



International Conference on Teaching and Learning English as an Additional Language,  
GlobELT 2016, 14-17 April 2016, Antalya, Turkey

## Student EFL Teachers' Receptive Vocabulary Size

Özgül Özönder<sup>a,\*</sup>

<sup>a</sup>*Abdullah Gül University, Sümer Campus, Erkelet Cad. Kayseri 38090, Turkey*

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### Abstract

This study reports the results of a study investigating the receptive vocabulary size of student EFL teachers. The study also examined the relationship between the participants' academic achievement (departmental GPA) and their receptive vocabulary size and the existence of any gender-related difference. The study was carried out in English Language Teaching (ELT) Department of a major state university in Turkey. A total of 104 undergraduate students (females: 76 and males: 28) enrolled in the department voluntarily participated in the study, took the Version 2 of the Vocabulary Levels Tests (Schmitt, Schmitt & Clapham, 2001) and responded to a survey investigating their GPA scores and genders. The results revealed that student EFL teachers have a high level of total receptive vocabulary capacity size in their foreign language ( $M=103.82$ ). Learners' academic achievement (GPA) is treated as an indicator of their language proficiency level in many studies of English Language Teaching (ELT) field. However, the results of this study revealed that there was not any statistically significant correlation between academic achievement (GPA) and their receptive vocabulary size. Although GPA may be a sign of academic achievement (GPA) and successful studentship, it may not readily one's actual English language proficiency. The results also indicated that there was no significant difference between males and females regarding their receptive vocabulary size.

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Peer-review under responsibility of the organizing committee of GlobELT 2016

*Keywords:* receptive vocabulary size; student EFL teachers; gender; academic achievement.

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### 1. Introduction

Vocabulary knowledge is one of the building blocks of any language. Of the multiple dimensions of vocabulary knowledge (Read, 2000), two of them have been widely discussed in SLA: breadth and depth of vocabulary knowledge (Qian, 2002; Read, 1988; Wesche & Paribakht, 1996). Both of these dimensions of vocabulary

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\* Corresponding author. Tel.: +90-542-354-38-34.

E-mail address: [ozgul.ozonder@agu.edu.tr](mailto:ozgul.ozonder@agu.edu.tr)

knowledge play an important role in foreign language learning. Breadth of knowledge refers to “the number of words the meaning of which one has at least some superficial knowledge” (Qian, 2002, p. 515). Depth of knowledge usually refers to how well one knows a lexical item (Qian, 2002). Depth of knowledge is crucial in that one needs to have sufficient knowledge of a word in order to be able to understand it and use it appropriately (Schmitt, 2008). On the other side, breadth of knowledge, or vocabulary size, is indispensable in that knowing the form and meaning of an adequate number of words is a prerequisite for unassisted comprehension of written and spoken discourse. The breadth of knowledge has become the main focus of this present research due to its essential role in learner’ foreign language learning. This study attempts to provide an estimate of the size of the student EFL teachers’ receptive vocabulary regarding their gender and academic achievement (GPA). Its results may serve to get an insight into the receptive vocabulary capacity of student EFL teachers. The implications and conclusions of this research could be utilized by the academics in the field.

## 2. Literature review

Vocabulary knowledge is a multifaceted construct (Laufer & Nation, 2012). The types of knowledge an L2 learner can have about a particular word differ in the degrees of their knowledge of it. Receptive knowledge implies knowing many things about the word—its literal meaning; its various connotations; the sorts of syntactic constructions into which it enters; the morphological options it offers; and a rich array of semantic associates, including synonyms, antonyms, hypernyms, hyponyms, and words with closely related yet contrasting meanings, as well as its capacity for polysemy (see Nagy & Scott, 2000). On the other hand, the productive knowledge includes knowing a word’s accurate pronunciation or its correct spelling, its precise meaning in various contexts, its precise context of use and the use of it in the absence of a highly specific context (Gass, Behney & Plosnky, 2013). Learners generally acquire a wider range of receptive vocabulary capacity than productive knowledge.

The Vocabulary Level tests serve to measure the vocabulary size for second language (L2) learners of general or academic English (Schmitt, Schmitt & Clapham, 2001). They provide an estimate of vocabulary size of learners at different frequency levels. For instance, Hu and Nation (2000) report that knowledge of 98%–99% of the lexical items in a written text is required to avoid comprehension problems caused by new words. Using statistics derived from the British National Corpus (BNC), Nation (2006) shows that a 98% lexical coverage of authentic written texts of wide-ranging genres and subject matters translates into a requirement for an 8,000–9,000-word family vocabulary. Laufer and Ravenhorst-Kalovski (2010) revisited the lexical threshold for “adequate reading comprehension” (p. 15) and suggest an optimal threshold of 8,000-word families and a minimum threshold of 4,000–5,000-word families, yielding 98% and 95% coverage, respectively. Although the lexical coverage rate required for unassisted comprehension of spoken discourse has not been established, Nation (2006) reports that, based on an analysis of the Wellington Corpus of Spoken English, a vocabulary of 6,000–7,000- or 2,000–3,000-word families would be necessary to achieve a 98% or 95% coverage rate of authentic spoken discourse, respectively. Adolphs and Schmitt (2003) also report that 3,000-word families plus proper nouns are necessary for successful everyday conversation when a 95% coverage rate is assumed. Given the importance of vocabulary size to language learning, there is a growing demand for estimating foreign language learners’ vocabulary size (Meara, 1996) in order to deliver the right types of language tasks. Therefore, knowing the vocabulary size of learners provide us with an idea of what foreign language tasks they are able to perform. Vocabulary assessment aims to “monitor the learner’s progress in vocabulary learning and to assess how adequate their vocabulary knowledge is to meet their communication needs” (Read, 2000, p. 2). A large vocabulary size is essential to interacting in the foreign language. Especially, strong vocabulary knowledge is essential to good reading, and because reading and writing mutually reinforce each other, it is also essential to writing (Brynildssen 2000, p.1). Additionally, the knowledge of the most frequent 2000 words in English provides learners with the majority of the lexical resources required for their basic everyday oral communication (Schonell, 1956 as cited in Schmitt et al., 2001). The next 1000 words provide additional material for spoken discourse but, additionally, knowledge of around 3000 words is the threshold that should allow learners to begin to read authentic texts. Most research indicates that knowledge of the most frequent 5000 words should provide enough vocabulary to enable learners to read authentic texts. Of course many words will still be unknown, but this level of knowledge should allow learners to infer the meaning of many of the novel words from context, and to understand most of the communicative content of the text. L2 learners

with the knowledge of the most frequent 10,000 words in English can be considered to have a wide vocabulary, and Hazenberg and Hulstijn (1996) found that a vocabulary level of this magnitude is required to cope with the challenges of university study in an L2. For L2 learners of English who wish to engage in an English-medium academic environment, knowledge of the sub-technical vocabulary that occurs across a range of academic disciplines (academic vocabulary) is also necessary. (For an overview of vocabulary size research, see Nation and Waring, 1997).

The Vocabulary Levels Test provides an estimate of vocabulary size at each of the above four frequency levels and also provides an estimate of the size of the examinees' academic vocabulary. This information can be utilized by teachers and administrators in a pedagogical context to inform decisions concerning whether an examinee is likely to have the lexical resources necessary to cope with certain language tasks, such as reading authentic materials. The information can also be used to identify possible lexical deficiencies that might need addressing. Similarly, results from the Vocabulary Levels Test can be used in research studies where an estimate of lexical size at the relevant frequency levels is considered informative (e.g., Cobb, 1997; Schmitt and Meara, 1997; Laufer and Paribakht, 1998).

GPA stands for Grade Point Average. Each letter grade is assigned a point value that is called the Grade Point. The GPA is calculated by converting each letter grade into Grade Points, and then multiplying each grade by the number of course credits. There are two different grade point averages: the term GPA is the point average of learners' grades over one semester. The cumulative GPA is the point average of learners' grades over all the academic courses. In the literature, it is possible to encounter some studies revealing the close link between vocabulary and academic success. Given the importance of vocabulary size to language learning, there is a growing demand for estimating foreign language learners' vocabulary size (Meara, 1996) in order to deliver the courses at tertiary level effectively. However, this hypothesis needs to be tested more in different local contexts as it is done in this particular study.

### **3. Methodology**

#### *3.1. Setting and participants*

The study was carried out in January 2015 in English Language Teaching (ELT) Department at Hacettepe University. Convenience sampling was used to select the participants of the study. Convenience sampling is a common non-probability sampling technique in second or foreign language (L2) research, where an important criterion of sample selection is the convenience to and resources of the researcher (Dörnyei, 2007). A total of 104 undergraduate students (females: 76 and males: 28) enrolled in the department voluntarily participated in the study, took the Version 2 of the Vocabulary Levels Tests (Schmitt et al., 2001) and responded to a survey investigating their GPA scores and genders. The participants were year two students taking the Approaches to ELT I course. Without any consultation among themselves, they completed an anonymous survey and the vocabulary levels tests after an exam they took, and also gave consent for data collection.

#### *3.2. Research design*

In order to explore the receptive vocabulary size of student EFL teachers regarding their gender and academic achievement at tertiary level in Turkey, three research questions were formulated:

1. What is the total receptive vocabulary size of student EFL teachers?
2. Is there a gender-related difference in participants' receptive vocabulary size?
3. Is there a statistically significant difference in participants' receptive vocabulary size according to their GPA?

### 3.3. Procedures for data collection and analysis

Data for this study were collected English language teaching (ELT) department at Hacettepe University in January 2015. After an exam session, a short meeting was held with the participants to explain the purpose and implementation of the study. The participants were administered Version 2 of the Vocabulary Levels Tests (Schmitt et al., 2001) and an anonymous survey after a regular class hour. It took approximately 50 minutes for the participants to finish answering all the questions. Data analysis was performed in order to address the research questions formulated for the present study. The statistical analyses were performed using IBM SPSS Statistics 22 a comprehensive computer program used to help researchers perform statistical analysis quickly and accurately.

## 4. Results

The present study sought to investigate the receptive vocabulary size of student EFL teachers and to find out whether there is a relationship between their receptive vocabulary size and their gender. The existence of any statistically significant difference in their receptive vocabulary size by GPA was also investigated. This section presents the results of the study in terms of descriptive and inferential statistics. A descriptive analysis, a Pearson product-moment correlation coefficient test, and a one-way between groups multivariate analysis of variance (MANOVA) were performed.

### *RQ 1. What is the total receptive vocabulary size of student EFL teachers?*

Table 1 illustrates that student EFL teachers have a high vocabulary size in their foreign language ( $m=103.82$ ). The mean scores indicate that the 2,000 word level test has the highest mean score. In other words, students know the bulk of the lexical resources required for basic everyday oral communication (Schonell et al., 1956). The second highest mean score was found for the 3,000 word level test, which means that the students have acquired additional material for spoken discourse. Additionally, this result indicates that student EFL teachers are on the threshold, which allow them to begin to read authentic texts. The responses of the students to the items in the 5,000 word level test show that the participants' have a wider vocabulary capacity than moderate, but not as high as the 2,000 or 3,000 word level tests. As research indicates, although many words are still unknown, learners could infer the meaning of many of the novel words from context, and understand most of the communicative content of the text. The mean score of the 10,000 word level test was the lowest one found in this study ( $m=6.23$ ). This result points out that student EFL teachers have some difficulties in coping with the challenges of university study in an L2. Lastly, the participants' responses to the items in Academic Vocabulary test reveal that they have necessary knowledge of the sub-technical vocabulary that occurs across a range of academic disciplines (Nation and Waring, 1997; Schmitt et al., 2001).

Table 1. Overall and categorical means for receptive vocabulary size.

Factors	Number of items	Mean	SD
The 2,000 word level test	30	27.73	3.70
The 3,000 word level test	30	25.01	4.44
The 5,000 word level test	30	19.87	5.42
The 10,000 word level test	30	6.23	5.36
Academic Vocabulary test	30	24.87	6.82
TOTAL	150	103.82	18.39

### *RQ 2. Is there a relationship between the participants' academic achievement (GPA) and their total receptive vocabulary size?*

A Pearson product-moment correlation coefficient was computed to determine whether there was a relationship between the participants' academic achievement (GPA) and their total receptive vocabulary size. As presented in the Table 2, the results revealed that there was no relationship between the participants' academic achievement (GPA) and their total vocabulary size  $r(104) = .147, p > .05$ .

Table 2. Correlation matrix for GPA and total vocabulary size.

Variables	N	1	2
1- GPA	104	1	
2- Total receptive vocabulary size	104	.147	1

Although the five tests measuring the participants' vocabulary levels are naturally related to each other, the participants' academic achievement (GPA) was not. There was no significant correlation between participants' academic achievement (GPA) and their total vocabulary size as can be seen in Table 3.

Table 3. Correlation matrix for GPA and tests of vocabulary size.

Variables	N	1	2	3	4	5	6	7
1. GPA	104							
2. The 2,000 word level test	104	.100	1					
3. The 3,000 word level test	104	.140	.641**	1				
4. The 5,000 word level test	104	.126	.305**	.575**	1			
5. The 10,000 word level test	104	.084	.073	.253**	.287**	1		
6. Academic Vocabulary test	104	.122	.377**	.583**	.583**	.204*	1	
7. Total	104	.147	.598**	.802**	.802**	.522**	.797**	1

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

*RQ 3. Is there a statistically significant difference in vocabulary size among participants according to their gender?*

A one-way between groups multivariate analysis of variance (MANOVA) was performed to see if there were any significant differences in the participants' receptive vocabulary size according to their gender. There were six dependent variables: the 2,000 word level test, the 3,000 word level test, the 5,000 word level test, the 10,000 word level test, the academic vocabulary level test and the total result of these tests. The independent variable, on the other hand, was gender. The results indicated there was no significant difference between females and males,  $F(2,101) = .039, p > .05$ . Wilk's  $\Lambda = 0.081$ , partial  $\eta^2 = .105$  in terms of their receptive vocabulary size.

## 5. Implications/ Conclusions

The vocabulary size of student EFL teachers has long been researched in the domain of English Language Teaching (ELT). The researchers propose that the higher the receptive vocabulary size of the learners, the better mastery of that foreign language both in a written and oral way. Accordingly, the learners who receive English-medium education at tertiary level can better cope with the challenges of academic life in a foreign language. In this study, future EFL teachers' receptive vocabulary size in relation to their academic achievement and gender has been explored empirically. Conclusions are organized around three issues: The receptive vocabulary size of these sophomore students, the relationship between students' receptive vocabulary size and their academic achievement and gender. The analysis of mean scores on the Version 2 of the Vocabulary Levels Tests (Schmitt et al., 2001) revealed that future ELF teachers students have a high vocabulary size in total ( $m=103.82$ ). The 2,000 word level has the highest score on the scale. This means that participants could communicate in their real life in basic sense as the findings in the literature suggest (Schonell et al., 1956). The second highest level is observed in the 3,000 word

level which means that the students have acquired additional material for spoken discourse. Additionally, this result indicates that student EFL teachers are on the threshold, which allow them to begin to read authentic texts. In the 5,000 word level, the learners' performance seems not as good as it does in the 2,000 or 3,000 level with a mean of 19, 82. As research indicates, although many words are still unknown, learners could infer the meaning of many of the novel words from context, and understand most of the communicative content of the text. The lowest mean score was found in the 10,000 word level, which revealed that the participants were not good at coping with the challenges of university study in an L2 ( $m=6.23$ ). Lastly, the academic vocabulary level of the participants was also calculated. Surprisingly, they had a better performance in this level compared to that of their 10,000 word level ( $m=24.87$ ).

Secondly, the relations between academic achievement (GPA) and their receptive vocabulary size are of particular interest. The study revealed that there was not any relationship between the participants' academic achievement (GPA) and their total vocabulary size. Learners' academic achievement (GPA) is treated as an indicator of their language proficiency level in many studies of English Language Teaching (ELT) field. However, the results of this research have pointed out a fact that there is a need to question the construct validity of academic achievement (GPA) as an indicator of language proficiency. Although it may be a sign of academic achievement (GPA) and successful studentship, it may not readily one's actual English language proficiency. Thirdly, the study uncovered an important issue regarding gender and participants' receptive vocabulary size. Gender is not found as a determining factor for a change in their receptive vocabulary size. Multivariate analysis of variance (MANOVA) indicated no significant difference between male and female participants.

This study confirmed the definition of receptive vocabulary given in the work of Nagy and Scott (2000). Accordingly, the participants of this study could match the words in the Version 2 of the Vocabulary Levels Tests (Schmitt et al., 2001) with their semantic associates. The present study has also verified the claims made by Schonell et al., (1956). The learners performed well in the 2,000 word level test measuring the lexical resources required for their basic everyday oral communication. In line with the reports by Adolphs and Schmitt (2003) and Nation (2006), the findings of the research revealed that student EFL teachers have acquired the majority of 2,000–3,000-word families, necessary to achieve authentic spoken discourse and to read authentic texts. Most research indicates that knowledge of the most frequent 5000 words provide enough vocabulary to enable learners to read authentic texts. The results of this present research have shown that student EFL teachers were good at the 5,000 word level test and they could infer the meaning of many of the novel words from context and understand most of the communicative content of the text to some extent. Hazenberg and Hulstijn (1996) underlined that a vocabulary of 10,000 word level magnitude is necessary to cope with the challenges of university study in an L2. The findings of this research pointed out that the sophomore students at Hacettepe University were in need of developing their 10,000 word level to deal with the difficulties of academic life in foreign language. On the contrary, the knowledge of the sub-technical vocabulary that occurs across a range of academic disciplines (academic vocabulary) of the participants was found very satisfying. This result was in line with the vocabulary size research done by Nation and Waring (1997).

As the findings of this study have shown that vocabulary size is directly related to the ability to use English in various ways. Therefore, the academics in the ELT departments might encourage their students to do more extensive reading by assigning them with some reading materials from various academic disciplines. Thus, the learners may be exposed to an array of lexical resources. The more they practice, the higher the chances they might have to learn new lexical items from different word levels. Finally, the academics in the field can utilize the results of this study and encourage their learners to interact with some authentic reading texts. In this way, students may enlarge their 10,000 word level capacity. That is essential because learners' vocabulary knowledge also contributes to their reading ability.

In conclusion, the present study investigated the receptive vocabulary level of sophomore students in a foreign language. The findings support the necessity of high vocabulary level for better oral and written comprehension of FL/L2. The results suggest that students have generally have a high vocabulary level in 2,000, 3,000 and academic level, but they need to improve their vocabulary capacity in 5,000 and 10,000 word level to get engaged in academic reading and writing tasks and handle the tasks of English-medium education at tertiary level. Their receptive vocabulary knowledge was not in correlation with their academic achievement (GPA) and there was no gender difference regarding their lexical capacity.

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