The impact of vocabulary knowledge on reading, writing and proficiency scores of EFL learners

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Abstract

This study is an attempt to clarify the incremental and multidimensional nature of foreign language vocabulary development and its relation to the participants' reading and writing performances and general language ability of English as a foreign language (EFL). With this principle aim, the current study investigated the relationship between receptive and productive vocabulary knowledge, the relationship between receptive vocabulary knowledge and reading performance and the relationship between productive vocabulary knowledge and writing performance using the participants' scores on vocabulary knowledge tests, a reading exam and a writing exam. Additionally, the lexical level of the essays written by the participants and its relation to their productive vocabulary knowledge and the impact of both receptive and productive vocabulary knowledge on the participants' general language ability of EFL were also examined. 175 students studying in an intensive language program participated in the study. The results revealed that the students' receptive vocabulary knowledge was larger than their productive vocabulary knowledge. It was also found that the contribution of vocabulary knowledge to the foreign language performances of reading, writing and proficiency was significant. Moreover, according to the Lexical Frequency Profile results, the lexical level of the student essays and the students' productive vocabulary knowledge were significantly related.

*Keywords:*Receptive vocabulary knowledge; productive vocabulary knowledge; lexical level; lexical frequency profile; reading; writing; proficiency

1. Introduction

Today, the fact that "vocabulary is central to language and of critical importance to the typical language learner" (Zimmerman, 1997, p. 5) is generally accepted in foreign language education. In fact, as Richards & Rodgers (2001, p. 132) puts it forward, "the building blocks of language learning and communication are not grammar, function, notions, or some other unit of planning and teaching but lexis, that is, word and word combinations". Considering this close relationship between vocabulary knowledge and language learning, one cannot deny the importance of vocabulary knowledge in general language ability, which is to have the necessary competences in a language.

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Vocabulary learning in a second or foreign language (L2) is different from vocabulary learning in one's mother tongue (L1) due to the fact that the acquisition of L2 is a more conscious and demanding process. Despite the great contributions, research on vocabulary development is an unfinished task. It might be really difficult to outline the processes and learning parts in vocabulary development as a result of the intricacy of these components included; however, it is important to strive for more exactness to build up a unified theoretical construct of lexical competence and a model of vocabulary development (Henriksen, 1999).

1.1. Literature review

1.1.1. The nature of vocabulary knowledge

The mechanics of vocabulary learning have not been understood fully so far; on the other hand, it is known that L2 vocabulary cannot be acquired instantaneously or simultaneously as mastering a word completely requires various component types of word knowledge and even learning of individual word knowledge is incremental in nature being a gradually developing continuum (Schmitt, 2000).

Vocabulary knowledge may sometimes be seen as consisting of isolated, memorized information about the meanings of particular words (Nagy, 2005); however, it is beyond this assumption. In addition to the fact that "learning burden, which is the amount of effort required to learn a word including its knowledge and patterns" (Nation, 2001, p. 7), the aspects of knowing a word (Nation, 1990) are also of the basic components affecting the process of learning a new word. Learners should know which word to use, how and where to use it. This knowledge constructs the aspects of vocabulary knowledge, which are respectively meaning, form, and use (Nation, 2001).

Furthermore, vocabulary knowledge has a continuum-based and multidimensional nature. For instance, three dimensions of lexical competence were proposed by Henriksen (1999): (a) partial to precise knowledge, (b) depth of knowledge and (c) receptive to productive use ability. Partial to precise knowledge refers to that the target vocabulary knowledge "ranges on a continuum rather than being known versus unknown" (Schmitt, 1998, p. 118). Another important distinction between two dimensions is depth of knowledge and size, or breadth of knowledge (Henriksen 1999; Read, 2000). Breadth of vocabulary knowledge refers to the quantity or the number of words learners know at a particular level of language proficiency (Nation, 2001) while depth of vocabulary knowledge refers to the quality of lexical knowledge, or how well the learner knows a word (Read, 2000). This study investigated the dimensions of receptive and productive vocabulary knowledge. Receptive vocabulary knowledge involves perceiving the form of a word and retrieving its meaning while listening or reading. On the other hand, productive vocabulary knowledge requires expressing a meaning through speaking or writing and producing the proper spoken or written word form (Nation, 2001). However, a clear-cut separation is not possible since each can include the other's features. Although listening and reading are the use of receptive vocabulary knowledge, one can produce meaning in these processes. Considering that most vocabulary is learned receptively (Webb, 2005), receptive vocabulary knowledge tends to be larger than productive vocabulary knowledge (Webb, 2008) and also can give some indication of productive vocabulary size (Waring, 2002; Zhong, 2014).

1.1.2. The process of vocabulary learning

It is a long-known fact that vocabulary learning is an essential component to language learning (Harley, 1996). Four vocabulary-learning partners, who are students, teachers, materials writers, and researchers, are essential to contribute to learning process to encourage sufficient vocabulary learning (Schmitt, 2008). However, the best method to accomplish good vocabulary learning is still obscure

somewhat on the grounds that it relies upon a wide variety of factors (de Groot, 2006). For example, the amount of word-related activity induced by the task is an important factor that determines task effectiveness for vocabulary learning (Hill & Laufer, 2003).

There are two basic ways of vocabulary learning, which are incidental and intentional vocabulary learning. Incidental vocabulary learning refers to "the learning of vocabulary as the by-product of any activity not explicitly geared to vocabulary learning" while intentional vocabulary learning refers to "any activity aiming at committing lexical information to memory" (Robinson, 2001, p. 271). Intentional vocabulary learning includes many ways and strategies such as using word cards, using mnemonics, keeping vocabulary notebooks, doing vocabulary exercises, looking up dictionaries and so forth. The core of the acquisition of word knowledge is to be able to establish the link between meaning and form. In L2 vocabulary learning, form is generally downplayed or disregarded. Considering the reason why L1 learners learn the target vocabulary easily, which is because they are acquainted with the features and regularities in the L1 input, more attention to the learning form in L2 vocabulary learning can aid to learn different aspects of vocabulary knowledge (Ellis, 2006).

1.1.3. The size of vocabulary knowledge

The first step of vocabulary knowledge is to have a certain amount of vocabulary size to comprehend and use the language. More importantly, language learners need to update their vocabulary size, since "vocabulary is a continually changing entity with new words and new uses of old words being added and old words failing into disuse" (Nation & Waring, 1997, p. 6). In respect to vocabulary size, an important question to ask is how many words a language learner needs to know. To be able to answer this question, one primarily should know what knowing a word means. In search of a quantifiable definition of "word knowledge", Nation (1990) identified components of word knowledge in a comprehensive framework by also presenting a distinction between receptive and productive knowledge.

There is not an exact number of words to be known for a language learner or even a native speaker since the number changes according to the specific purposes. However, it was estimated that an educated native speaker would have a vocabulary size of approximately 17,000 word families according to Goulden, Read & Nation (1990) and 20,000 word families according to Nation & Waring (1997). Furthermore, some previous research provided foreign language learners and teachers with some numbers. For instance, an EFL learner needs to know at least 2,000 word forms to understand 90-94% of spoken discourse in different contexts (Adolphs & Schmitt, 2004); 2,000 and 3,000 word families for adequate listening comprehension at 95% level, compared with Nation's (2006) calculation of 6,000-7,000 families based on a 98% figure (van Zeeland & Schmitt, 2012); 3,000 word families to reach a text coverage of 95% (Laufer, 1992, 1997); 5,000 word families to enjoy reading (Hirsh & Nation, 1992); and 15,000-20,000 word families to comprehend the target L2 with almost no disturbance in a native-like level (Nation, 2001).

These figures probably underestimate the learning challenge as each word family includes several individual word forms, including the root form (stimulate), its inflections (stimulated, stimulating, stimulates), and regular derivations (stimulation, stimulative) (Schmitt, 2008). To illustrate, a vocabulary of 6000 word families (enabling listening) entails knowing 28,015 individual word forms, while 8000 families (enabling wide reading) entails 34,660 words (Nation, 2006). In fact, there is no absolute threshold for a total comprehension; nevertheless, it is true to say that poor vocabulary knowledge may lead to poor comprehension.

Another important thing to remember in vocabulary learning is that all of the words in a language are not equally useful and one measure of usefulness is word frequencies. It is well-known that a small

number of word types, high frequency words (the most frequent 2,000 words), occur very frequently and make up the majority of running words in discourse. Conversely, a very large number of types occur very rarely, and make up the low frequency words (Schmitt & Schmitt, 2012).

The assumption that vocabulary learning is strongly affected by word frequency has been confirmed by several studies (Laufer & Nation; 1999; Read, 2004; Öztürk, 2015). The general conclusion gained from the examination of the relationship between vocabulary learning and word frequency is that learners tend to learn the words that occur frequently before the words that occur less frequently in the target language. Furthermore, there is a strong relationship between text coverage and word frequency. For instance, the most frequent 1,000 words of English account for around 75% of the running words in formal written texts and around 84% of informal spoken use (Laufer & Nation, 1999). The most frequent 2,000 words of English provide high coverage of fiction, but knowing them still does not provide enough coverage for a comfortable reading (Hsueh-Chao & Nation, 2000). More recently, Laufer & Ravenhorst-Kalovski (2010, p. 15) have suggested that there are two thresholds of lexical coverage: "An optimal one, which is the knowledge of 8,000 word families yielding the coverage of 98% (including proper nouns) and a minimal one, which is 4,000-5,000 word families resulting in the coverage of 95% (including proper nouns)".

1.1.4. Testing vocabulary knowledge

Testing vocabulary is a really difficult issue due to individual differences and untraceable cognitive processes of learners; however, vocabulary knowledge of language learners can be tested in many ways. Depending on what exactly one wants to know about L2 vocabulary knowledge, one has to select appropriate materials and adequate procedures to reach valid and reliable results; therefore, different types of tests will be necessary to be able to take all aspects of vocabulary knowledge into account (Bogaards, 2000).

The diversified nature of word knowledge makes impossible to test all the different knowledge facets of a word at the same time. However, as Pignot-Shahov (2012) suggests, a small number of well-established vocabulary tests provide valuable information for teachers, learners and assessment bodies by investigating and providing data for some aspects of word knowledge and aiming at validating theories and models of the mental lexicon on the grounds that knowing how words are stored and learned helps to improve language course content, delivery and assessment as well as to further develop our understanding of language learning processes.

In this study, vocabulary level tests (Schmitt, Schmitt & Clapham, 2001; Laufer & Nation, 1999) were used since it is useful to view the vocabulary of English (and indeed any language) as consisting of a series of levels based on frequency of occurrence for several reasons: First, there are striking differences between levels basically due to the purpose and frequency of use of the words in different levels. Second, there are a very large number of words in English so that the goals of any language course can give attention to only a very small proportion of these words (Laufer & Nation, 1999).

1.1.5. Vocabulary and reading

Several authors and researchers emphasized the effect of the integration of vocabulary learning and improving reading skills. For example, Zimmerman (1997) stated that interactive vocabulary instruction accompanied by moderate amounts of self-selected and course-related reading led to gains in vocabulary knowledge. Also, Hill & Laufer (2003) found that post-reading tasks explicitly focusing on target words led to better vocabulary learning than comprehension questions which required knowledge of the target words' meaning.

There is an interrelation between vocabulary knowledge and reading comprehension having two major directions of effect – the effect of vocabulary knowledge on reading comprehension and the effect of reading comprehension on vocabulary knowledge or growth (Hsueh-Chao & Nation, 2000). Moreover, most theorists and researchers in education have assumed that vocabulary knowledge and reading comprehension are closely and strongly related, and numerous studies have shown the strong correlation between the two (Nelson-Herber, 1986; Anderson & Freebody, 1981; Baker, et al., 1995; Zimmerman, 1997; Read, 2000; Nation, 2001; Qian, 2002; Zhang, 2012).

More specifically, there is a linear relationship between vocabulary size and reading comprehension (Laufer, 1992; Schmitt, Jiang & Grabe, 2011). In other words, as Pringprom (2012, p. 1104) stated, "learners will have difficulty comprehending the text if their vocabulary size is far from the required threshold". However, it is crucial to remember without underestimating the effect of vocabulary size and knowledge that there are also other factors affecting reading comprehension of learners such as the effect of L1 (Fecteau, 1999; Lee & Schallert, 1997; van Gelderen et al., 2004; Garrison-Fletcher, 2012), group dynamic and individual differences (Levy, 2011) and text difficulty (Thomas & Healy, 2012).

1.1.6. Vocabulary and writing

Considering that a certain level of vocabulary is needed to learn the target language and writing means production; it can be said that vocabulary plays an important role in writing by enabling the use of the language in an active way. In the study by Coxhead (2012), the students individually carried out an integrated reading and writing task and then participated in an interview which focused on their language learning background and academic studies through vocabulary use in the reading and writing task. Data analysis showed that these students have an overall sense of the importance or need for academic vocabulary for their university studies and they especially demonstrated a high level of awareness of the academic audience for their writing and its impact on their word choice. Furthermore, these participants used a variety of techniques to incorporate academic or technical words into their essays.

As the relationship between vocabulary and reading, the relationship between vocabulary and writing is also reciprocal. In other words, vocabulary knowledge and size have an impact on writing whereas writing helps to improve vocabulary knowledge. Receptive vocabulary knowledge develops through a variety of sources, but Laufer (1998) claims that productive vocabulary does not necessarily develop in parallel. Converting receptive vocabulary into productive vocabulary is the final stage of vocabulary learning (Brown & Payne, 1994). Besides, Muncie (2002) states that writing allows for greater experimentation with productive use of new words than speaking does, as students have greater use of resources such as dictionaries and time. Likewise, Pichette, Serres & Lafontaine (2012) suggest that writing a text may lead to significantly higher recall than reading if enough time is allocated for each task and therefore language teachers may resort to writing tasks that incorporate newly taught words in order to enhance students' retention.

1.2. Research questions

Addressing the need for further research and remembering that vocabulary knowledge has different aspects and dimensions (Schmitt, 2000), the following specific questions guided the current study:

(1) What is the relationship between the receptive and productive vocabulary knowledge of the participants?

(2) How does the participants' receptive vocabulary knowledge have an impact on their reading performance?

(3) How does the participants' productive vocabulary knowledge have an impact on their writing performance?

(4) What is the lexical level of the compositions written by the participants and its relation to their productive vocabulary knowledge?

(5) How do the receptive and productive vocabulary knowledge have an impact on the participants' general language ability of EFL (English as a foreign language)?

2. Method

This non-experimental study was designed as quantitative, correlational and descriptive research in order to present the impact of vocabulary knowledge on reading, writing and proficiency scores of a group of English students studying in an intensive language program.

2.1. Participants

In Anadolu University School of Foreign Languages (AUSFL) in Eskişehir, Turkey, all the students' proficiency level was determined with a placement exam at the beginning of the fall term. The placement exam, prepared by Bilkent University in Ankara, was a multiple-choice exam consisting of 170 questions of different levels of difficulty. The questions were designed to test students' knowledge of grammar and vocabulary. Each question had five options to choose from and four wrong answers cancelled out one correct answer.

The placement exam primarily identified the language level of the students. At the same time, it aimed to determine the students who would take the proficiency exam. Students who scored 60 points or higher from the placement test were entitled to take the proficiency exam while students who scored 59 points or lower were placed to a class according to their points and started the intensive language program at one of the levels called A, B1.1, B1.2, B.2.1 and B2.2. These levels were based on Common European Framework of Reference for Languages (CEFR) and their learning outcomes were adapted regarding to that of CEFR levels. A was the beginner level at which students with low level or no English skills were placed while B1.1, B.1.2 and B2.1 were the levels at which students further consolidated and developed the language points from the previous levels. The exit level, B2.2 aimed to bring students' language skills and lexis up to the level required for entry into faculties.

Normally, each module, in which students of different levels could study, lasted 8 weeks; however, if students were able to reach B2.2 level at the very beginning of the fall or spring term, they had to take the courses of this level for 16 weeks, which was one academic term.

A variety of assessment methods such as mid-term(s), online assignment(s), portfolio(s), and a final exam were implemented. In order to pass their level, the students had to fulfil the following requirements: They had to take 8 pop-quizzes (16 pop-quizzes for 16-week B2.2 level students, who were the participants of the present study), (25%); kept portfolios including vocabulary files, unit tests, and written assignments (15%) and did online study exercises (10%) as in-course assessment requirements (50% in total) and also took a mid-module test (MMT) consisting of listening, reading, and writing parts (50%). Their score had to be 70 or more out of 100 to be able to take the end of module test (EMT). In the EMT, which consisted of reading, listening, writing and speaking parts, they had to take at least 60 out of 100 to be able to study at the next level. This exam procedure was

valid for all levels with the exception that A and B2.2 level students did not take a speaking exam as a part of the EMT.

Moreover, if students were able to pass the EMT of B2.2 level, they were allowed to take the proficiency exam consisting of a multiple choice exam to assess reading and language use, a listening exam, a speaking exam, and a writing exam. As the last requirement, the students scoring 60 or more out of 100 as the average of all these exam parts gained the right to pass AUSFL and enter their faculties.

175 students from 16-week B2.2 level studying in AUSFL in the second term of 2013-2014 Academic Year participated in the current study. Although 8-week B2.2 level students were not included, the participants of the present study consisted of a mixed group of students including the ones who never repeated previous levels, the ones who repeated one or more previous levels or their current level and those students from the previous year.

2.2. Instruments

With the aim of collecting the required data for the present study, 2000 Word Level Receptive Vocabulary Knowledge Test (Schmitt, Schmitt & Clapham, 2001), 2000 Word Level Productive Vocabulary Knowledge Test (Laufer & Nation, 1999), Lexical Frequency Profile and AUSFL 2013-2014 Academic Year Spring Term 16-week B2.2 Level Students' reading and writing scores on the EMT and also their overall scores on the proficiency exam were utilized.

2.2.1. 2000 Word Level Receptive Vocabulary Knowledge Test

The 2000 level represents the 1,986 word families from the General Service List (GSL; West 1953) (Li & MacGregor, 2010). The test used in the present study consisted of 30 items (Schmitt, Schmitt & Clapham, 2001) and the students were expected to match three words out of six with the given three associations presented in 10 units. The six words within each item were semantically, morphologically and phonologically unrelated, to minimize the contribution of guessing to correct scores (Li & MacGregor, 2010). The words from the stratified sample tended to fall into a 3 (noun): 2 (verb): 1 (adjective) ratio and actually this ratio was maintained in the test, with each section containing three noun clusters, two verb clusters and one adjective cluster (Schmitt, Schmitt & Clapham, 2001). Some words were in the test to make it more difficult and they did not have to find a meaning for these words. In the example below, these words are 'business', 'clock', and 'shoe'.

The following is an example:

l .business

2 .clock   _____ part of a house

3.   horse   _____ animal with four legs

4.   pencil   _____ something used for writing

5.   shoe

6.   wall

They answer it in the following way:

l.   business

2.   clock   __6__ part of a house

3.   horse   __3__ animal with four legs

4. pencil   __4__ something used for writing
5. shoe
6. wall

2.2.2. 2000 Word Level Productive Vocabulary Knowledge Test

Unlike the fully productive tests such as Lexical Frequency Profile (Laufer & Nation, 1999); the term 'controlled productive vocabulary test' actually defines this form of productive test better. It more correctly refers to the ability to use a word when compelled to do so by a teacher or researcher, whether in an unconstrained context such as a sentence-writing task, or in a constrained context such as a fill-in task where a sentence context is provided and the missing target word has to be supplied (Laufer & Nation, 1999). For the one used in this study, for each item, a meaningful sentence context was presented and the first letters of the target item were provided in order to prevent test-takers from filling in another word which would be semantically appropriate in the given context but which came from a different frequency level. For this purpose, two 2,000 word level productive vocabulary knowledge tests, Version A (18 items) and Version B (18 items), (Laufer & Nation, 1999) were used considering the fact that inclusion of 30 items is probably a minimum for a reliable test (Nation, 2001).

The following is an example:

He has a successful car_____ as a lawyer.

They answer it in the following way:

He has a successful car*eer* as a lawyer.

2.2.3. Lexical Frequency Profile

Lexical Frequency Profile (LFP) is a kind of measurement to estimate productive vocabulary size. Meara (2005) states LFP takes a text as raw input, and outputs a profile that describes the lexical content of the text in terms of frequency bands. In Nation's original formulation of LFP (Nation & Heatley 1996, cited in Meara, 2005, p. 33), the bands are described as follows:

The first [band] includes the most frequent 1,000 words of English. The second [band] includes the second 1,000 most frequent words, and the third [band] includes words not in the first 2,000 words of English but which are frequent in upper secondary school and university texts from a wide range of subjects. All of these base lists include the base forms of words and derived forms.

In LFP, for the assessment of bands, Nation's (1986) word lists are used and the calculation is done by a computer program. The output from LFP shows the number and percentage of word types and word tokens from the text being analyzed (Meara, 2005). Although there are some counterarguments, the study conducted by Laufer & Nation (1995) proved that Lexical Frequency Profile correlates well with an independent measure of vocabulary size. Therefore this reliable and valid measure of lexical richness in writing will be useful for determining the factors that affect judgments of quality in writing and for examining how vocabulary growth is related to vocabulary use. In the present study, the participants were given a certain topic according to their level and their textbooks and then their essays were analyzed through the range program VocabProfile to get results for their lexical frequency profile. Each participant's use of word families from the 1000 and 2000 word bands together and only 2000 word band was noted down.

2.2.4. AUSFL 2013-2014 Academic Year Spring Term 16-week B2.2 Level Students' Reading Scores in the EMT

AUSFL 2013-2014 Academic Year Spring Term 16-week B2.2 Level Students' reading scores in the EMT were used so as to be able to correlate the students' receptive vocabulary knowledge to their reading performance. The reading part, prepared by the lecturers working in Testing Office of AUSFL, consisted of 20 items including multiple-choice questions and true-false questions for two reading texts. Both texts had 71.5% text difficulty level according to Flesch Kincaid The Readibility Test Tool, which meant they were "fairly easy to read".

2.2.5. AUSFL 2013-2014 Academic Year Spring Term 16-week B2.2 Level Students' Writing Scores in the EMT

AUSFL 2013-2014 Academic Year Spring Term 16-week B2.2 Level Students' writing scores in the EMT were used so as to be able to correlate the students' productive vocabulary knowledge to their writing performance. For the writing part, which was prepared by the lecturers working in Testing Office of AUSFL, the students were given an essay topic, which was "World Health Organization (WHO) estimates that the number of overweight adults in the world is 2.1 billion. What are the possible causes / effects of obesity?". Also, some key points such as 'diet', 'genetics', 'death', 'social factors' and 'lifestyle' were given to help them develop their essay along with these topics. They were expected to write a cause-effect essay meeting the word limit between 250 and 300 words. The essays were evaluated in terms of content, organization, grammatical range and accuracy and lexical range and accuracy.

2.2.6. AUSFL 2013-2014 Academic Year Spring Term 16-week B2.2 Level Students' Overall Scores on the Proficiency Exam

The proficiency exam aimed to determine whether students had proficiency in English. The students who scored 60 and higher were exempt from the intensive language program, and they had the right of entry into their faculties. The exam was conducted in three sessions (Anadolu University School of Foreign Languages Student Handbook, 2014-2015):

Session 1 – Multiple-choice Exam: It constituted 60% of the exam and consisted of listening (25 multiple choice questions related to short and medium length listening texts), reading (25 multiple choice questions related to the given reading texts which included 200-500 words), vocabulary (25 multiple choice questions about finding the meaning of vocabulary, assessment of knowledge on vocabulary structure, finding the synonyms and antonyms, assessment of knowledge of the collocations) and grammar (25 multiple choice questions about filling the blanks either in a sentence or in a text and finding the mistakes in the sentences, which were underlined).

Session 2 – Writing: It constituted 20% of the exam. Students were given a topic to write an essay between 250-300 words. A jury of two teachers assessed writing papers in terms of content, organization, vocabulary and grammar.

Session 3 – Speaking: It constituted 20% of the exam. Students took the exam in groups of two at the date and hour they were assigned beforehand and they were asked two personal questions that they could speak individually, and one question that they could speak with one another, which would be cam-corded. Their performances would be evaluated by the jury of two teachers in terms of content, language usage, fluency, vocabulary knowledge and pronunciation.

For the purposes of the present study, the overall scores that the students got from all the abovementioned parts of the proficiency exam were used in order to be able to measure their general language ability.

2.3. Data collection and analysis

Before being used in the present study, the vocabulary knowledge tests were pilot-tested with a group of 20 students at 16-week B2.2 level in the 14th week of their module. The primary aim of the pilot study was to decide the time to allocate in this study. It revealed the time the students needed for the receptive vocabulary knowledge test as 15 minutes and productive vocabulary knowledge test as 25 minutes. The pilot study was only for allocating time since the test-developers had already proved the reliability and validity of both 2000 word level receptive vocabulary knowledge test (Schmitt, Schmitt & Clapham, 2001) and 2000 word level productive vocabulary knowledge test (Laufer & Nation, 1999).

For the study itself, the tests were administered during the classes in the 15th week of their module. Before the students took the tests, they had been informed about the general purpose of the study and that the tests would not affect their course outcome and also they filled the related consent forms. Moreover, they had been instructed about how to do receptive and productive vocabulary knowledge tests with sample questions. Firstly, they were given the 2000 word level productive vocabulary knowledge test. After the participants submitted the productive vocabulary knowledge test, they took 2000 word level receptive vocabulary knowledge test. The reason why they were given the productive vocabulary knowledge test in the first order was that some of the items in both tests were the same; and therefore, the possibility of getting help from the receptive vocabulary knowledge test to do productive vocabulary knowledge test was removed beforehand. These vocabulary knowledge tests were administered towards the end of the second semester and their reading, writing and proficiency scores were included in the calculation of the study results after they were announced.

In fact, responses in the 'controlled' productive vocabulary test can be scored at two levels of sensitivity, which are sensitive and strict scoring in order to consider both partial and full knowledge of the students. In the strict scoring system, a learner's response is marked as correct if the target word is written exactly. In the sensitive scoring system, responses are marked correct even if the target words are misspelled or ungrammatically written, which means ignoring spelling mistakes, the mistakes in subject-verb agreement and the mistakes in part of speech. However, in the present study strict scoring system was preferred because it was assumed that it could provide more correct correlations.

3. Results and Discussion

3.1. The relationship between receptive and productive vocabulary knowledge

The descriptive statistics for receptive and productive vocabulary knowledge tests (means, standard deviations, standard error means and minimum and maximum scores) were given in Table 1. Since the grades of the reading exam, writing exam, proficiency exam and Lexical Frequency Profile scores were calculated out of 100, the participants' scores in the vocabulary knowledge tests were also converted in order to be calculated out of 100.

As seen in Table 1, the participants knew most of the words in the receptive vocabulary knowledge test (M = 87,18). Also, it shows that all participants receptively knew more than 50% of the given words from 2000 word level (min. = 53 and max. = 100). On the other hand, the participants were not as successful in 2000 word level productive vocabulary knowledge test (M = 45,14) as they were in 2000 word level receptive vocabulary knowledge test and they did not have much productive knowledge of the given words (min. = 19 and max. = 72).

Table 1. Means, standard deviations, and minimum and maximum scores for the 2000 word level receptive and productive vocabulary knowledge test scores

	N	Minimum	Maximum	M	SD	Std. Error Mean
Receptive vocabulary knowledge test scores	175	53	100	87,1829	8,47720	,64082
Productive vocabulary knowledge test scores	175	19	72	45,1486	10,69970	,80882

Note. Maximum score = 100.

Moreover, the standard deviation figures show that the distribution of the receptive vocabulary knowledge test scores (SD = 8,47) was more concentrated than the distribution of the productive vocabulary knowledge test scores (SD = 10,69). The larger spread of the scores on productive vocabulary knowledge test might be due to the fact that the participants of the present study consisted of a mixed group of students including the ones who never repeated previous levels, the ones who repeated one or more previous levels or their current level and those students from the previous year. Therefore, their backgrounds seemed to be largely different although they all studied at the same level. Furthermore, considering the fact that for each word to gain the full knowledge, foreign language learners need to master a multitude of aspects and it is more difficult to acquire and use the productive aspects (Laufer & Goldstein, 2004). Thus, this larger distribution of the scores on productive vocabulary knowledge test might be due to the effect of individual differences and personal effort of the participants in the process of their foreign language vocabulary learning.

On the other hand, the narrower spread of the scores the students got from the receptive vocabulary knowledge test might be due to the fact that receptive vocabulary knowledge is easier to acquire and receptive vocabulary knowledge test is a relatively easier test type. Despite their different backgrounds, all the participants were exposed to similar vocabulary learning in the classrooms, which were mostly receptive (Webb, 2005) and therefore might have resulted better scores on receptive vocabulary knowledge test. Besides, in receptive vocabulary knowledge test, test-takers only have to recall the meaning of the words to match their associations while they have to produce the target words according to the given clues in the productive vocabulary knowledge test. Another important point to be considered is that the participants' even a small amount of knowledge about a target word's meaning may help them to make a correct response in receptive vocabulary knowledge test because the words within a cluster have very different meanings (Schmitt, Schmitt & Clapham, 2001).

The mean differences, the other paired differences including standard deviation, 95% confidence interval of the difference, and also t, df, and sig. values were presented in Table 2. The mean difference between the students' receptive vocabulary knowledge and productive vocabulary knowledge (MD = 42,03) showed that the difference was significant being lower than 0,01. These results indicated that the students got significantly higher scores from receptive vocabulary knowledge test as compared to their scores from productive vocabulary knowledge test as Webb (2008) suggested. Based on the fact that sufficient words to assemble a working vocabulary in a foreign language that is sufficient across contexts requires time and effort and a working vocabulary involves the knowledge of basic concepts of meaning, form and use (Nation, 1990), it can be concluded that productive vocabulary knowledge is more comprehensive than receptive vocabulary knowledge (Stoddard, 1929; Laufer, 1998; Fan, 2000; Webb, 2008; Zhou, 2010).

Table 2. The paired differences and t, df, and sig. values found in paired samples test of receptive vocabulary knowledge test scores & productive vocabulary knowledge test scores

	Paired Differences							
			Std. Error Mean	**95% Confidence Interval of the Difference**				**Sig. (2-tailed)**
	Mean	**Std. Deviation**		**Lower**	**Upper**	**t**	**df**	
Receptive VK & Productive VK	42,03429	8,01500	,60588	40,83847	43,23010	69,378	174	,000*

Note. * = *statistically significant at 0.01 level. VK refers to "vocabulary knowledge".*

Some researchers argue that receptive vocabulary knowledge develops double time faster at beginner levels, but that production eventually catches up with it and therefore the gap diminishes in favor of productive vocabulary knowledge at advanced levels (Laufer, 1998; Laufer & Paribakht, 1998). However, the results of the present study did not support this suggestion because the participants' receptive vocabulary knowledge test scores were much higher than their productive vocabulary knowledge test scores (MD = 42,03) even if they studied at the exit level of AUSFL. The reason why the gap between their receptive vocabulary knowledge and productive vocabulary knowledge was still significantly large may be due to two main factors – the type of vocabulary learning, which was mostly receptive in the classroom (Webb, 2005) and the characteristics of that specific group, which had different backgrounds as mentioned earlier. Besides, the gap between receptive vocabulary knowledge and productive vocabulary knowledge was significant most probably due to the assessment of other aspects of word knowledge such as collocations and syntax in productive vocabulary knowledge tests in addition to form and meaning assessed in both receptive and productive vocabulary knowledge tests. Previous research (Griffin, 1992) has suggested that receptive learning is more likely to lead to larger gains in receptive knowledge than productive knowledge, whereas productive learning tends to be more effective in increasing productive knowledge.

Table 3. The correlation between the receptive vocabulary knowledge test scores and productive vocabulary knowledge test scores

	N	**Correlation**	**Sig.**
Receptive VK & Productive VK	175	,673*	,000

Note. Correlation is significant at the 0.01 level (2-tailed). VK refers to "vocabulary knowledge".

When the participants' receptive vocabulary knowledge test scores were correlated with their productive vocabulary knowledge test scores, it was found out that there was a moderate positive correlation (r = 0,673) between the two types of vocabulary knowledge. This means when the scores on 2000 word level receptive vocabulary knowledge increased, the scores on productive vocabulary knowledge also increased or vice versa. Also 45% of variance in productive vocabulary knowledge was explained by receptive vocabulary knowledge (r^2 = 0,4529). The correlation was significant at the 0.01 level and the results were summarized in Table 3. It demonstrates that the more receptive vocabulary knowledge the students had, the more productive vocabulary knowledge they had as well. The results supported the previous finding by Waring (2002) that receptive vocabulary knowledge can give some indication of productive vocabulary size.

3.2. The relationship between receptive vocabulary knowledge and reading performance

The descriptive statistics for the reading exam scores (means, standard deviations, standard error means and minimum and maximum scores) were given in Table 4. As seen, the students' scores ranged from 27 to 90 out of 100 (M = 60.76).

Table 4. Means, standard deviations, and minimum and maximum scores for the reading exam scores

	N	Minimum	Maximum	M	SD	Std. Error Mean
Reading Exam Scores	175	27	90	60,7600	12,74640	,96354

The results demonstrated that there was a moderate positive correlation (r = 0,429) between the students' receptive vocabulary knowledge and reading performance. This means when the scores on 2000 word level receptive vocabulary knowledge test increased, the scores on the reading exam moderately tended to increase or vice versa. Also, 18% of variance in reading performance was explained by receptive vocabulary knowledge (r^2 = 0,184041). The correlation was significant at the 0.01 level and the results were summarized in Table 5.

Table 5. The correlation between the receptive vocabulary knowledge test scores and reading exam scores

	N	Correlation	Sig.
Receptive VK & RP	175	,429*	,000

Note. *Correlation is significant at the 0.01 level (2-tailed). VK refers to "vocabulary knowledge" and RP refers to "reading performance".*

The findings of the present study proved the impact of receptive vocabulary knowledge on reading performance showing that the more receptive vocabulary knowledge the students had, the more successfully they performed in the given reading exam. Hence, the results supported the previous research (Laufer, 1997; Hsueh-Chao & Nation, 2000; Schmitt, Scmitt & Clapham, 2001).

Also, the item analysis of the 20 questions in the reading exam was presented demonstrating lower, upper, p and r values of each item in Table 6. According to these values and comments, 20% of the questions (4 items) were very good while 15% of them (3 items) were good. On the other hand, 40% of the questions (8 items) were moderate having an r-value between 0,20 and 0,29. This means that the items were acceptable; nonetheless, they could be improved in order to make them good or very good items. Also, 10% of the questions (2 items) were bad having an r-value smaller than 0,20. Finally, 15% of the questions (3 items) were reverse scored, which means most of the students chose a distractor as the correct answer. In other words, 35% of the questions (5 items in total) needed to be corrected.

The values received from the item analysis of the questions in the reading exam could be the explanation for the students' lower grades on the reading exam considering that 13 of 20 questions (65%) needed correcting or improving. Hence, it can be concluded that the reading exam might not have been able to assess what it aimed to assess. More specifically, reading assessment can be problematic since it can require different types of reading assessment at different proficiency stages. For instance, extensive reading may become a part of reading assessment or may be in interaction with other language components such as writing according to different aims and contexts (Grabe, 1997).

Table 6. Item analysis of the 20 questions in the reading part of the 16-week B2.2 level 2014-2015 spring term end of module test

Qs	As	A U	A L	B U	B L	C U	C L	D U	D L	Not Answered U	Not Answered L	p	r	COMMENT
1	B	0,19	0,49	0,56	0,15	0,21	0,29	0,03	0,05	0	0	0,35	0,41	Very good
2	C	0	0,03	0,1	0,17	0,89	0,77	0	0,01	0	0	0,83	0,12	Bad
3	B	0,52	0,61	0,47	0,12	0	0,12	0	0,14	0	0	0,29	0,35	Reverse scoring
4	D	0,26	0,56	0,1	0,19	0	0,05	0,63	0,19	0	0	0,41	0,44	Very good
5	A	0,87	0,4	0,1	0,22	0,01	0,08	0	0,26	0	0,01	0,63	0,47	Very good
6	D	0,01	0,01	0,17	0,4	0,29	0,31	0,5	0,26	0	0	0,38	0,24	Moderate
7	B	0,1	0,24	0,85	0,64	0	0,05	0,03	0,05	0	0	0,74	0,21	Moderate
8	C	0,03	0,15	0,07	0	0,7	0,52	0,19	0,31	0	0	0,61	0,18	Bad
9	A	0,85	0,47	0,01	0,24	0,01	0,01	0,1	0,26	0	0	0,66	0,38	Good
10	C	0,17	0,08	0,4	0,24	0,12	0,01	0,29	0,64	0	0	0,06	0,11	Reverse scoring
11	B	0,31	0,52	0,57	0,29	0	0,01	0,1	0,15	0	0	0,43	0,28	Moderate
12	D	0,07	0,17	0	0,12	0,07	0,38	0,85	0,31	0	0	0,58	0,54	Very good
13	B	0,26	0,36	0,54	0,28	0,01	0,22	0,17	0,12	0	0	0,41	0,26	Moderate
14	C	0	0,1	0,01	0,21	0,98	0,68	0	0	0	0	0,83	0,3	Good
15	B	0,03	0,07	0,78	0,42	0,03	0,15	0,14	0,35	0	0	0,6	0,36	Good
16	A	0,4	0,17	0,07	0,14	0,15	0,33	0,36	0,35	0	0	0,28	0,23	Moderate
17	A	0,68	0,4	0,19	0,21	0	0,21	0,1	0,17	0	0	0,54	0,28	Moderate
18	B	0,12	0,33	0,08	0,03	0,54	0,47	0,24	0,15	0	0	0,05	0,05	Reverse Scoring
19	A	0,91	0,7	0,03	0,1	0,03	0,08	0,01	0,1	0	0	0,8	0,21	Moderate
20	D	0	0,01	0,28	0,38	0,31	0,4	0,4	0,19	0	0	0,29	0,21	Moderate

Note. Qs refers to "Questions", As refers to "Answers", U refers to "Upper Value", and L refers to "Lower Value".

Regarding this situation to the present study, the effect of the reading exam on the results cannot be ignored, especially in terms of the correlation between receptive vocabulary knowledge and reading performance. If the reading exam had been structured differently, the level of the success of the students in the exam would have been different resulting a different correlation between their receptive vocabulary knowledge and reading performance. In addition to that, there might have been some other factors also affecting the students' performance in the reading exam such as individual differences, text difficulty relative to reader skill (Thomas & Healy, 2012), and L1 reading comprehension (Fecteau, 1999; Lee & Schallert, 1997; van Gelderen et al., 2004).

3.3. The relationship between productive vocabulary knowledge and writing performance

The descriptive statistics for the writing exam scores (means, standard deviations, standard error means and minimum and maximum scores) were given in Table 7. As seen, the participants' scores ranged from 55 to 100 out of 100 (M = 81,28).

Table 7. Mean, standard deviation, and minimum and maximum scores for the writing exam scores

	N	Minimum	Maximum	M	SD	Std. Error Mean
Writing Exam Scores	175	55	100	81,2800	9,03482	,68297

Compared with the distribution of the reading exam scores ranging from 27 to 90 out of 100 (min. = 27; max. = 90; and M = 60,76), the distribution of the writing exam scores ranging from 55 to 100 out of 100 (min. = 55; max. = 100; and M = 81,28) showed the higher achievement of the students in the writing exam.

Generally, the language learners were expected to get higher scores in reading exams rather than writing exams since reading is a receptive skill while writing is a productive skill. In fact, the approach adopted for writing criteria might have affected the results. In the criteria, the writing components such as content, organization, structure and vocabulary were evaluated one by one; still, the students' writing grades could eventually have been subjective even if they were assessed by two graders because writing an essay does not have one true answer or way as the multiple-choice questions in the reading exam.

Table 8. The correlation between the productive vocabulary knowledge test scores and writing exam scores

	N	Correlation	Sig.
Productive VK & WP	175	,431*	,000

Note. Correlation is significant at the 0.01 level (2-tailed). VK refers to "vocabulary knowledge" and WP refers to "writing performance".

The results given in Table 8 indicated that there was a moderate positive correlation (r = 0,431) between productive vocabulary knowledge and writing performance. This means when the scores on 2000 word level productive vocabulary knowledge test increased, the writing exam scores moderately tended to increase or vice versa. Also, 18% of variance in writing performance was explained by productive vocabulary knowledge ($r^2 = 0,185761$).

Looking at these findings, it could be concluded that the more productive vocabulary knowledge a student had, the more successful they were in the given writing exam and the impact of the students' productive vocabulary knowledge on their writing performance was significant. However, there is one important point that should not be ignored in the examination of the relationship between productive vocabulary knowledge and writing performance: Even if the students did not have a large size of 'full' productive vocabulary knowledge, they could write well-developed essays using the words they knew fully, which were most probably low frequency words (the most frequent 2,000 words). Eventually, these findings supported the suggestion by Greidanus and Nienhuis (2001) that word frequency has an impact on quality of word knowledge since it enables students with frequent encounters to acquire better knowledge of the aspects of vocabulary items by providing them to use words productively.

Besides, the given key points in the writing exam might have enabled the students to develop their essays on certain topics. None of these given words were from 2000 word level band according to VocabProfile. Therefore, it can be said that the students' lexical level in terms of full productive knowledge could be assessed without any impact of the instruction or key points given in the writing exam. On the contrary, it might have enabled the students to remain in a certain framework that provided individual but parallel samples of writing. Moreover, except for vocabulary knowledge, there

might have been some other factors affecting the students' success in the writing exam such as individual differences and the topic of the target essay.

3.4. The Lexical Level of the Student Essays and Its Relation to Productive Vocabulary Knowledge

The descriptive statistics for the participants' Lexical Frequency Profile percentages (means, standard deviations, standard error means and minimum and maximum scores) were given in Table 9. As seen, the students' use of word families ranged from 81,11% to 97,70% (M = 89,79%) for the cumulative calculation of 1000 and 2000 word bands together while their use of word families from only 2000 word level band ranged from 6,56% to 24,14% (M = 13,84%).

Table 9. Mean, standard deviation, and minimum and maximum scores for the writing exam scores

	N	Minimum	Maximum	M	SD	Std. Error Mean
LFP – Word Families (1K + 2K)	175	81,11	97,70	89,7979	3,92777	,29691
LFP – Word Families (2K)	175	6,56	24,14	13,8404	3,29465	,24905

According to the results, there was a moderate positive correlation between productive vocabulary knowledge test scores and the participants' lexical level (see Table 10). When the scores on the productive vocabulary knowledge increased, the percentages of the use of word families from the 1000 and 2000 level moderately tended to increase or vice versa (r = 0,378). In other words, 14% of variance in the students' lexical level at 1000 and 2000 word band was explained by their productive vocabulary knowledge (r^2 = 0,142884). Moreover, when the scores on the productive vocabulary knowledge increased, the percentages of the use of word families from only 2000 level moderately tended to increase or vice versa (r = 0,424). That means 17% of variance in the participants' lexical level at 2000 word band was explained by their productive vocabulary knowledge (r^2 = 0,179776).

Table 10. Mean The correlations between the productive vocabulary knowledge test scores and lexical frequency profile scores

	N	Correlation	Sig.
Productive VK & LFP 1K + 2K	175	,378*	,000
Productive VK & LFP 2K	175	,424*	,000

Note. Correlation is significant at the 0.01 level (2-tailed). VK refers to "vocabulary knowledge", LFP 1K + 2K refers to "1000 and 2000 word band in Lexical Frequency Profile" and LFP 2K refers to "only 2000 word band in Lexical Frequency Profile".

This moderate positive correlation between the students' productive vocabulary knowledge test scores and lexical frequency profile scores indicated that the more productive vocabulary knowledge a student had, the more lexical level they also had. Moreover, the findings proved, one more time, the suggestion that Lexical Frequency Profile correlates well with an independent measure of vocabulary size; thus, it is reliable and valid measure of lexical richness (Laufer & Nation, 1995).

One of the most important findings from the correlation between the lexical level of the student essays and their productive vocabulary knowledge was that the relationship between the students' controlled productive vocabulary knowledge and full productive vocabulary knowledge was

significant. Moreover, the word families from the 1000 and 2000 word bands covered at least 81% of the student essays on average. The findings supported the suggestion by Read (2004) that the 2000 most frequent words account for at least 80% of the running words in any written text.

In addition to the given key points, there might have been several factors affecting the findings. Firstly, the student essays were evaluated at the 1000 and 2000 word bands together and only 2000 word band because the productive vocabulary knowledge test was at 2000 word level. Eventually, it was found out that more than 80% of the word families were used by the participants from the 1000 and 2000 word bands together. However, the words off-list or from the other bands could not be assessed. Secondly, the correlation between the LFP scores and productive vocabulary knowledge test scores were in support of LFP itself rather than the students' productive vocabulary knowledge. For instance, a student using word families mostly from 1000 word level and a student using word families mostly off-list or from the other bands except for 1000 and 2000 word bands may get the same score in their writing exams; therefore, the students' use of full productive vocabulary knowledge as a whole cannot be assessed through LFP. Besides, the way in which LFP uses word frequency is rather limited; as a result, it may not be used for meaningful feedback to learners and requires to be adapted to reflect the actual frequencies rather than broad bands of LFP (Goodfellow, Lamy & Jones, 2002).

3.5. The Impact of Receptive and Productive Vocabulary Knowledge on General Language Ability

The descriptive statistics for the students' overall scores on the proficiency exam (means, standard deviations, standard error means and minimum and maximum scores) were given in Table 11. As seen, the students' scores ranged from 49 to 93 out of 100 (M = 68,96).

Table 11. Mean, standard deviation, and minimum and maximum scores for the proficiency exam scores

	N	Minimum	Maximum	M	SD	Std. Error Mean
Proficiency Exam Scores	175	48	93	68,9657	7,67583	,58024

The results given in Table 12 indicated that there was a moderate positive correlation (r = 0,650) between receptive vocabulary knowledge and general language ability while there was a strong positive correlation (r = 0,826) between productive vocabulary knowledge and general language ability. This means that when the scores on receptive vocabulary knowledge went up, the scores on general language ability moderately tended to go up or vice versa. Also, 42% of variance in general language ability was explained by receptive vocabulary knowledge ($r^2 = 0,4225$). On the other hand, when the scores on productive vocabulary knowledge went up, the scores on general language ability also went up or vice versa. Moreover, 68% of variance in general language ability was explained by productive vocabulary knowledge ($r^2 = 0,682276$). These results supported the common perception in the literature that vocabulary knowledge is an important component in the improvement of general language ability (Zimmerman, 1997; Laufer 1992, 1997; Grabe & Stoller 1997).

Table 12. The correlations between the vocabulary knowledge test scores and proficiency exam scores

	N	Correlation	Sig.
Receptive VK & GLA	175	,650*	,000
Productive VK & GLA	175	,826*	,000

Note. Correlation is significant at the 0.01 level (2-tailed). VK refers to "vocabulary knowledge" and GLA refers to "general language ability".

Both correlations were significant at the 0,01 level; however, the higher value belonged to the correlation between the students' productive vocabulary knowledge test scores and proficiency exam scores (r = 0,826). Hence, it can be concluded that productive vocabulary knowledge might be a better indicator of success in foreign language learning addressing the use of skills instead of just recognizing knowledge. However, all in all, it was found out that vocabulary knowledge had a significant impact on general language ability in foreign language learning supporting the previous research (Thelen, 1986; Şener, 2010; Huang, 2010). In other words, the more vocabulary knowledge a student had, the more successful they were in the target foreign language.

4. Conclusions

4.1. Implications

This study was implemented towards the end of the spring term of 2014-2015 academic year and with the students studying at the exit level of AUSFL in Eskişehir, Turkey. The participants and the timing of the administration of the study was decided like that because it was a descriptive study to evaluate the reached level of vocabulary knowledge and its relation to the other components of the target language or the target language as a whole.

By looking at the overall results of the present study, it can be suggested that vocabulary awareness should be created for the students in their language learning process. Deliberate teaching of low frequency words in the classroom, encouraging students to acquire high frequency words via extensive reading and teaching them vocabulary learning strategies are some optional ways to create the awareness of the importance of vocabulary in an EFL setting. For instance, learners' receptive vocabulary knowledge can be enhanced through various vocabulary activities (Topkaraoğlu & Dilman, 2014) whether they are combined with reading or not (Laufer, 2003). Additionally and more specifically, the use of full vocabulary knowledge can be encouraged with specific and realistic goals including different ways of productive vocabulary knowledge taught by teachers with sufficient language training and practice (Levitzky-Avaid & Laufer, 2013). To be able to monitor such process of vocabulary development, assessment of the students' vocabulary size can be done regularly (Pringprom, 2012).

Also, the results showed that vocabulary knowledge at 2000 word level might not be sufficient for the exit level students. For instance, Schmitt & Schmitt (2012) label the vocabulary between high-frequency (3,000) and low-frequency (9,000+) as "mid-frequency vocabulary" and suggest that foreign language learners should learn mid-frequency vocabulary for proficient language use and also for authentic purposes, such as watching movies or reading. However, it is a well-known fact that students tend to use a small range of simple words in their writing in academic discourse as in this study although they are expected to use more sophisticated vocabulary. Considering the fact that not only learning opportunities but also learners' subjective willingness to explore these opportunities mediate their receptive and productive vocabulary knowledge (Zhang, 2012), motivation and needs of both foreign language teachers and learners crucially help to create the awareness of the importance of vocabulary in an EFL setting.

In order to enhance vocabulary knowledge of both reception and production; extensive reading is a primary way that EFL learners can build their reading vocabulary to an advanced level. Extensive reading promotes second or foreign language learners' automaticity of word recognition (Grabe, 1991; 2009; Paran, 1996; Pressley, 2006) as well as it helps to improve their writing skills (Stotsky, 1983; Krashen, 1984; Hafiz & Tudor, 1989; Robb & Susser, 1989; Nation, 1997; Tsai, 2006); therefore, EFL

students can be encouraged to read outside of the classroom by teaching them reading strategies and giving them assignments related to extensive reading.

According to some researchers (Nagy & Herman, 1987; Krashen, 1989; Waring & Nation, 2004; Pigada & Schmitt, 2006), extensive reading can lead to a great amount of vocabulary growth provided that certain preconditions including adequate exposure to the language, interesting material, and a relaxed, tension-free learning environment are met. However, other researchers state that extensive reading is not able to promote a dramatic increase in vocabulary knowledge. For instance, if a learner reads for an hour, they will acquire only 3 to 6 words (Waring & Nation, 2004). Therefore, "extensive reading practice might help students confirm the meaning and function of the words that are already stored in their memory systems making the connection stronger, which in turn may potentially develop into productive-vocabulary knowledge" (Yamamoto, 2011, p. 240).

On the other hand, the effect of repeated exposure on vocabulary acquisition is not necessarily constant (Bisson et al., 2014). However, it is generally suggested that learners encounter the target words in many different contexts so that the mastery of different word knowledge types can be developed (Schmitt, 2008). Considering the fact that the knowledge of frequent, earlier acquired words are qualitatively better than that of the less frequent, more recently acquired words (Greidanus & Nienhuis, 2001), the contribution of extensive reading to the foreign language learner especially in terms of multiple encounters of words in different contexts cannot be underestimated. All in all, it is true that "each encounter leaves a trace which makes words easier to retrieve" (Pignot-Shahov, 2012, p. 41).

Another important point regarding to the impact of vocabulary knowledge on reading performance is that reading for information or entertainment provides a quantitatively and qualitatively rich context and resource for lifelong lexical development (Eckerth & Tavakoli, 2012) in addition to the importance of explicit or deliberate vocabulary learning.

In terms of learning how to use vocabulary actively, previous studies led to mixed conclusions about the issue of "forced output" (Barcroft, 2006) and there is still need for further research in the related literature. For instance, in L2 learning, some researchers found writing target words in sentences or essays, a way of forced output of using full productive knowledge, were more effective than alternative methods while other researchers found it to produce negative effects on L2 vocabulary knowledge (Barcroft, 1998, 2000, 2004; Folse, 1999) relative to alternative methods. It can be concluded that the effect of writing on productive vocabulary knowledge is not clear; however, the effect of productive vocabulary knowledge on writing seems significant according to the present study and previous studies (Raimes, 1985; Astika, 1993; Leki & Carson, 1994; Engber, 1995; Laufer & Nation, 1995; Meara & Fitzpatrick, 2000; Lee & Muncie, 2006; Baba, 2009).

4.2. Suggestions for further research

This non-experimental descriptive study was able to identify these results at that particular time when the data were collected. However, a longitudinal study with practices that would gather data at certain intervals could better provide results reflecting the incremental nature of vocabulary knowledge. For instance, in order to be able to determine the drawbacks encountered during foreign language learners' acquisition of productive vocabulary knowledge in the long term may be investigated by looking at their written work to see what vocabulary discourse features are not properly used. Also, through a case study, specific findings could be obtained reflecting the individual differences on the vocabulary learning and teaching process since that kind of study would present a detailed view of individual vocabulary improvement.

The current study examined on the relationship between receptive vocabulary knowledge and reading performance and the relationship between productive vocabulary knowledge and writing performance. However, the impact of vocabulary knowledge can be observed on all the main skills. Thus, the analysis of the impact of vocabulary knowledge on listening and speaking is also a must. For instance, a corpus study to find the vocabulary which is much more frequent in certain spoken registers than it is in written registers might be implemented in the future.

Finally, the present study focused on learning vocabulary and the size of vocabulary knowledge. However, teaching vocabulary, especially teachers' approaching to unknown words, is another vital topic in the literature. To give a specific suggestion, whether before or after gaining meaning focused experience is the best time for direct teaching to occur in the learning of a word in an EFL setting can be studied in the future. Besides, testing vocabulary should include the other dimensions such as partial and precise word knowledge or depth of vocabulary knowledge in addition to vocabulary size due to the multidimensional nature of vocabulary knowledge; thus, further research is needed to develop or measure the practicality of different kinds of vocabulary tests.

4.3. Limitations

Although the present study had significant results, it had also some limitations: Firstly, in the productive vocabulary knowledge test the first letters of the target vocabulary items are given to prevent test-takers from filling another word that semantically fits in the given context (Laufer & Nation, 1995); however, it is possible that the test-taker might choose a different word to complete the sentence, which might be a less frequent word, possibly indicating a broader productive vocabulary than the test would reveal (Walters, 2012). Either vocabulary learning is continuum-based (Henriksen, 1996; Schmitt, 1998; Zhong, 2014) or it is not a continuum but a candidate for a threshold effect as Meara (1997) suggested, the results of the present study could have been different if it had been implemented before or after the time when the data were collected. Individuals' vocabulary knowledge can develop or regress according to the involvement in the foreign language vocabulary learning and teaching process (Hulstijn & Laufer, 2001). In addition to the effect of the nature of vocabulary knowledge on the results of the present study, there might have been some other factors having an impact on the findings. Since the students were informed about the general purpose of the study and that the tests would not affect their course outcome, they might not have taken these vocabulary tests seriously. Also, the content of the questions in the reading, writing and proficiency exams might have had an effect on the success of the participants and therefore on the results of the present study. For instance, it would have been likely for the participants to get different scores if different questions had been asked in these exams. Finally, the vocabulary part in the proficiency exam (25 multiple choice questions about finding the meaning of vocabulary, assessment of knowledge on vocabulary structure, finding the synonyms and antonyms, assessment of knowledge of the collocations) might have had an effect on the results leading to stronger correlations between vocabulary knowledge tests and the proficiency exam.

Acknowledgements

References

Adolphs, S.,& Schmitt, N. (2003). Lexical coverage of spoken discourse. *Applied Linguistics*, 24(4), 425-438.

Anderson, R. C.,& Freebody, P. (1981). Vocabulary knowledge. In J. Guthrie (ed.), *Comprehension and teaching: Research reviews*, (pp. 77-117). Newark, DE: International Reading Association.

Astika, G. (1993). Analytical assessment of foreign students' writing. *RELC Jour*nal, 24, 61-71.

Baba, K. (2009). Aspects of lexical proficiency in writing summaries in a foreign language. *Journal of Second Language Writing*, 18(3),191-220.

Bachman, L. F. (1990). *Fundamental considerations in language testing*. Oxford: Oxford University Press.

Baker, S. K., et al. (1995). *Vocabulary acquisition: Curricular and instructional implications for diverse learners*. Technical Report No. 14. Eugene, OR: National Center to Improve the Tools of Educators.

Barcroft, J. (1998). *L2 vocabulary learning: do sentence writing and oral repetition help?*. Poster Presentation at the Second Language Research Forum, Honolulu, HI.

Barcroft, J. (2000). *The Effects of sentence writing as semantic elaboration on the allocation of processing resources and second language lexical acquisition*. (Doctoral dissertation). University of Illinois, Urbana- Champaign, USA.

Barcroft, J. (2004). Second language vocabulary acquisition: A lexical input processing approach. *Foreign Language Annals*, 37(2), 200-208. Retrieved 25.11.2014 from http://onlinelibrary.wiley.com/doi/10.1111/j.1944-9720.2004.tb02193.x/epdf

Barcroft, J. (2006). Can writing a new word detract from learning? More negative effects of forced output during vocabulary learning. *Second Language Research*, 22, 487-497.

Bisson, M. J., van Heuven, W. J. B., Conklin, K., & Tunney, R. J. (2014). The role of repeated exposure to multimodal input in incidental acquisition of foreign language vocabulary. *Language Learning*, 64, 855-877.

Bogaards, P. (2000). Testing L2 vocabulary knowledge at a high level: The case of the Euralex French tests. *Applied Linguistics*, 21(4), 490-516.

Brown, C.,& Payne, M. E. (1994). *Five essential steps of processes in vocabulary Learning*. Paper presented at the TESOL Convention, Baltimore, Md.

Coxhead, A. (2012). Researching vocabulary in secondary school English texts: The Hunger Games and more. *English in Aotearoa*, 34-41.

Cronbach, L. J. (1942). An analysis of techniques for diagnostic vocabulary testing. *Journal of Educational Research*, 36, 206-217.

de Groot, A. (2006). Effects of stimulus characteristics and background music on foreign language vocabulary learning and forgetting. *Language Learning*, 56(3), 463-506.

Eckerth, J.,& Tavakoli, P. (2012). The effects of word exposure frequency and elaboration of word processing on incidental L2 vocabulary acquisition through reading. *Language Teaching Research*, 16(2), 227-252.

Ellis, R. (2006). Current issues in the teaching of grammar: An SLA perspective. *TESOL Quarterly*, 40, 83-107.

Engber, C. (1995). The relationship of lexical proficiency to the quality of ESL compositions. *Journals of Second Language Writing*, 4, 213-238.

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

Fecteau, M. L. (1999). First and second language reading comprehension of literary texts. *The Modern Language Journal*, 83(4), 475-493.

Folse, K. (1999). *The effect of written practice activity on second language vocabulary retentio*n (Doctoral Dissertation). University of South Florida, Tampa.

Garrison-Fletcher, L. (2012). *The acquisition of L2 reading comprehension: The relative contribution of linguistic knowledge and existing reading ability* (Doctoral Dissertation). The Graduate Center, CUNY.

Goodfellow, R., Lamy, M., & Jones, G. (2002). Assessing learners' writing using lexical frequency. ReCALL, 14(1), 133-45.

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

Grabe, W. (1991). Current development in second language reading research. *TESOL Quarterly*, 25(3), 375-406. Retrieved on 12.02.2015 from http://dx.doi.org/10.2307/3586977

Grabe, W. (1997). Reading research and its implications for reading assessment. In A. J. Kunnan (Ed), *Fairness and validation in language assessment*, (pp.226-262). Cambridge: Cambridge University Press.

Grabe, W. & Stoller, F. (1997). Reading and vocabulary development in a second language: A case study. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition*(pp. 98-122). Cambridge: Cambridge University Press.

Grabe, W. (2009). *Reading in a second language: Moving from theory to practice*. Cambridge: Cambridge University Press.

Greidanus, T. & Nienhuis, L. (2001). Testing the quality of word knowledge in L2 by means of word associations: Types of distractors and types of associations. *Modern Language Journal*, 85, 567-577.

Griffin, G. F. (1992). *Aspects of the psychology of second language vocabulary list learning*. (Doctoral dissertation). University of Warwick, UK.

Hafiz, F. M.,& Tudor, I. (1989). Extensive reading and the development of language skills. *English Language Teaching Journal*, 43, 4-13.

Harley, B. (1996). Introduction: Vocabulary learning and teaching in a second language. *The Canadian Modern Language Review*, 53(1), 3-12.

Henriksen, B. (1996). *Semantisation – a key process for vocabulary learning and use*. Paper presented at 11th AILA Conference, Jyväskylä, Finland.

Henriksen, B. (1999). Three dimensions of vocabulary development. *Studies in Second Language Acquisition*, 21(02), 303-317. Retrieved 20.10.2014 from http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=36641&fileId=S0272263199002089

Hill, M.,& Laufer, B. (2003). Type of task, time-on-task and electronic dictionaries in incidental vocabulary acquisition. *International Review of Applied Linguistics*, 41(2), 87-106.

Hsueh-Chao, M. H.,& Nation, P. (2000). Unknown vocabulary density and reading comprehension. *Reading in a Foreign Language*, 13(1), 403-430.

Huang, S. (2010). *Effects of Tasks and Glosses on L2 Incidental Vocabulary Learning: Meta-analyses.* (Doctoral Dissertation). Texas A&M University, Texas, USA.

Hulstijn, J.H.,& Laufer, B. (2001). Some empirical evidence fort he involvement load hypothesis in vocabulary acquisition. *Language Learning*, 51, 539-558.

Krashen, S. D. (1984). *Writing: Research, theory and application*. New York: Prentice Hall.

Krashen, S. D. (1989). We acquire vocabulary and spelling by reading: Additional evidence for the input hypothesis. *The Modern Language Journal,* 73(4), 440–464.

Kunnan, A. J. (1997). Fairness and justice for all. In A. J. Kunnan (Ed), *Fairness and validation in language assessment*, (pp.1-14). Cambridge: Cambridge University Press.

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

Laufer, B.,& Nation, P. (1995). Vocabulary size and use: Lexical richness in L2 written production. *Applied Linguistics*, 16(3), 307-322. Retrieved 25.11.2014 from http://applij.oxfordjournals.org/content/16/3/307.abstract

Laufer, B. (1997). The lexical plight in second language reading: Words you don't know, words you think you know and words you can't guess. In J. Coady and T. Huckin (Eds.), *Second language vocabulary acquisition: A rationale for pedagogy*, (pp. 20-34). Cambridge: Cambridge University Press.

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

Laufer, B.,& Paribakht, T. S. (1998). The relationship between passive and active vocabularies: Effects of language learning context. *Language Learning*, 48(3), 365-391.

Laufer, B.,& Nation, P. (1999). A vocabulary-size test of controlled productive ability. *Language Testing*, 16(1), 33-51.

Laufer, N. (2003). Vocabulary acquisition in a second language: Do learners really acquire most vocabulary by reading? Some empirical evidence. *Canadian Modern Language Review/La revue canadienne des langues vivantes*, 59(4), 567-587.

Laufer, B., & Goldstein, Z. (2004).Testing vocabulary knowledge: Size, strength, and computer adaptiveness.*Language Learning*, 54(3), 399-436.

Laufer, B.,& Ravenhorst-Kalovski. (2010). Lexical threshold revisited: Lexical text coverage, learners' vocabulary size and reading comprehension.*Reading in a Foreign Language*, 22(1), 15-30.

Lee, J.,& Schallert, D. (1997). The relative contribution of L2 language proficiency and L1 reading ability to L2 reading performance: A test of the threshold hypothesis in an EFL context. *TESOL Quarterly*, 31, 713-739.

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

Leki, I.,& Carson, J. (1994). Students' perception of EAP writing instruction and writing needs across the disciplines. *TESOL Quarterly*, 28, 81-101.

Levitzky-Aviad, T.,& Laufer, B. (2013). Lexical properties in the writing of foreign language learners over eight years of study: Single words and collocations. In C. Bardel, C. Lindquist & B. Laufer (Eds), *L2 vocabulary acquisition, knowledge and use: New perspectives on assessment and corpus analysis*, (pp. 127-148). Eurosla.

Levy, L. (2011). *The Effects of Repeated Reading of a Single Text and the Reading of Multiple Related Texts on Vocabulary Learning in the Content Areas*. (Doctoral Dissertation).

Li L.,& MacGregor, L.J. (2010). Investigating the receptive vocabulary size of university-level Chinese learners of English: how suitable is the Vocabulary Levels Test?.*Language and Education*, 24, 239-249. Rutgers, The State University of New Jersey, New Jersey, USA.

Meara, P. (1980). Vocabulary acquisition: A neglected aspect of language learning. *Language Teaching and Linguistics Abstracts*, 13, 221-246.

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

Meara, P.,& Fitzpatrick, T. (2000). Lex 30: An improved method of assessing productive vocabulary in an L2. *System*, 28(1), 19-30.

Meara, P. M. (2005). Lexical frequency profiles: A Monte Carlo analysis. *Applied Linguistics*, 26, 32-47.

Muncie, J. (2002). Process writing and vocabulary development: Comparing lexical frequency profiles across drafts. *System*, 30(2), 225-235.

Nagy W. E.,& Herman, P. A. (1987). Breadth and depth of vocabulary knowledge: Implications for acquisition and instruction. In M. G. McKeown & M. E. Curtis (Eds.), *The nature of vocabulary acquisition*, (pp. 19-36). Hillsdale, NJ: Erlbaum.

Nagy, W. E. (2005). Why Vocabulary Instruction Needs to Be Long-Term and Comprehensive. In E.H. Hiebert & M.L. Kamil (Eds.), *Teaching and learning vocabulary; Bringing research to practice*, (pp. 27-44). Mahwah, New Jersey:Lawrence Erlbaum Associates.

Nation, I. S. P. (1990). *Teaching and learning vocabulary*. Boston: Heinle & Heinle.

Nation, I. S. P. (1997). The language learning benefits of extensive reading. The Language Teacher, 21(5), 13-17.

Nation, I. S. P.,& Waring, R. (1997). Vocabulary size, text coverage and word lists. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary, description, acquisition and pedagogy,*(pp. 6-19). New York: Cambridge University Press.

Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.

Nation, I. S. P. (2006). How large a vocabulary is needed for reading and listening?.*Canadian Modern Language Review/La revue canadienne des langues vivantes*, 63(1), 59-82.

Nelson-Herber, J. (1986). Expanding and refining vocabulary in content areas. *Journal of Reading*, 29, 626-633.

O'Malley, L.,& Chamot, A. (1990). *Learning strategies in language acquisition*. New York: Cambridge University Press.

Oxford, R. (1990). *Language learning strategies: What every teacher should know*. Boston, Heinle: Heinle Publishers.

Öztürk, M. (2015). Vocabulary growth of the advanced EFL learner, *The Language Learning Journal*, 43(1), 94-109. Retrieved 26.03.2015 from http://www.tandfonline.com/toc/rllj20/43/1

Paran, A. (1996). Reading in EFL: facts and fictions. *English Language Teaching Journal*, 50(1), 25-34.

Pichette, F., de Serres, L., & LaFontaine, M. (2012). Sentence reading and writing for second language vocabulary acquisition. *Applied Linguistics*, 33, 66-82.

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

Pignot-Shahov, V. (2012). Measuring L2 receptive and productive vocabulary knowledge. *Language Studies Working Papers*, 4, 37-45.

Pressley, M. (2006). *Reading instruction that works* (3rd ed.). New York, NY: Guilford Press.

Pringprom, P. (2012). Exploring relationship between students' vocabulary breadth and their reading proficiency. *US-China Foreign Language*, 10(4), 1098-1105.

Qian, D. D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance: An assessment perspective. *Language Learning*, 52(3), 513-536.

Raimes, A. (1985). What unskilled ESL students do as they write: A classroom study of composing. *TESOL Quarterly*, 19, 229-258.

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

Read, J. (2004). Research in teaching vocabulary. *Annual Review of Applied Linguistics*, 24, 146–161.

Richards, J. C. (1976). The role of vocabulary teaching. *TESOL Quarterly*, 10 (1), 77-89. Retrieved 25.11.2014 from http://www.jstor.org/stable/3585941

Richards, J. C.,& Rodgers, T. S. (2001). *Approaches and methods in language teaching* (2nd ed.). Cambridge: Cambridge University Press.

Robb, T. N.,& Susser, B. (1989). Extensive reading vs skills building in an EFL context. *Reading in a Foreign Language*, 5(2), 239-249.

Robinson, P. (2001). *Cognition and second language instruction*. Cambridge: Cambridge University Press.

Schmitt, N. (1997). Vocabulary Learning Strategies. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary, description, acquisition and pedagogy*, (pp. 199-227). New York: Cambridge University Press.

Schmitt, N. (1998). Tracking the incremental acquisition of second language vocabulary: A longitudinal study. *Language Learning*, 48(2), 281-317.

Schmitt, N. (2000). *Vocabulary in language teaching*. Cambridge: Cambridge University Press.

Schmitt, N., Schmitt, D., & Clapham, C. (2001). Developing and exploring the behaviour of two new versions of the Vocabulary Levels Test. *Language Testing*, 18(1), 55-88.

Schmitt, N. (2008). Instructed second language vocabulary learning. *Language Teaching Research*, 12(3), 329-363.

Schmitt, N., Jiang, X., & Grabe, W. (2011). The percentage of words known in a text and reading comprehension. *Modern Language Journal*, 95, 26-43.

Schmitt, N.,& Schmitt, D. (2012). A reassessment of frequency and vocabulary size in L2 vocabulary teaching. Language Teaching, 47(4), 484-503.

Şener, M. (2010). *The effect of proficiency level on the rate of receptive and productive vocabulary acquisition*. (Master's Thesis). Bilkent University, Ankara, Turkey.

Stotsky, S. (1983). Research on reading and writing relationship: A synthesis and suggested direction. *Language Arts*, 66(50), 627-642.

Stoddard, G.D. (1929). An experiment in verbal learning. *Journal of Educational Psychology*, 20, 452-457.

Thelen, J. N. (1986). Vocabulary instruction and meaningful learning. *Journal of Reading*, 603-609.

Thomas, K. H.,& Healy, A. F. (2012). A comparison of rereading benefits in first and second language reading. *Language Learning*, 62, 198-235.

Thompson, B.,& Levitov, J. E. (1985). Using microcomputers to score and evaluate test items. *Collegiate Microcomputer*, 3, 163-168.

Topkaraoğlu, M.,& Dilman, H. (2014). Effects of studying vocabulary enhancement activities on students' vocabulary production levels. *Procedia – Social and Behavioral Studies*, 152, 931-936.

Tsai, J. (2006). Connecting reading and writing in college EFL courses. *The Internet TESL Journal*, XII(12). Retrieved on 21.04.2015 from http://iteslj.org/Articles/Tsai-ReadingWritingConnection.html

van Gelderen, A., Schoonen, R., De Glopper, K., Hulstijn, J., Simis, A., Snellings, P., & Stevenson, M. (2004). Linguistic knowledge, processing speed and metacognitive knowledge in first and second language reading comprehension. *Journal of Educational Psychology*, 96, 19–30.

van Zeeland, H.,& Schmitt, N. (2012). Lexical coverage in L1 and L2 listening comprehension: the same or different from reading comprehension?. Applied Linguistics, 34(4), 457-479.

Walters, J. (2012). Aspects of validity of a test of productive vocabulary: Lex30. *Language Assessment Quarterly,* 9(2), 172-185.

Waring, R. (1999). *Tasks for assessing second language receptive and productive vocabulary*. (Doctoral dissertation). University of Wales, Swansea, UK.

Waring, R. (2002). *Scales of vocabulary knowledge in second language vocabulary assessment*. Retrieved 20.10.2014 from http://www.robwaring.org/papers/various/scales.htm

Waring, R.,& Nation, I. S. P. (2004). Second language reading and incidental vocabulary learning. *Angles on the English Speaking World*, 4, 11-14.

Webb, S. (2005). Receptive and productive vocabulary learning: The effects of reading and writing on word knowledge. *Studies in Second Language Acquisition*, 27(01), 33-52.

Webb, S. (2008). Receptive and productive vocabulary sizes of L2 learners. *Studies in Second Language Acquisition*, 30(01), 79-95.

Wenden, A.,& Rubin, J. (1987). *Learner strategies in language learning*. New York: Prentice Hall.

Yamamoto, Y. M. (2011). Bridging the gap between receptive and productive vocabulary size through extensive reading. *The Reading Matrix*, 11(3), 226-242.

Zhang, D. (2012). Vocabulary and grammar knowledge in second language reading comprehension: A structural equation modeling study. *The Modern Language Journal*, 96(4), 558-575.

Zhong, H. (2014). *The interface between receptive and productive vocabulary knowledge: Vocabulary knowledge as a multi-aspect construct*. (Doctoral Dissertation). University of Sydney, Sydney, Australia.

Zhou, S. (2010). Comparing receptive and productive academic vocabulary knowledge of Chinese EFL learners. *Asian Social Science*, 6(10), 14-19.

Zimmerman, C. B. (1997). Historical trends in second language vocabulary instruction. In J. Coady and T. Huckin (Eds.), *Second language vocabulary acquisition: A rationale for pedagogy*, (pp. 5-19). Cambridge: Cambridge University Press.

İngilizceyi Yabancı Dil Olarak Öğrenen Öğrencilerin Kelime Bilgisinin Okuma, Yazma ve Yeterlik Notlarına Etkisi

Öz

Bu çalışma, yabancı dilde sözcük gelişiminin artımlı ve çok boyutlu yapısını ve bunun, katılımcıların okuma ve yazma performansları ile genel yabancı dil yetenekleriyle ilgisini açıklığa kavuşturma amacındadır. Bu esas amaç doğrultusunda katılımcıların sözcük bilgisi testleri ile okuma ve yazma sınavlarında aldıkları notlar kullanılarak; algısal ve üretimsel sözcük bilgisi arasındaki ilişki, algısal sözcük bilgisi ve okuma performansı arasındaki ilişki ve üretimsel sözcük bilgisi ile yazma performansı arasındaki ilişki incelenmiştir. Ayrıca, katılımcılar tarafından yazılan kompozisyonların sözcük seviyesi ve bunun katılımcıların üretimsel sözcük bilgisiyle ilgisi ile hem algısal hem de üretimsel sözcük bilgisinin genel yabancı dil yeteneği üzerinde etkisi de araştırılmıştır. 175 İngilizce Hazırlık öğrencisi bu çalışmaya katılmıştır. Sonuçlar, öğrencilerin algısal sözcük bilgilerinin, üretimsel sözcük bilgilerinden daha fazla olduğunu ortaya çıkarmıştır. Sözcük bilgisinin; yabancı dil okuma, yazma ve yeterlik performanslarına katkısının önemli olduğu da bulunmuştur. Ayrıca, sözcük sıklığı profili sonuçlarına göre, öğrenci kompozisyonlarının sözcük seviyesi ile öğrencilerin üretimsel sözcük bilgisi arasındaki ilişki de önemlidir.

Anahtar sözcükler: algısal sözcük bilgisi; üretimsel sözcük bilgisi; sözcük seviyesi; sözcük sıklığı profili; okuma; yazma; yeterlik

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