pre-test administration. The experimental group recognized 9.88 words per minute on post-test. So there had been a great improvement (about 6 words) on the number of correctly recognized words per minute in the experimental group. On the other hand, in a minute the control group responded with 2.63 correct answers on the pre-test administration. On post-test, there had been enhancement in the number of correct responses per minute by only 1.22 words and they identified 3.85 target words on average per minute. So while the difference of the correct responses per minute between the groups on pre-test was not important (0.85), the difference became greater on post-test (6.03).

CHAPTER 5

DISCUSSION

This study examined and compared the vocabulary development (in terms of vocabulary breadth, depth and recognition speed and accuracy) of two groups one of which was additionally exposed to an extensive reading program, as an extra-curricular activity, together with regular language education. With regards to vocabulary development under these three subtitles being investigated, the extensive reading group was reported to achieve more gains than the control group did. In this chapter, the results will be discussed in detail.

5.1. Quantitative Gains from Extensive Reading

The first hypothesis assumes that there will be a difference between the vocabulary gain of the students who read books regularly and extensively, and those who do not. The analysis of data gathered clearly indicated that substantial development in the number of familiar vocabulary occurred following a ten-week extensive reading treatment. Familiar words in the experimental group increased from 20% in pre-test to 78% in post-test. According to the discrepancy between pre- and post-tests of extensive group, they learned 58% unfamiliar words in the test, which means they gained almost 3 words in 5 in the end. Compared with the results of control group (0.5 words in 5), extensive reading group picked up target words almost 6 times more than the control group, which supports the Hypothesis 1 affirmatively, as extensive reading definitely appears to lead to the enhancement of vocabulary knowledge.

A wide range of different gains was reported in studies on vocabulary learning from reading. Among the previous studies, the highest level of vocabulary gain clearly occurred in the research by Saragi et al. (1978). Learners picked three quarters of 90 nadsat (i.e. Russian) words through reading. The most important reason for such high result was because the

language of the text was English and the learners were all native speakers. In this way, learners could understand the overall text, which made the target words' meaning prediction easier and the vocabulary gains higher. Second highest gains (30% for university students and 24% for high school students) were found in the study by Day et al. (1991) with Japanese EFL students through silent reading in the classroom.

Other studies investigating vocabulary improvement through reading did not reveal gains as high as those cited above. Horst (2005) overviewed the studies related to vocabulary improvement through reading and stated that subjects showed a relatively small mean growth rate [e.g. 8% by Hulstijn, 1992; and 14% by Ferris, 1988 (cited in Horst, 2005); 6% and 9% by Pits et al., 1989; %22 by Horst et al., 1998]. She attributes this to a number of limitations such as using measuring instruments not sensitive to small amounts of learning (Nation, 2001), no control of text difficulty (Nation, 2001) resulting in subjects' being unable to finish reading the assigned chapters, and testing small numbers of target words. In later studies (Horst et al., 1998; Horst and Meara, 1999), those limitations were tried to overcome by expanding the reading treatment and adding new measuring instruments. Consequently, a higher pick-up rate than the previous studies was obtained (1 word in every 5 running words, Horst et al, 1998).

Yet, these studies did not create true extensive reading conditions that are comparable to those of Saragi et al. (1978). In extensive reading studies as in the present study, much greater gains were obtained. For instance, it was reported in an extensive reading study by Horst (2005) that the subjects learned well over half of the unfamiliar words in the test (pick-up rate of 3 words in 5 for low frequency words, almost 4 words in 5 for the most frequent words list) which is most probably because the tests were prepared with the words the subjects were definitely going to be exposed during the treatment. As the tests were specially designed to subjects, the gains were higher than any other previous studies. In the present study, as in Horst (2005), more than half of the words were learnt. In the light of the results from the present study which measured the competence of more target words of more subjects in a longer period, it is apparent that subjects of extensive reading studies showed three times more progress in the number of familiar target words than those did through reading (3 in 5, 1 in 5, respectively).

Not all extensive reading studies revealed large gains. Al- Homoud and Schmitt (2009) in their study discovered that the highest level of gains was only 6 words that occurred

at subjects' 2000-word level at the end of 10-week extensive reading treatment. These low gains, not significantly different from the gains by the control group, might have relation with the fact that the researchers used a standard test (the Vocabulary Levels Test, Schmitt et al., 2001) to measure the vocabulary development. In order to minimize the effects of standard tests, in the present study, the measurement instrument was made up of the vocabulary from the readers' wordlist. For this reason, the gains and the difference between the pre- and post-tests were higher in the present study.

There were several reasons why extensive reading worked so well in the present study. First, since the period allotted was longer than the previous studies, the subjects were frequently exposed to the words, which led them to learn the meaning in different contexts more comfortably and easily. As the number of encounters increased, they got familiar with the words, and in the end the discrepancy between the pre- and post-test of extensive reading group showed that they could pick on an average of 3 words in 5. Al- Homoud and Schmitt (2009) carried out their study in ten weeks and Horst's extensive reading study (2005) covered a 6-week-period.

Second, the present study tested a lot more number of words (60 in yes-no test, 45 in fluency test, 45 in depth test) and improvement could be measured more reliably, because there might be improvement in a word as well which appears in books but which is not measured in tests. Likewise, other extensive reading studies also measured a large number of target words. Al-Homoud and Schmitt (2009) and Horst (2005) included 100 target words in the tests. Conversely, the measurement instruments in previous studies especially on vocabulary learning through reading appear to cover fewer items [i.e. 12 low frequency target words (Hulstijn, 1992), 13 items in word association test (Horst et al., 1998), and 17 target words (Day et al., 1991)] Therefore, this might be considered as a negative point of the previous studies which measured the improvement in students' vocabulary knowledge by means of only a handful of words.

Third, the amount of reading is another key factor in the success of the extensive reading treatment. Nation and Wang suggest (1999) that as the number of books to be read increases, the improvement in the vocabulary knowledge will go up as well. If the time slot between two encounters decreases, students get familiar with the word. In longer texts and more books, they come across the same word more frequently, which ends up with consolidation and improvement in word knowledge. So, even if reading takes a crucial role in

language learning, in terms of vocabulary development, compared to extensive reading, reading of short texts is effective to some extent. In her study, Horst (2005) also supported Nation and Wang's claim (1999) that the more the students read, the higher vocabulary knowledge they will have. Therefore, through her extensive reading study with a great deal of books (1, 75 books per week/ 10.5 books for a learner) and amount of time (6 weeks in total), she reached the peak, regarding the success rate achieved among previous reading or extensive reading studies. However in other extensive reading studies this number is as high as Horst's (2005). In the study of Al-Homoud and Schmitt (2009) 45 books were read by 70 participants in total, 4 books in Pigada and Schmitt (2006) (1 participant, 4 books), and a 150 page-novel was read by 20 subjects in the study of Pellicer-Sanchez and Schmitt (2010). However in the present study, each participant read one book every week (10 weeks=10 books) which is quite higher than the latter extensive reading studies with shorter texts or fewer books.

Fourth, extensive reading is a matter of want. So, students are expected to take some pleasure while reading, because, later on, it results in more reading as they have fun and comprehend the text easily. Thus, it is quite important to find the right text for students, which is only possible if learners are given some space to prefer what they are going to read without being imposed or forced. When learners choose the reading material suitable to their reading taste and interest, they enjoy reading the books of their choice more than those of teachers. For this reason, the book list to be read in the treatment was made up of the students' choices.

Finally, standard tests measure the general word knowledge of students. They might not cover the target words exposed in the books, so the results are likely to be misleading in terms of the improvement in vocabulary knowledge. For instance, the biggest reason for the low gains in the study of Al-Homoud and Schmitt (2009) was that they used standard tests (Vocabulary Levels Test by Schmitt et al, 2001) to measure the progress. Even if gains occurred in the target word knowledge, the standard test might not have measured the gains as a custom-made test could. On the other hand, Horst (2005) designed a new instrument in which she included the words the students were to come across during reading after scanning the books. Thus, the test directly measured the target words in the books. The present study is somewhat different from those by Horst (2005) and Al-Homoud and Schmitt (2009) in terms of measurement because it didn't use a test formed totally of the target words as it was in Horst's (2005) study or a general standard test as in Al-Homoud and Schmitt's (2009). In the

present study, the target words were picked from the wordlists of the readers not through scanning the books the students were going to read. So, the students might have been tested on some words which they encountered very rarely or didn't at all in the books. In spite of this limitation, they achieved 58% of the target words, which is far beyond the vocabulary gains obtained in previous studies (Sanchez and Schmitt, 2010; Al-Homoud and Schmitt, 2009; Pigada and Schmitt, 2006).

In view of the suggestions by Day and Bamford (1998) and Nation and Wang (1999) that one reader per week should be a goal for a successful extensive reading program, 58% vocabulary growth in the present study verifies these suggestions by showing that learners can increase their vocabulary knowledge by reading a book in a week.

5.2. Development of Vocabulary Depth

The present study revealed that extensive reading had a positive impact on learners' relational knowledge of words in terms of sense relationship, collocation and association. A global test based on the model of 'Word Associate Test' (Read, 1998) was used to measure the improvement in the knowledge of different word aspects. According to the results of the present study, through reading extensively for ten weeks, subjects increased their mean scores of correct relations from 25 to 62 (24% to 59%). They learned 37 more associations unknown in the pre-test, that is, they learnt 75% of the unknown associations which means three quarters of the possible total score for unknown target words' associations in the post-test. Furthermore, the extensive reading group had a statistically and significantly larger improvement than the other group (75%, 8% respectively).

Previous studies also presented significant gains in the aspects of vocabulary knowledge (in terms of meaning and collocation). Pigada and Schmitt (2006) found in their case study with a learner of French that 65% of the target words was enhanced in at least one of their word knowledge aspects (spelling, meaning and grammatical knowledge).

Likewise, Sanchez and Schmitt (2010) reported in their study that second language learners could acquire spelling, word class, and recognition and recall of meaning from reading. In their study, after more than ten exposures, students were shown to have enhancement of 14% in meaning recall, 20% word class recall, 34% in spelling recognition, and 43% in meaning recognition.

Results of the studies support each other and show that, the word knowledge in vocabulary depth increased and got deeper through extensive reading because the main benefit of extensive reading is to provide consolidation for readers with lots of repetitions and encounters (Pigada and Schmitt, 2006), and assist them to learn ~~the~~ aspects of words, which is relatively difficult through intensive reading.

5.3. Word Recognition Speed and Accuracy

Abundant exposure to reading materials promotes automaticity of word recognition (LaBerg and Samuels, 1974). When a learner decodes words without attention, s/he processes information automatically and thus achieves better comprehension (Taguchi, Gorsuch & Sasamoto, 2006). So, fluency in word recognition promotes accuracy, as well. That's why good readers are fast readers and rapid word recognition is crucial to proficient reading.

However, most extensive reading studies do not examine the development in vocabulary recognition speed. So far, they have generally investigated improvement in reading speed (Bell, 2001; Robb and Susser, 1989). But in this study, in addition to breadth and depth, students' recognition speed and recognition accuracy over words were also measured. It is apparent from the results that extensive reading subjects made gains of 47% in their speed of recognizing the target words through the treatment. Results show that, in pre-test, extensive reading group could recognize almost 3 words in 1 minute (28 words in 8 mins) whereas after the treatment, in post-test, they noticed 10 words in 1 minute (36 in 4mins) which was 2.5 times more than the control group score -4 in 1 minutes in post-test.

One study deeply researching L2 learners' word recognition speed is the Digame Project by Meara (1986). However it is different from the present study because it was administered in an electronic environment. The amount of time learners spent on each word's recognition is calculated by seconds using special computer software. According to the results, learners were presented to improve their recognition speed from 2.15 to 1.55 sec on average. There occurred 28% progress in the response time, and in the seventeenth week, the amount of time spent on word recognition was relatively close to the response time of a native speaker on recognizing an English word (1.55, 1.47, respectively). Compared to the results of DIGAME Project (Meara, 1986), the present study presented very low scores in terms of

recognition speed. Normally a native speaker recognizes an English word in 1.44 sec (Meara, 1986), but with recognition rate 1 in 10 sec (35.6 words in 3.6 sec), the results of the present study is 8 times longer. The lower scores result from the fact that the timing was not strictly measured, and it depended on the subjects. Also, learners took more time to indicate their answer as they were required to circle words in contrast to the learners in Meara (1986) who simply pressed a button. Nonetheless, with 47% progress in the speed, it verifies that reading extensively improves language learners' word recognition skill.

As mentioned above, there are almost no studies regarding the word recognition speed and accuracy apart from the present study and DIGAME Project (Meara, 1986). But in second language vocabulary learning, as well as vocabulary breadth and depth knowledge, the response time over a word and its accuracy are also significant because the faster a learner recognizes a word, the quicker he activates his mental sources, in this way he can understand a sentence more comfortably and easily. He can predict the unknown words quickly if he can understands a sentence easily, which finally provides the learner with automaticity in reading. So, as it is obvious, word recognition speed is a very crucial piece in this cycle and more studies are needed to explore the link among reading, learning vocabulary, and word recognition speed and accuracy.

CHAPTER 6

CONCLUSION

6.1. Summary and Conclusions

This study investigated whether or not extensive reading is effective in improving vocabulary knowledge of second language learners. It was hypothesized that there would be significant vocabulary improvement through extensive reading between the extensive reading and control groups. Regarding the analysis of vocabulary improvement in different dimensions of vocabulary knowledge, three important conclusions can be derived from the results above.

First of all, covering a longer period of experiment and greater number of books, this study revealed that reading extensively provided language learners with higher vocabulary learning comparable to L1 learners (as in Cho and Krashen, 1994). In the end, there was an improvement in vocabulary range of the extensive reading group. To state this another way, the more books, the more words.

The second conclusion derived from the present study is that learners' reading a great deal of books leads to enhancement in different aspects of vocabulary knowledge together with the improvement in the number of familiar vocabulary. In the present study, the learners could build some more meaning relations among the words. Not only did they learn the meaning but also strengthen their knowledge of word collocations, synonyms, antonyms, co-hyponyms, and associations.

A final outcome of this study is that learners increase their word recognition speed as well while they improve their accuracy in word recognition through extensive reading. Apart

from the Digame Project (Meara, 1986) which yielded somewhat different results from the present study in terms of word recognition speed, the present study is the only other study to provide statistical evidence on the enhancement of word recognition speed from extensive reading.

Searching the effect of extensive reading on vocabulary improvement of English language learners, this study differs from similar studies in some ways. Most of the previous researches on vocabulary teaching through extensive reading are short term studies. However, the present study covered a longer period with more books, which ended up with more enhancements in vocabulary knowledge. Additionally, the study was carried out with more subjects, and the number of the target words measured was greater in number than that of previous studies. Furthermore, the target words were selected from the wordlist of the graded readers. Thus, it is more likely that the students encountered the words measured in the tests, which resulted in a more reliable measurement of the effect of extensive reading on vocabulary progress. As a longitudinal study, the present investigation offers statistical evidence that when the students follow extensive reading program seriously, they considerably improve their vocabulary in the target language.

This study also demonstrated that reading one graded reader a week as recommended by Nation and Wang (1999) led to the vocabulary improvement in three different areas (breadth, depth, and word recognition speed and accuracy) but not to the same extent. Vocabulary size was the best learned word knowledge area. Subjects made a great progress (57%) by a pick-up rate of almost 3 in 5 in the post test. The gains in word recognition speed followed vocabulary size in the second place with 54% progress. Third, depth knowledge improved by 46%, in terms of sense relationship, collocation and association. The more the subjects read the more meaning relations they could build. However, word recognition accuracy improved to somewhat a lesser degree (45%).

The investigation reported here provides empirical evidence for the claim that foreign language learners can learn vocabulary through reading. It, along with Sanchez and Schmitt (2010), Al- Homoud and Schmitt (2009), Pigada and Schmitt (2006), Horst (2005), Laufer (2003), shows that language learners can acquire vocabulary by reading and suggests that reading extensively can be an important source of vocabulary in second language learning. One can conclude that learners should do a great deal of comprehensible reading to enhance

their word knowledge. To sum up, the relatively stress-free, highly popular and effective extensive reading approach appears to be effective in L2 vocabulary learning

6.2. Further Research

Considering the findings of the present study, some recommendations can be made for further research.

First of all, this study has investigated the effect of extensive reading through a ten-week experiment. In order to provide more accurate, valid, and statistically significant findings, a similar study might be carried out in a longer period of a whole academic year or more.

Secondly, the present study has focused on the improvement in vocabulary breadth, depth and word recognition speed through extensive reading. Future studies might include the enhancement on reading comprehension and writing ability, language proficiency, motivation and attitudes towards language learning, as well as on the knowledge of other aspects of depth like connotation, register and discourse features, or frequency of the target words.

Finally, Lambert (1955) suggested that the amount of time speakers spent to recognize a word was basically a function in the quality of their language competence. Thus, more studies are needed on word recognition speed. Besides, in the present study, the subjects timed themselves in recognition speed test the results of which were inevitably not as accurate as in Digame Project. Therefore, a new investigation where special computer software written and used is needed for more accurate and valid findings about the benefit of extensive reading in the word recognition speeds of students.

6.3. Recommendations

The current study, adds to the growing evidence showing the benefits of extensive reading. Thus, extensive reading should receive more importance in school programs even at early stages of foreign language learning by beginning from the simpler books. Language teaching program coordinators should fix the deficiency in language programs by making the graded readers/extensive reading a crucial part of the program. They may include reading hours and have the students taken it seriously with the discussion and book activity sessions at school. Integration of extensive reading and direct teaching may lead to increase in the benefits of

extensive reading on vocabulary, reading comprehension, and writing skills as well (Horst, 2005; Day & Bamford, 1998; Mason & Krashen, 1997, Hafiz & Tudor, 1990; Tudor &Hafiz, 1989). Even if extensive reading is not included within the teaching program, teachers should encourage learners to read extensively as an extra curriculum activity. However, they shouldn't expect the benefits of extensive reading come in the short term. They should bear in mind that if reading leads learners to achieve good proficiency in writing, vocabulary knowledge, and good reading speed, extensive reading apparently does more in the long run.

Additionally, English language teachers should be given training about the administration and important points of extensive reading treatment. For the teachers who are interested in extensive reading and want to perform the programme in their classrooms, 'Extensive Reading in the Second Language Classroom' by Day and Bamford (1998) is a very good guide which includes very important points and practical suggestions about extensive reading programme in language classrooms.

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APPENDICES

Appendix 1:Full list of the level three graded readers

The Call of the Wild *	Classics
A Christmas Carol *	Classics
Ethan Frome	Classics
The Three Strangers and Other Stories	Classics
Through the Looking-Glass	Classics
The Wing in the Willows	Classics
As the Inspector Said and Other Stories	Crime & Mystery
Goldfish	Crime & Mystery
The Last Sherlock Holmes Story	Crime & Mystery
Australia and New Zealand	Factfiles
Information Technology	Factfiles
Martin Luther King	Factfiles
Recycling	Factfiles
The USA	Factfiles
Frankenstein *	Fantasy & Horror
Moondial	Fantasy & Horror
A Pair of Ghostly Hands and Other Stories	Fantasy & Horror
The Picture of Dorian Gray *	Fantasy & Horror
The Star Zoo	Fantasy & Horror
Tales of Mystery and Imagination *	Fantasy & Horror
The Card	Human Interest
Go, Lovely Rose and Other Stories	Human Interest
Love Story *	Human Interest
The Railway Children	Human Interest
The Secret Garden *	Human Interest
Tooth and Claw- Short Stories	Human Interest
'Who, Sir? Me, Sir?'	Human Interest
Chemical Secret *	Thriller & Adventure
The Crown of Violet	Thriller & Adventure
Justice	Thriller & Adventure
Kidnapped	Thriller & Adventure
On the Edge	Thriller & Adventure
The Prisoner of Zenda *	Thriller & Adventure
Skyjack! *	Thriller & Adventure
Wyatt's Hurricane	Thriller & Adventure
The Bronte Story	True Stories
Rabbit-Proof Fence	True Stories
Dancing with Strangers: Stories from Africa	World Stories
The Long White Cloud: Stories from New Zealand	World Stories
Playing with Fire: Stories from the Pacific Rim	World Stories

**Bestseller*