

**REPUBLIC OF TURKEY
ÇUKUROVA UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES
ENGLISH LANGUAGE TEACHING DEPARTMENT**

**AN ANALYSIS OF LEXICAL RICHNESS IN WRITTEN PRODUCTION OF
TURKISH EFL STUDENTS**

Özhan HARMAOĞLU

MASTER OF ARTS

ADANA / 2019

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Supervisor : Prof. Dr. Zuhal OKAN

Member of Examining Committee : Assoc. Prof. Dr. M. Oğuz KUTLU

Member of Examining Committee : Assoc. Prof. Dr. Emrah CİNKARA

MASTER OF ARTS

ADANA / 2019

To ukurova University, Institute of Social Sciences,

We certify that this thesis is satisfactory for the award of the degree of Master of Arts in the Department of English Language Teaching.

Supervisor: Prof. Dr. Zuhal OKAN

Member of Examining Committee: Assoc. Prof. Dr. M. Oğuz KUTLU

Member of Examining Committee: Assoc. Prof. Dr. Emrah CİNKARA

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Özhan HARMAOĞLU

ÖZET

TÜRK YABANCI DİL ÖĞRENCİLERİNİN YAZILI ÜRÜNLERİNDEKİ SÖZCÜK ZENGİNLİĞİNİN ANALİZİ

Özhan HARMAOĞLU

Yüksek Lisans Tezi, İngiliz Dili Eğitimi Ana Bilim Dalı

Danışman: Prof. Dr. Zuhâl Okan

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Bu çalışma ağırlıklı olarak, liselerin yabancı dil bölümlerinde okuyan ve Hatay'da bulunan iki özel dil öğretim kurumuna devam eden öğrencilerin yazdıkları kompozisyonlardaki İngilizce sözcük zenginliğini ve kelime sıklık seviyelerini analiz etmeyi amaçlamaktadır. Çalışma ayrıca, öğrencilerin LYS-5 yabancı dil deneme sınavından elde ettikleri ortalama puanları ile yazdıkları kompozisyonlarındaki sözcük zenginliği arasında bir bağlantı olup olmadığını bulmayı da hedeflemektedir. Sözcük zenginliklerinin analizi ve kelime sıklık seviyelerinin belirlenmesi RANGE ve FREQUENCY adlı iki bilgisayar programı kullanılarak gerçekleştirilmiştir. Heatley, Nation ve Coxhead (2002) tarafından geliştirilen RANGE, sözcüklerin veya diğer sözcüksel birimlerin bir ya da daha fazla metindeki dağılımları hakkında bilgi vermektedir. Tek bir metinde bulunan tüm kelimelerin sıklık listeleri de RANGE ile aynı pakette yer alan FREQUENCY programıyla bulunabilmektedir. İkinci bir araştırma alanı olarak, bu çalışmada yer alan 50 katılımcıyı eğiten 4 İngilizce öğretmeni ile sözcük zenginliği hakkındaki genel görüşlerini ve öğrencilerinin sözcük bilgisini arttırmak için neler yaptıklarını öğrenmek için görüşme yapılmıştır. Araştırma sonucu, öğrenci kompozisyonlarının, daha yüksek yüzdelerde birinci kelime listesinden, yani İngilizce 'de en sık kullanılan sözcükler içerdiğini göstermiştir. Bireysel olarak incelendiğinde, deneme sınavlarında daha yüksek ortalamaya sahip öğrencilerin, çoğunlukla, düşük ortalamaya sahip olan öğrencilere kıyasla, daha zengin sözcükler kullandıkları tespit edilmiştir. Daha sonra öğrenciler deneme sınavı ortalamalarına göre üç gruba ayrılmıştır. 1. Grup en yüksek deneme sınavı ortalamasına sahip öğrencilerden oluşmuştur. 2. Grup orta seviye puana sahip öğrencilerden meydana gelmiştir ve son olarak da 3. Grup en düşük deneme sınavı ortalamasına sahip öğrencilerden oluşmuştur. Bu üç gruba ait kompozisyonların sözcüksel

analizi yapıldığında, katılımcılar tarafından yazılan kompozisyonların deneme sınavlarındaki akademik not başarısını yansıtmayabileceği veya katılımcıların sahip olduğu deneme sınavı sonuçlarının akademik düzeyde sözcük kullanımını her zaman taahhüt etmeyeceği anlaşılmıştır. Görüşme sonuçlarına gelince, öğretmenler sözcük zenginliğini artırmanın büyük ölçüde öğrencinin kendi sorumluluğu olduğunu ifade etmiştir. Bunlara ek olarak, tüm görüşmeciler, çok kapsamlı zengin kelimelere sahip öğrencilerin düşüncelerini etkili bir şekilde ifade edeceklerinden sözcük zenginliğinin öğrencilerin daha kaliteli kompozisyonlar üretmelerine yardımcı olduğu konusunda hemfikir olmuşlardır.

Anahtar kelimeler: Sözcük zenginliği, sözcüksel sıklık profili, RANGE, kompozisyon yazma

ABSTRACT**AN ANALYSIS OF LEXICAL RICHNESS IN WRITTEN PRODUCTION OF
TURKISH EFL STUDENTS****Özhan HARMAOĞLU****Master Thesis, Department of English Language Teaching****Supervisor: Prof. Dr. Zuhale OKAN****April 2019, 95 pages**

This study primarily aims at analysing L2 lexical richness and word frequency levels in free essays written by students studying at foreign language departments of high schools and attending to two private language teaching institutions located in Hatay, Turkey. It also targets to find out whether there is a correlation between the average score of students' pilot LYS- 5 foreign language exam and lexical richness in their essays. The analysis of lexical richness and identification of word frequency levels were carried out by using two measuring software programs called RANGE and FREQUENCY. Developed by Heatley, Nation and Coxhead (2002), RANGE gives information about the distribution of words or other lexical units across a set of two or more texts. Included in the same package with RANGE, frequency list of all the words in a single text can be found by FREQUENCY. As a second researching area, 4 teachers of English who are educating 50 participants partaking in the current study were interviewed in order to find out their general opinions on L2 lexical richness and what they do in order to enhance their student's lexical knowledge. The result of analysis showed that students free written essays contained higher percentages of words belonging to the word list one than it is supposed to be. By word list one, it is meant the most frequently used words in English. When examined individually, students with higher average pilot test scores are found to use lexically richer words compared to the students with lower average pilot test scores in general terms. Then the students were grouped in three according to their average pilot test scores. Group 1 consisted of students with the highest average test score. Group 2 were formed with the students having a medium average test score and lastly, Group 3 included students with the lowest average test score. When the lexical analysis of essay of these three groups was made, it was found that

essays written by the participants may not reflect their academic success in English test scores or the average test scores that the participants have may not always guarantee the usage of words that belong to the academic word list. As for the result of the interviews, teachers fundamentally highlighted that increasing lexical richness is students' own responsibility. Additionally, all the interviewees agreed that rich vocabulary help students produce better quality essays because students having a wide range of rich vocabulary can express their ideas effectively.

Keywords: Lexical richness, lexical frequency profile, RANGE, essay writing



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TABLE OF CONTENTS

	Page
ÖZET	iv
ABSTRACT.....	vi
ACKNOWLEDGEMENTS	viii
TABLE OF CONTENTS	ix
ABBREVIATIONS.....	xii
LIST OF TABLES.....	xiii
LIST OF FIGURES.....	xiv
LIST OF APPENDICES	xv

CHAPTER I INTRODUCTION

1.1. Introduction.....	1
1.2. General Background	2
1.3. Background for the study.....	3
1.4. Statement of the Problem.....	5
1.5. Purpose of the Study	6
1.6. Research Questions.....	7
1.7. Significance of the Study	7
1.8. Assumptions and Limitations of the Study.....	8
1.9. Operational Definitions.....	9

CHAPTER II LITERATURE REVIEW

2.1. Introduction.....	11
2.2. Knowing A Word.....	11
2.3. Receptive and Productive Vocabulary Knowledge	14
2.4. Vocabulary Learning and Teaching.....	16
2.5. Lexical Approach.....	17
2.6. Explicit and Implicit Vocabulary Learning Hypothesis	17

2.7. Techniques for Teaching Vocabulary	20
2.7.1. Using Visuals to Teach Vocabulary	20
2.7.2. Using Audios to Teach Vocabulary	21
2.7.3. Using Antonyms and Synonyms	21
2.7.4. Providing L1 Equivalent of the Vocabulary	22
2.7.5. Brainstorming and Semantic Mapping	22
2.7.6. Games	24
2.7.7. Corpus Linguistics	24
2.8. Word Frequency Lists	25
2.9. Dimensions of Lexical Richness	27
2.10. Several Measuring Tools of Lexical Richness	30
2.10.1. Type/Token Ratio	30
2.10.2. Mean Segmental Type/Token Ratio	30
2.10.3. D Value	31
2.10.4. Measure of Textual Diversity	31
2.10.5. Lexical Frequency Profile (LFP)	31
2.11. Related Empirical Studies in the Literature	34

CHAPTER III

METHODOLOGY

3.1. Introduction	39
3.2. Overall Design of the Study	39
3.3. Students	40
3.4. Teachers	40
3.5. Research Questions	41
3.6. Data Collection Instruments	42
3.6.1. Essays	42
3.6.2. Semi-Structured Interviews	42
3.7. Data Analysis Instruments	44
3.7.1. Software RANGE	44
3.7.2. Software FREQUENCY	45
3.7.3. Thematic Analysis	46

CHAPTER IV48
FINDINGS AND RESULTS48

4.1. Introduction.....	48
4.2. Lexical Richness of Students' Essays.....	49
4.3. The Most Frequent Words Found in All the Essays	54
4.4. Relationship between Participants' Test Score and Their Lexical Richness.....	57
4.5. Methods and Techniques That the Teachers Use in Order to Enhance Students' Lexical Richness	69

CHAPTER V74
CONCLUSION AND DISCUSSION74

5.1. Introduction.....	74
5.2. Summary of the Study	74
5.3. Discussion of Findings.....	75
5.4. Pedagogical Implications of the Study	79
5.5. Suggestions for Further Research	80

REFERENCES	81
APPENDICES	88
CURRICULUM VITAE	95

ABBREVIATIONS

CEF: Common European Framework

EFL: English as a Foreign Language

ELT: English Language Teaching

ESL: English as a Second Language

LFP: Lexical Frequency Profile

L1: First Language (Native Language)

L2: Second Language

SLA: Second Language Acquisition

TOEFL: Test of English as a foreign

TTR: Type/token ratio

LIST OF TABLES

	Page
Table 1. Knowledge of Words	13
Table 2. Level of vocabulary Lists Based on a Written Academic Text	26
Table 3. Lexical Richness Measures by Different Researchers	29
Table 4. A Sample of LFP analysis.....	32
Table 5. Correlation between Word Families from Each Frequency Band and Level Test Scores	33
Table 6. Profile of Teachers Participated in the Study.....	41
Table 7. Word Frequency Level in All the participants' Essays Excluding Stop List ...	49
Table 8. Word Frequency Level in All the Participants' Essays Including Stop list	51
Table 9. Some of the Types Not Found in Any of the First Three Lists.....	53
Table 10. The Most Frequent 20 Words Used by the Participants	54
Table 11. Types Found in Base List One	55
Table 12. Types found in Base List Two	56
Table 13. Types Found in Base List Three	56
Table 14. Highest Average Score of Five Participants	58
Table 15. Lowest Average Pilot Test Scores of Five Participants.....	61
Table 16. Score of 10 Students and the Percentage of the Words They Use Belonging to Different Word Lists.	65
Table 17. Word Frequency Analysis of Group 1	66
Table 18. Word Frequency Analysis of Group 2	66
Table 19. Word Frequency Analysis of Group 3	67

LIST OF FIGURES

Figure 1. A sample of brainstorming	23
Figure 2. A sample of semantic mapping	24
Figure 3. A sample output of RANGE software.....	45
Figure 4. A sample output from FREQUENCY software	46
Figure 5. Distribution of tokens and types according to frequency levels.....	51
Figure 6. Distribution of tokens and types according to frequency levels by using stop list.	52
Figure 7. Vocabulary frequency levels of five participants with highest average pilot test scores.....	59
Figure 8. The total analysis of five participants with the highest test scores.....	60
Figure 9. Vocabulary frequency levels of five participants with the lowest average English pilot test scores	62
Figure 10. The total analysis of five participants with the lowest test score	63
Figure 11. Comparison of the word frequency levels of the participants.....	64

LIST OF APPENDICES

	Page
Appendix A. Topics of the essays taken from the sample writing essays of TOEFL examinations	88
Appendix B. List of function words included in the stop list	91
Appendix C. Interview Questions.....	94



CHAPTER I

INTRODUCTION

1.1. Introduction

Of all Turkish EFL learners, those who study at English language departments of high schools are no doubt in need of developing and expanding their general and academic vocabulary more than other learners who are learning it for different reasons such as simple daily communication or specific purposes. For the majority of learners in this group, the main aim is to study at university programs where the English language performance and competence is highly required. These university programs include English Language Teaching, English Language and Literature and Department of Translation and Interpreting, etc. In other words, most of these students aim to be fairly proficient in English and majority of them target to be teachers of English language and wish to teach English to the masses of learners in different age groups or levels. However, one of the preconditions of being proficient in language teaching is to have adequate lexical richness in this language.

The point of origin for this study is basically the concept of lexical richness. Lexical richness, in a broad sense, is a generic term which explains the overall effect of more particular measures including lexical density, lexical variation, and lexical sophistication (Nation & Webb, 2011). A number of methods have been developed for measuring the lexical richness of learners around the world (Read, 2000). These methods intended to measure different dimensions such as lexical density (O'Loughlin, 1995), lexical sophistication (Laufer & Nation 1995) etc. Yet, relatively no research has been conducted relating to measuring lexical richness of high school students mentioned above by using the software program called RANGE in Turkey. Briefly stating, RANGE gives a distribution figure in terms of how many texts a particular word occurs in, a headword frequency figure which means the overall number of times the actual headword type appears in all the texts. It also provides a family frequency figure, that's, the total number of times the word and its family members take place in all the texts and finally a range figure for each of the texts the word takes place (Gregori-Signes & Clavel-Arroitia, 2015).

This study is going to analyse and compare the lexical richness of 50 high school students that take part in the study by means of exploring word frequency levels of the

vocabulary that they use in their essays in the first phase. The underlying opinion behind this analysis is that the higher percentage of low frequency words that the students use indicates the higher the lexical richness they have. Then, the most frequently words used by 50 participants and their frequency levels will be listed. As a next step, the relationship between students' average score from LYS 5 pilot tests (LYS-5 is an English language test in Turkey, which is applied to the students who would like to study in foreign Language related university programmes) and lexical richness in their essays will be compared.

In addition to Range, the software program called FREQUENCY, which is included in the same package with Range, will be used. FREQUENCY is a simpler program than RANGE. It works on an ASCII text and used in order to make a frequency list of all the words in a single text. It enables to run only one text at a time. The output is listed in alphabetical order or a frequency order. Finally, it gives the rank order of the words as well as their raw frequency and the cumulative percentage frequency. The most common list of words used by all the participants will be revealed via the software program FREQUENCY

Since EFL teachers and the methods they use are regarded to have a vital role in improving EFL learners' lexical richness, EFL teachers will be interviewed in the final phase. They are going to be asked five questions specifically relating to their vocabulary teaching procedure such as which methods, techniques etc. they follow and how they help their students to increase their lexical richness.

The chapter will start with an overall background. Then, the background of the study followed by the statement of the problem and significance of the study will be presented. The research questions will be introduced and finally, limitations and definitions of the key terms will be clarified at the end of the chapter.

1.2. General Background

English is the most commonly used language in the world. When people from different countries come together; they usually use English language to communicate with each other. The era we are living in makes English language even more popular and necessary due to the globalization as well as easy access to technology. As in most of the other countries in the world, learning English has also obtained great importance and popularity in recent years in Turkey. As a result, there has been a burst in English

learning and teaching. Alongside with most universities providing one year of English preparation classes or distance education English classes, there are also non-profit organizations or private language teaching institutions located almost in every city, that promise their target audience to teach English in a short time. Moreover, there are numerous online courses that help learners to develop their English specifically in terms of vocabulary. Recently, Ministry of National Education (2017) has announced that 5th grade of primary schools will serve as preparation classes for learning foreign languages so students are going to be taught only foreign languages and Turkish at 5th grade. This reform in educational program also reveals the importance of foreign languages in the eye of experts and stakeholders.

People have different purposes for learning English. Most young learners are supposed to learn English because it is an obligation for them to pass their English exams while some of them would like to learn because they want to be English teachers in the future. Some wish to advance in their academic or job carrier by learning English whereas others do it as a hobby to communicate with foreigners or to be able to understand English songs as well as famous TV series. One way or the other, there has always been a reason for learning English and this situation sparks off eager learners who ask limitless questions and recommendations on how to learn English as soon as they encounter with an English language teacher. Mostly, they sort things they have done so far and then they complain that the ways they follow for learning English have not worked out. At least, some of them realize that lexical knowledge of a language, that's knowledge of vocabulary, has a major role in the course of learning a foreign language. It is also widely known that vocabulary is the key component for improving the 4 skills existing in language learning, that's reading, listening, speaking and writing ("The Importance of Teaching", 2018). In addition to this, when it comes to productive skills, that are speaking and writing, the importance of vocabulary richness doubles because these skills require learners to retrieve and to use rich vocabulary actively making it more challenging.

1.3. Background for the Study

As early as 1970s, many scholars and linguists conducted research highlighting the importance of vocabulary knowledge. Among those, British linguist David Wilkins (1972) stated that "without sufficient level of grammar very little can be conveyed,

however; without enough knowledge of vocabulary, nothing can be conveyed at all (p. 111) which literally underlines the vital role of vocabulary knowledge in learning a language. Philosopher Wittgenstein stated that “The limits of my language are the limits of my mind. All I know is what I have words for’ (as cited in Pitkin, 1993, p. 114). From this quotation, it can clearly be conceived that vocabulary knowledge, or to put it more technical, lexical knowledge is a crucial part of knowledge of all languages whether it is a first language or second language. Similarly, Nation (2001) expressed that vocabulary knowledge is important for language proficiency because it encompasses other language skills. What’s more, the single and the biggest component of any language course is accepted to be the vocabulary by most of the language teachers. Even if the students learn grammar and they pronounce L2 successfully, communication in L2 cannot be meaningful without words expressing a wide range of meanings. However, vocabulary is often neglected and it seems to be less systematized and less well catered than other components of language (McCarthy, 2005). The truth is no matter how good we are at grammatical patterns, if our lexical knowledge is not sufficient, we are going to have difficulty in putting our grammatical knowledge into practice. For this reason, lexical knowledge should be valued because the wider lexical knowledge someone has, the more effective he/she will be in expressing himself/herself and using the language which, in turn, will enable him/her to express his/her opinions in an effective and intelligible manner.

Richard and Renandya (2002) claim that the lack of sufficient vocabulary knowledge and strategies in teaching new vocabulary causes learners to be less successful and prevents them from discovering their real potential. Luckily, those who are specializing in English language, that’s to say, the majority of the students who are studying in English language departments are highly aware of the importance of lexical knowledge they need to acquire in the process of language learning. For this reason, as I recall from my own high school years, students tend to memorize words and chunks, prepare notes of wordlists in order to enhance their lexical knowledge. Apart from the ways they follow, their teachers also use methods or techniques to help their students maximize their lexical richness. Yet, it is still unknown what level of lexical knowledge these students have. In other words, the length of words they know and the level of vocabulary they possess has not been analysed in terms of lexical richness. What is also not well known is what ways their language teachers use with the aim of enhancing student’s lexical richness.

A learners' proficiency is generally assessed by the richness of vocabulary they use in their written or spoken output. As Linnarud (1986) and Engberg (1993) stated that a composition which is written well uses effective vocabulary and this vocabulary affects the readers positively in turn. Engberg (1995) conducted a study which is concerned with lexical knowledge of the participants through different kind of lexical measures. However, her study was limited to examining how many different words the participants produced, without investigating the level of these words, which is actually another vital aspect that affects the L2 writing quality. Similarly, having a wide range of vocabulary is usually associated with effective writing by the teachers (Grobe, 1981). Astika (1993) put forward that proficiency of vocabulary is probably the best indicator of total composition quality. Apart from these studies listed above, there are also a number of studies which have claimed that there is an on-going interaction between lexical knowledge and writing process (Cumming & Riazi, 2000; Hayes & Chenowith, 2001; Zimmermann, 2000).

1.4. Statement of the Problem

Even though English language education is offered starting with the second grade of primary schools in Turkey, learners often complain about not having sufficient skill and knowledge in order to communicate in English (Doğançay-Aktuna & Kiziltepe, 2005). Moreover; some of them go further and claim that although they have been learning English for years, they still cannot piece even two sentences together or utter a few sentences properly. These learners, regardless of their age, jobs or level of English knowledge usually ask English teachers what they should do in order to improve their language competence and performance. They also ask what strategies they should follow in order to boost their vocabulary set. Undoubtedly, their failure in language learning cannot merely be connected with their lack of vocabulary knowledge. There are, for sure, lots of reasons which, in turn, have yielded many research focusing on these reasons (Gobel & Mori, 2007; Oxford & Shearin, 1994). However, it is a valuable chance that most learners of English language are well aware that without enough vocabulary knowledge they are going to have difficulty in understanding what is being told and they will experience awkward times while expressing themselves. As said earlier, vocabulary knowledge is fundamental in the development of four skills that are reading, listening, speaking and writing. When English learners encounter with an Eng-

lish speaker, when they read a piece of article in English or when they listen to their favourite English songs, they are always required to operate with words. As for the students targeting to be teachers of English in the future, of course, the importance of vocabulary knowledge duplicates. As Schmitt (2010) noted, “learners carry around dictionaries and not grammar books” (p. 4) which can hint that students usually instinctively seem to notice the importance of vocabulary for their learning.

Although there are always debates and claims about poor vocabulary knowledge of students studying English language in high schools of Turkey, there is still almost no research that reveals the word frequency level of high school students aiming at studying in English language related departments by using RANGE and Frequency software. Therefore, this study will heavily focus on this issue.

Second concern of this study is connected with the methods or special techniques that teachers use with the aim of increasing their student’s vocabulary knowledge. Moreover; their ideas about the relationship among student’s vocabulary use, lexical richness and success in English is another point of interest. As it is widely known, the teacher’s role in the second- language classroom is to perform as a facilitator, resource person and language model for L2 learners. With regard to teaching vocabulary, the objective of EFL teachers are to provide learners with necessary vocabulary capacity in order to help them to communicate in the target language (Cornu, 1979). For this objective, teachers should make use of a variety of language teaching methods and techniques. Nonetheless, it is still uncertain what methods teachers use with the aim of boosting vocabulary knowledge of their students if they ever do so. It is also another question whether they use common methodologies or distinctive ways in this regard.

To sum up, the current study, primarily, aims to shed light on these two concerns stated above and contribute to the literature in these respects.

1.5. Purpose of the Study

This study primarily aims at analysing L2 lexical richness in the written production of students in terms of word frequency levels they use. These students are studying at foreign language department of different high schools in Hatay. They also attend to two different private language teaching institutions which are located in the same city in order to get extra support for university entrance exams. Therefore, these two private

language teaching institutions are visited in order to collect the necessary data. The underlying idea behind the analysis is that the higher proportion of low frequency words means the higher the lexical richness of the texts written by the students.

The average score of students' pilot LYS- 5 foreign language exam and lexical richness in their essays will also be compared and examined in order to shed light on whether lexical richness of the students is a predictor of success in students' score of foreign language exams or whether having a high score in pilot LYS-5 exam means higher lexical richness of the students. The study further targets to determine the most frequent words used by the participants and the frequency levels, cumulative and raw percentages of these words.

Finally, the study also intends to find out the common methods or authentic techniques English teachers use in order to enhance their students' lexical richness. The research data for the final objective will be collected via semi-structured interview.

1.6. Research Questions

The study addressed the following four main research questions:

1. What is the lexical richness level in all the participants' essays?
2. What is the most frequent vocabulary used in all the essays written by the participants?
3. Is there a relationship between participants' LYS-5 pilot tests and lexical richness in their essays?
4. What do the teachers working with the participating learners do in order to enhance their lexical richness?

1.7. Significance of the Study

As previously stressed, the importance of having a high level of lexical richness is valued much by both the teachers and the language learners. Especially in Turkey, where productive skills in language teaching are commonly considered as problematic, the value of lexical richness is folded because possessing a considerable extent of lexical richness is one of the main paths of expressing the ideas effectively in productive skills which are writing and speaking. By means of this study, the lexical richness possessed by language students studying in foreign languages departments of high schools

will come to the light which in turn will enable the students, their teachers and most importantly target population of the study to see the level of lexical richness students have in their free written essays and take necessary steps accordingly. Moreover, the interviews with the teachers of the students will show what ways teachers follow in order to enrich their students' lexical richness. This study will also help EFL teachers to remember the importance of lexical knowledge and will encourage them to provide a richer comprehensible input to their students in the classroom settings whereby the students will be guided to use words belonging to low frequency word lists. Finally, this study will offer suggestions for further research in the related literature and will bolster other researchers for similar research.

1.8. Assumptions and Limitations of the Study

It is assumed that lexical frequency profile provided by the software RANGE is an objective means of measuring lexical richness in written production. Although it is proven to be objective and sensitive by Laufer and Nation, Laufer (2005) points out that there are two major shortcomings of the profilers. First of all, profilers are unable to distinguish between homonym words such as ring, book, can etc. which may be involved in particular frequency bands in contextual use. The second problem is that word units such as “in spite of” or “relating to” are not recognised by vocabulary profilers. So, they are regarded as separate words like “in”, “spite” and “of”. Scholars are currently working in order to find solutions to these problems.

As a matter of fact, students seemed to be reluctant to participate in the study at first because they stated that they do not really focus on writing skills as they are not required to write any essays in English for studying at related university programmes. Luckily, a brief speech about the importance of writing skills at university and as language teachers in the future persuaded the majority of them to write their essays for the study.

The participants of this study are going to be from two private language teaching institutions located in Hatay. For this reason, the results of the study will be valid for the institutions that are studied and they may not be generalized nationwide.

1.9. Operational Definitions

Definition of key terms is of great importance as they enlighten the target audience and help them to understand the gist of the study. Below there are some terms with their definitions that take place in the current study.

AWL: It is the Academic word list which consists of words sampled from the Academic Word list (Coxhead, 1988). The list contains 570 academic word families which usually occur in a wide range of academic texts. The list does not include words that belong to the most frequent 2000 words of English. It is also represented as the third list in software RANGE.

Corpus: A collection of written or spoken authentic text that is usually stored on a computer.

FREQUENCY: FREQUENCY is a software that runs on an ASCII text to make a frequency list of all the words in a single text. It can run only one text at a time. The output is an alphabetical list, or a frequency ordered list. It gives the rank order of the words, their raw frequency, and the cumulative percentage frequency

GSL: The General Service List (West, 1953) is a list of around 2000 headwords (families) largely chosen on the basis of frequency.

LFP: It means lexical frequency profile which uses the proportion of frequent versus nonfrequent vocabulary in the text. The final calculation is carried out by a special computer program, RANGE.

Lexical Richness: Lexical richness is a generic term which explains the overall effect of more particular measures including lexical density, lexical variation, and lexical sophistication (Nation & Webb, 2011).

LYS-5: LYS-5 is an English language test in Turkey, which is applied to the students who would like to study in foreign Language related university programmes

RANGE: It is a software programme used to analyse lexical frequency profile of texts. It is developed by Nation, Heatley and Coxhead (2002). RANGE provides a distribution figure of how many texts a particular word occurs in, the total number of times the actual headword appears in all the texts, the total number of times the word and its family members in all the texts and finally a frequency figure for each of the text the word occurs in (Gregori-Signes, C., & Clavel-Arroitia, B., 2015)

Token: It generally refers to the total number of the words in a written text regardless of how often they are repeated. The phrase “running words” can also represent the same notion.

Type: It is any word form which occurs once; regardless of how many more times it might occur in the text.



CHAPTER II

LITERATURE REVIEW

2.1. Introduction

This chapter is composed of three parts. In the first part, the significance of vocabulary learning and teaching will be highlighted. For this aim, the importance of L2 vocabulary knowledge of learners, that's to say, the significance of knowing a word is going to be clarified at the first place. Since this study is also going to reveal methods and techniques that the teachers' use while teaching vocabulary, emphasis on the cruciality of vocabulary teaching and some effective techniques used in the L2 vocabulary teaching will be highlighted as well. In the second part, prerequisite definitions of terms for this study are going to be explained. As Nation & Laufer indicated (1995) the most well-known and important lexical richness measures such as lexical originality, lexical sophistication, lexical density, and lexical variation are going to be defined. As a next step, Lexical Frequency Profile (LFP) and the software programs called RANGE and FREQUENCY are going to be presented. Finally, in the third part theoretical and empirical studies related to measuring lexical richness of L2 learners as well as studies concerned with techniques for teaching vocabulary will be examined.

2.2. Knowing A Word

“Word” is the most commonly used term not only on a daily basis but also in different research interest referring to a single entity of a language that bears meaning and can be in spoken and written form. However, first introduced by C. S. Pierce to literature in 1906 token and type are also two different terms which are usually used instead of word in academic studies particularly by corpus linguists. Schmitt (2000), for example, used the terms types and tokens in his book titled *Vocabulary in Language Teaching* in order to explain the calculation of lexical richness dimensions such as lexical density and lexical variation. Similarly, the terms type and token are used in a study by Daller, Milton, and Traffers-Daller (2007) while stressing the importance of TTR in modeling and assessing vocabulary knowledge of the learners. Token generally refers to the total number of words in a written text regardless of how many times they are repeated. However, types are only unique words in a written text. In this sense, if the sen-

tence “I saw the cat that you saw yesterday” is examined, it can be said that it has eight tokens but seven types. The lexical profile of learners’ essays is, as a matter of course, expressed in types because the repeated occurrences of the same words, that’s tokens, do not demonstrate a larger vocabulary set than a single use of the same word. The term vocabulary, however, is a broader term which refers to all the words in a particular language. The last but not the least, the term “lexis” is also used for the term “vocabulary” in language studies (Laufer & Nation, 1995; Linnarud, 1986; Schmitt, 2000).

Contrary to general belief, knowing a word does not merely mean knowing its dictionary definition. When someone claims to know a word, in addition to the meaning of the word, he/ she is supposed to know its appropriate usage in spoken and written context, its right way of pronunciation, its spelling and its associations with other words (Nation, 2001). For example, the dictionary meaning of the word “congratulations” may be known but if it is mispronounced, which is quite common among many language learners, then, it actually cannot be said that it is a known word. According to Richards (1976), different kind of word knowledge including its frequency, collocations, register, semantic structure, case relations, development in native speakers and underlying forms should be known in order to comprehend and use a word fully. He further explains his eight assumptions thoroughly and finalizes these assumptions as follows:

1. The native speaker of a language continues to expand in adulthood, whereas there is comparatively little development of syntax in adult life.
2. Knowing a word means knowing the degree of probability of encountering that word in speech or print. For many words, we also know the sort of words most likely to be found associated with the word.
3. Knowing a word implies knowing the limitations imposed on the use of the word according to variations of function and situation.
4. Knowing a word means knowing the syntactic behaviour associated with the word.
5. Knowing a word entails knowledge of the underlying form of a word and the derivations that can be made from it.
6. Knowing a word entails knowledge of the network of associations between that word and other words in the language.
7. Knowing a word means knowing the semantic value of a word.

8. Knowing a word means knowing many of the different meanings associated with a word. (Richards, 1976, pp. 78-83).

Nation (2001) classified knowledge of words into 4 categories which are form (orthography and phonology), position (grammatical pattern and collocation), function (frequency and appropriateness of use), and meaning (concept and association) and each category involves two subcategories. Having word knowledge adds up to apprehend these eight categories. Nation also divides these dimensions as receptive and productive knowledge.

Table 1

Knowledge of Words

<u>Aspect</u>		<u>Receptive</u>	<u>Productive</u>
Form	Spoken form (phonology)	How does the word sound?	How is the word pronounced?
	Written form(orthography)	How does the word look?	How is the word written and spelled?
Function	Frequency	How common is the word?	How often should the word be used?
	Appropriateness	Where would we expect to see this word?	Where can this word be used?
Meaning	Concepts	What does the word mean?	What word should be used to express this meaning?
	Associations	What other words does this word make us think of?	What other words could we use instead of this one?
Position	Grammatical patterns	In which pattern does the word occur?	In which patterns must we use the word?
	Collocations	What words or types of words can come before or follow the word?	What words or types of words must we use together with this word?

Note. Adapted from *Learning a Vocabulary in Another Language* (p. 31) by I.S.P. Nation, 2001, Cambridge: Cambridge University Press. Copyright 2001 by "Cambridge University Press".

Read (2000) stated that knowing a word means to include both knowing the formal aspects of the word as well as its meaning and having the ability of utilising it

In the light of ideas of the scholars presented above it can be summarized that, knowing a word is not a simple phenomenon as it is generally thought since it requires being familiar with different dimensions of the word basically with its meaning, use, form, register, phonological and orthographical features etc.

2.3. Receptive and Productive Vocabulary Knowledge

As Schmitt (2000) states “the mechanics of vocabulary learning are still something of a mystery, but one thing we can be sure of is that words are not instantaneously acquired, by adult second language learners, in particular” (p .4). Instead, they are learned from different inputs step by step. In this learning process, vocabulary knowledge mainly divided into two groups as receptive and productive vocabulary by most prominent researchers (Laufer, 1998; Laufer & Paribakht, 1998; Henriksen, 1999; Nation, 2001). The distinction between receptive and productive vocabulary has been highlighted countless times in the literature (Henriksen, 1999; Laufer, 1998; Qian & Schedl, 2004; Webb, 2005). Receptive vocabulary refers to the vocabulary that the learners receive passively during listening to any kind of input such as a speech, a song etc. Receptive vocabulary can also be obtained while learners read any kind of texts such as short stories, novels, magazines, journals, letters etc. In this context, the learners know the meaning of the vocabulary but they cannot use it actively in their productive skills which are writing and speaking. In a sense, it can be said that knowledge of receptive vocabulary resembles the case when kids understand the words but they cannot articulate these words. Productive vocabulary, on the other hand, refers to the vocabulary that the learners know and utilize in their speech and in their written production. It is possible to assume that knowledge of receptive vocabulary achieved earlier than knowledge of productive vocabulary (Benjamin & Crow, 2014; Nagy, Anderson & Herman, 1987; Teichroew, 1982). Gass and Selinker (2008) make a detailed definition of knowledge of receptive and productive vocabulary. They take the word “overextended” as an example and indicate that;

Receptive knowledge includes:

- recognizing the word in writing or orally

- knowing the general meaning
- knowing the specific meaning in a specific context of use
- knowing that it is made up of the component parts—*over, extend, -ed*
- knowing that it has a possible negative connotation (as opposed to *overqualify*, which may or may not have a negative connotation)
- knowing that it generally occurs with *himself, herself, oneself, themselves, ourselves, yourself*
- knowing that the opposite is *underextended*.

On the other hand, productive knowledge involves greater specificity and includes, among others:

- knowing how to accurately pronounce a word or correctly spell it
- knowing the precise meaning in a variety of contexts
- knowing that *She overextended herself* is OK, but that *She overextended her chair* is probably not OK in the absence of a highly specific context
- knowing the precise context of use. (pp. 451-452)

It is commonly accepted that knowledge of productive vocabulary forms a basis for writing skills. For this reason, language teachers should instill the idea that language learners need to develop their scope of productive vocabulary in order to produce better and more effective essays in target language. Correspondingly, the degree of an individual's productive vocabulary knowledge is generally considered to influence an individual's capacity to deliver high quality written production. There are a good number of studies supporting this claim in the literature. For instance; McNamara et al (2009) analysed students' essays and found out that there is a direct proportion between students' writing quality and their use lexical variation. Here, by lexical variation, it is meant the ratio of different words used in a piece of writing. McNamara et al. (2009) also found a connection between writing scores and use of low-frequency words and suggested that individuals having high proficiency in writing use vocabulary that is less frequent in a language. Similarly, Crosley et al (2011) showed links between writing quality of essays and lexical variation as well as word frequency. In conclusion, it can be said that knowledge of productive vocabulary is crucial in the process of producing high standard written production since it enables the learners to use a rich variety of vocabulary as well as low frequency vocabulary.

2.4. Vocabulary Learning and Teaching

More attention has recently been given to vocabulary teaching and learning in ESL programs. That's due to the fact that many of the necessary vocabulary still cannot be learned in spite of much effort given for learning them. Many teachers need more help with word instruction especially in the countries where English is being taught as a foreign language. New interest in the study of lexical issues by many researchers has also increased the importance of vocabulary learning and teaching in the field (Heras & Lasagabaster, 2015; Sonbul & Schmitt, 2009).

The value of teaching vocabulary has usually been regarded by language teachers in Turkey. Most of us can remember the limitless efforts of our language teachers which have helped us gain new set of vocabulary. However, the techniques or methods some of them use for learning and teaching vocabulary may not have been as effective as possible. As a result, most language learners, even the ones studying at ELT major programs or at foreign language departments lack necessary vocabulary knowledge they are supposed to know.

As Hinkel (2003) stated different kind of influential pedagogical approaches to vocabulary teaching have been developed in vocabulary research in recent years. According to him;

1. The most valuable techniques necessitate helping learners form semantic domains of verbs that are synonyms or have similar meaning that can provide readily accessible contextual substitutions in discourse.
2. Teaching verb collocations with nouns, articles, and prepositions provide an important discourse-oriented technique in vocabulary teaching because when learners get vocabularies as lexical chunks instead of separate units, they can associate the links easier which in turn makes learning more effective.
3. To widen the range of verbal semantic networks, besides the traditional foci of vocabulary teaching, for example, formal two-or three-word verbs and idioms, derivational prefixes and suffixes can also be highly beneficial since they provide additional venues for learning and enriching vocabulary (2003, p. 201).

2.5. Lexical Approach

Since this study is primarily based on the analysis of lexical richness, it is legitimate to define and explain Lexical approach. First introduced by Lewis in 1993, lexical approach is a method that fundamentally rests on the rationale that a vital part of a language learning requires the ability of being able to apprehend and produce collocations and lexical phrases as chunks. Lewis (1993) stated that lexical approach shares many key principles of communicative approaches but it is different in that it focuses more on growing understanding of lexis in natural use and its possible contribution to language pedagogy. He further added that “the lexicon of the language is considerably larger than any list of the “words” of that language. This simple insight is the basis for a lexical view of language, and a lexical approach to teaching”(Lewis et al., 1997, p. 7).

Some prominent methodological principles of lexical approach are as follows;

- Students learn best in language-rich classrooms with language-rich materials. Teachers must be unafraid of exposing their students to real English, at all levels.
- Listening activities should be repeated. In most classrooms, teacher is the best source for listening.
- Language classrooms is a combination of input, awareness-raising, learner training and language practice. Each of these elements is important.
- Receptive skills are important. Receptive grammar practice values awareness-raising and exploration above and teacher explanation.
- Communicative competence is a much wider concept than accuracy.
- Many grammar mistakes are caused by lexical deficiency. Take lexis seriously.
- Develop your own skill in chunking text- identifying different lexical items in it. Help students to develop the same skill. (Lewis, 1993, pp. 193-194)

2.6. Explicit and Implicit Vocabulary Learning Hypothesis

Nick Ellis (1994) recognized two possibilities in connection to the handling of new vocabulary; these possibilities are the implicit vocabulary learning hypothesis and the explicit vocabulary learning hypothesis. The former is identified with cognitivist methodologies and claims that new vocabulary is processed without the language learn-

er realising he/she monitors new vocabulary especially during reading or speaking due to the input that the learners are exposed to. Moreover, according to the implicit vocabulary learning hypothesis, vocabulary is learned completely unconsciously as a result of repeated series of activities in a context. As stated by Schmitt (2000), in contrast to explicit approaches to vocabulary teaching and learning, the main point of implicit learning is to ensure that learners get maximum exposure to target language. Without a doubt, the best approach to do this is to transplant the learner into a country or place where L2 is the primary language. Unfortunately, this alluring methodology is not broadly accessible to the learners around the globe. For this reason, educators must discover methods for expanding their students' exposure to the target language without travelling abroad. The agreement on the most proficient method to do this is to have the students read more so that they can become acquainted with more new vocabulary.

Explicit vocabulary learning hypothesis, on the other hand, holds the idea that vocabulary learning process should be conscious and new vocabulary should be taught by planned and explicit techniques. Schmitt (2000) remarked that traditional approaches to teach vocabulary have obviously centred on the explicit study of teaching vocabulary. There are various sources that show a wide range of vocabulary activities, including teachers' reference books such as *Techniques in Teaching Vocabulary* (Allen, 1983), *Vocabulary* (Morgan & Rinvoluceri, 1986), *Working with Words* (Gairns & Redman, 1986), *Teaching and Learning Vocabulary* (Nation, 1990), and *Implementing the Lexical Approach* (Lewis, 1997). As Ellis (1994) stated, an explicit vocabulary learning hypothesis argues that there is some advantage to vocabulary acquisition from the learner's being aware of novice vocabulary, specifically taking care of it, and utilizing different kinds of techniques in an attempt to guess its meaning from the context. Besides, there may likewise be advantages of implementing metacognitive techniques to call back new vocabulary and to reinforce new understanding by repetition.

Recently, much research into second language vocabulary teaching and learning has been made to compare explicit and implicit approaches and techniques that can support and enhance the learning process. Although the two hypotheses mentioned above may seem to have two different views on vocabulary learning, SLA specialists would likely concur that a blend of the two hypotheses is required so they form a mixture of both implicit vocabulary learning and explicit vocabulary learning (Schmitt, 2000). Nation (1990) considered that as soon as a L2 learner has gained a certain measure of fundamental vocabulary, there is an edge in which word recurrence diminishes and exten-

sive reading turns into an inefficient approach to learn vocabulary. Instead, he suggested that classroom time be given to the improvement of procedures for L2 learners to learn vocabulary. Paribakht and Wesche (1997) analysed two teaching systems for vocabulary learning, one focused on extensive reading, and the other based on reading together with explicit teaching. Outcomes demonstrated that both methods were helpful and learners in both groups expanded their vocabulary learning significantly, in spite of the fact that the group combining reading and related activities outflanked the extensive reading group.

Huckin & Coady (1997) claimed that most of the vocabulary any individual knows, either in the L1 or L2, has been acquired incidentally through reading procedure and interpretation of the meaning through the context. They additionally stressed three fundamental advantages in incidental approaches to vocabulary acquisition in light of reading, instead of explicit approaches to vocabulary learning. These main advantages are as follows;

(a) It is contextualized, giving the learner a richer sense of a word's use and meaning that can be provided in traditional paired-associate exercises, (b) it is pedagogically efficient in that it enables two activities—vocabulary acquisition and reading—to occur at the same time, and (c) it is more individualized and learner-based because the vocabulary being acquired is dependent on the learner's own selection of reading material. (Huckin & Coady, 1997, p. 182).

As stated earlier, many analysts today appear to concur that a blend of explicit and implicit techniques for vocabulary learning is attractive, albeit additional research is expected to find the routes in which such a blend can be tried most effectively regarding class-time confinements and classroom assets that L2 educators and learners have on hand. Additionally, Schmitt (2000) indicates both methodologies are essential; each reimbursing the inadequacies of the other. To sum up, deliberate learning is powerful however, constrained in terms of the number of words (and word knowledge kinds) it can address. Implicit learning is slow and untargeted; however, it can fill in the "contextual" sorts of word information, and give the chance of reusing the vocabularies which are partially learned.

2.7. Techniques for Teaching Vocabulary

As Nation (2001) states, many teachers today agree that the meanings of the words must be taught within context instead of giving the learners a list of unrelated words because it is apparent that the meaning of a vocabulary can change according to their use in a particular context. Moreover; teaching vocabulary in a context also enables students to realize the usage of the vocabulary in a sentence or a context so that they can use it for communicating in target language as well as in their written productions. However, teachers need extra devotion to help students learn new vocabulary by providing vocabulary within a context. Nation (2001) highlighted that teaching a word means teaching three things which are;

1. Teaching the shape or form of the word.
2. Teaching the meaning of the word.
3. Teaching the form and meaning of the word that go together. (p. 67).

He gives the word “fork” as an example. In his opinion, when the word “fork” is taught, the learner should recognise and utter the word “fork”. Besides, he must know the meaning of the word and finally, he must know the sound and form of a fork go together.

There are three different senses which can help students to grab the meaning of vocabulary. These are visual, tactile and aural senses. First of all, visual sense consists of primarily showing the written form of the word. Additionally, showing mouth and hand movements are also involved in a visual sense. Tactile sense means using real objects which the students can touch and feel. Aural sense consists of pronouncing the word as well as playing an audio system for producing the word.

These three senses ensure different techniques for learners to perceive the meaning of a word. Now, let’s have a look at these techniques which involve learners’ visual, tactile and aural senses.

2.7.1. Using Visuals to Teach Vocabulary

Visual materials such as pictures, flashcards, and as the technology advances, most recently, videos are commonly used for introducing new vocabulary. Thanks to them, the learning process becomes more enjoyable and memorable and most im-

portantly effective, especially for young learners. Flashcards and pictures may be simple so they may not be available for explaining sophisticated words. However, videos can be instrumental in helping the learners obtain the meaning of newly learnt vocabulary. They can also be effective in reinforcing already learnt vocabulary by enabling the learners to make a connection between what they see in the video setting and the vocabulary. When we refer to video, first thing comes to the mind is basically movies, series, documentaries etc. Hence, it is enjoyable for students to watch a funny or exciting movie which can help them to learn new vocabulary without being aware of learning new vocabulary as well as make them to reinforce already existed vocabulary within their lexical set.

2.7.2. Using Audios to Teach Vocabulary

Like visual materials, audio materials can be an effective way of teaching new vocabulary, especially in terms of pronunciation. By using audios, students can be asked to listen and repeat. In this way, they can know the right pronunciation of the word they are learning. Besides, they can listen to a particular dialogue and try to guess meanings of the words within the context which seems to be an incidental way of learning vocabulary. Songs can also be effectively used for introducing new vocabulary. They can also get students attention and interest easily as listening to songs is highly popular among the high school students. Üseini (2003) stated that songs are also an effective way of practicing pronunciation. They can provide repetition of helpful words and expressions. High school students usually desire to know the lyrics of English songs and they generally try to accompany to songs which is also a great way of improving their pronunciation skills. As a consequence, making use of songs and lyrics in class can be profoundly motivating. After listening and practicing the song, singing it in the classroom produces joy and enthusiasm among the students. Hence, making use of songs, from time to time, is an effective way of introducing new vocabulary.

2.7.3. Using Antonyms and Synonyms

Giving the antonym or synonyms of the words which is commonly used by many language teachers can be regarded as a classic but effective way of enhancing lexical richness. However, when this technique is used, educators must be sure that the students comprehend the target vocabulary well before its antonym provided. If the vo-

cabulary is given with its antonym at first, that's before the students absorb it, they may mix the meaning of the vocabulary with its antonym. For synonym, such problems will not occur as the same or similar meanings are provided.

2.7.4. Providing L1 Equivalents of the Vocabulary

This is probably the most commonly used technique in vocabulary teaching among the language teachers. It can be used for all level of students. It is a direct way of teaching vocabulary. For this reason, it heavily relies on memorising. It is time-effective and economical. By using this technique, it is possible to provide students with a large number of vocabulary. However, this technique should be used as a last resort when other techniques do not work. It should also be kept in mind that a word in English may not have a precise equivalent in L1. In this respect, the word should be clarified by explanation. Another point is that the meaning of some words differs according to the context, so when the L1 equivalent of the word is taught, the context it is used in should be taken into consideration.

2.7.5. Brainstorming and Semantic Mapping

The word brainstorming was first invented by Alex Osborn in 1953. Brainstorming can be defined as form of group interaction that is used to ease the flow of ideas. It is commonly used in corporations and companies and is usually used when new, original, and creative ideas are desired (Putman & Paulus, 2009). According to Osborn (1953) there are two key principles in brainstorming. First is the elimination of the notion of judging any idea presented. Second is the encouragement of the quantity of the idea.

As for the teaching vocabulary, brainstorming can be a creative way of introducing new vocabulary to language learners. It is a combination of a relaxed, informal approach to provide new lexical set. The teachers can write a word on the board and then ask the students which words they remember when they see the word written on the board. In this way, the teacher can write the words that the students tell around the main word in the middle. This helps the students to make connections with the main word and learn new words that are associated with the word in the centre. There is a sample of brainstorming in the diagram below.

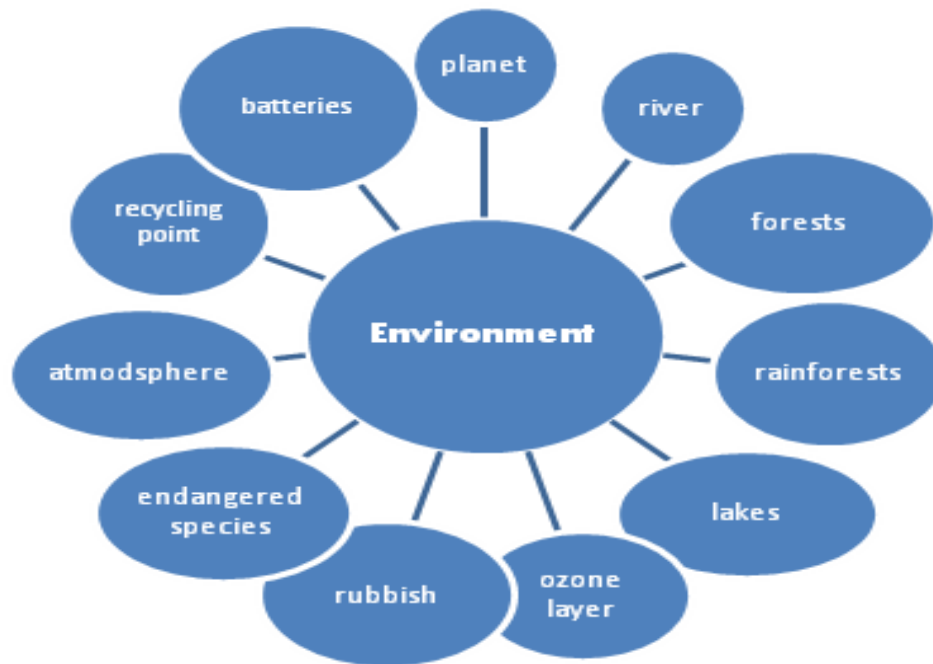


Figure 1. A sample of brainstorming

Here are basically two aspects in semantic map. These are the visual and the conceptual aspects. In visual aspect, a semantic map is an arrangement of shapes such as boxes, triangles, circles, etc, connected to each other by arrows or lines. In conceptual aspect, a semantic map contains “verbal information between the shapes that create links of ideas” (Fisher, 1995, p. 68). Novak indicated that as “knowledge representation tools” semantic maps ought to be read from top to bottom, starting with more general concepts and proceeding to more specific concepts (2010, p. 3)

In vocabulary teaching semantic mapping can be regarded as another way of providing new vocabulary to the learners. The aim of forming such a map is to demonstrate the meaning-oriented relations between a word or phrase and a set of linked words or concepts. Most importantly, these maps help the students recall the meaning of words they have already learnt before. Semantic mapping also provides additional benefit of enabling students to visualize how word meanings can be categorized. You can find an example of Semantic mapping added below.



Figure 2. A sample of semantic mapping

2.7.6. Games

Traditional techniques of vocabulary teaching are often seen as a boring way of learning vocabulary especially by new generation growing up in the era of technology. Making use of games, specifically computer-based or online games, in teaching vocabulary can break this boredom and provide new dimensions to vocabulary teaching. It is known that students feel enthusiastic when they practice the target language by means of games because games are not only entertaining but also help students learn without a conscious analysis or understanding of the learning process while they acquire new vocabulary. Some specialists have additionally stated that features of games make vocabulary learning more effective. Lee (1995) for example, lists a few fundamental advantages of games when they are utilized in the classroom, including "a much-needed break from the ordinary routine of the language class ", "motivating and challenging" and "an opportunity of practicing the target language in different skills." (p. 35). Ersöz (2000) indicated that games are fairly welcomed because of their fun and interest. Moreover, games bring real-world context into the language classroom and enhance students' use of new vocabulary in a flexible, communicative way.

2.7.7. Corpus Linguistics

A corpus can simply be defined as a collection of texts that is stored in a computer. These texts can be in spoken or written language and they are authentic i.e. they contain genuine and natural language. As it is known, the written texts such as newspapers, magazines, articles can be entered into the computer from a USB, a CD, or the internet. Spoken texts, like conversations, speeches can be recorded and then recordings

can be listened to and transcribed to be entered into computer database. It is then possible to analyse the language in the corpus with corpus software tools to see how people really speak or write.. (McCarten, 2007, p. 2).

Even though corpus linguistics has been an area of interest for linguists for many years, teachers or language instructors have only recently begun to exploit corpora for teaching a foreign language especially for teaching vocabulary. As Balunda (2010) stated, essentially, there are two ways to directly engage second language learners in corpus work in the classroom: 1) they can be given direct access to a corpus and concordancing program on a computer; or 2) they can be given print-outs containing the raw data, or concordance output, from a corpus(Balunda, 2010, p. 9).

A corpus provides a deeper and better understanding of the contextual use of language (Marton, Tsui, Chik, Ko, & Lo, 2004). Besides, a corpus can basically give information about frequency, collocation and grammatical patterns of the words. Consequently, teachers can make use of corpus and determine what words to teach in the classroom as well as guide students to discover patterns of language use (Biber, Conrad, Reppen, 2008).

It can be said that the acquisition of vocabulary is considered to be the most important aspect of successful language learning and corpus linguistics research has given ways to access to a wealth of authentic language on spoken and written English which was previously unavailable. Owing to this fact, teachers now have the challenge of finding ways to make use in the classroom of the new information provided by corpora (Carneiro, 2014).

2.8. Word Frequency Lists

The notion of word frequency is mostly linked with the size of vocabulary that the language learners have. Thus, learners' size of vocabulary has been frequently discussed with regard to the frequency levels of words they know (Nation, 1990; Laufer, 1998). As a result, word frequency lists have helped many researchers and language teachers to determine vocabulary level of the learners. West's General Service list of English words (1953) which contains 2000 headwords can be regarded as the most famous vocabulary list. It is a collection of the most important words of English for learners. This list was taken from a study of five million running words. It actually has 6000-word entries but the stated total headwords are 2000.

Another word list called the Threshold level was prepared by J. Van Eck in 1975. It consisted of 1500 items and aimed to find out a minimum level of general ability. As a result, it is claimed of two-third of 1500 items was needed in order to use the lexicons productively. Even though different lists were created in the past, such as the threshold level mentioned above as well as Teacher's Word Book (Thorndike & Lorge, 1944) or The Brown University Corpus (Kučera & Francis, 1967), the General Service List is accepted as a unique list in that it is both the most comprehensive and accurate word list prior to the publication of word lists based on the British National Corpus which contains 100 million words (Šišková, 2012).

Nation (2001), on the other hand, classified word frequencies on the basis of 1000 items intervals. In order to form his classification, he used the percentage of text coverage and proposed that 80 % of running words, in other words, tokens in a text are high-frequency words while low frequency words cover small percentages. Moreover, he also proposed two more categories which are technical words and academic words. By technical words, it is meant the jargons words which are used in a special area such as fender, clutch disk etc. used in the automobile industry. Academic words, on the other hand, contain words which are frequently used in academic texts such as analysis, variable etc. Nation underlined that, in terms of vocabulary learning, high frequency words can be dealt with by the learners; however, low frequency words, technical and academic vocabulary require vocabulary learning and teaching strategies and techniques in order to be acquired (Laufer & Nation, 1999).

Table 2 below shows the level of vocabulary lists based on a written academic text.

Table 2

Level of vocabulary Lists Based on a Written Academic Text

Levels	Number of words	Text coverage %
High frequency words	2000	%87
Academic words	800	%8
Technical words	2000	%3
Low frequency words	123.200	%2
Total	128.00	%100

Note. Adapted from *Teaching and Learning Vocabulary* (p. 65) by I. S. P. Nation, 1990, Massachusetts: Heinle & Heinle. Copyright 1990 by "Heinle & Heinle".

2.9. Dimensions of Lexical Richness

The term “lexical richness” which is first used by Ure (1971) is often adopted as an umbrella term to cover different dimensions of lexical richness which are lexical density, lexical sophistication, lexical originality, lexical variation etc. Lexical density refers to the ratio of number of lexical words (or content words) to the overall number of words in a given text. Lexical words give a composition its meaning and provide data with respect to what it is about. Namely, lexical words are simply adjectives, nouns, verbs, and adverbs. Different sorts of words, for example, articles (a, the), prepositions (on, at, under), conjunctions (and, because, yet), etc. are grammatical or functional words. Hence, they give little or no data about the content of a text. These non-lexical words are called function words as well. In the light of this information, lexical density is essentially the rate of words in written or spoken language which give us data about what is being conveyed. As for the writing, lexical density is basically a measure of how informative a given text is.

According to Nation and Laufer (1995), the measurement of lexical density would be like following;

$$\text{Lexical density} = \frac{\text{Number of lexical tokens} \times 100}{\text{Total number of tokens}}$$

Lexical sophistication is another dimension of lexical richness which is considered as an indicator of vocabulary development. It is also known as lexical rareness. According to Read (2000), it measures the extent of unusual or high-level vocabulary in learner’s written texts. Linnarud (1986) and Hyltenstam (1988) both computed lexical rareness as the proportion of the quantity of advanced lexical words to the total number of lexical words in a given context. Lexical sophistication is frequently measured via the Lexical Frequency Profile (LFP) created by Laufer and Nation (1995). The LFP depicts the lexical content of the composed text according to the frequency groups (the most frequent 1000 words, the second-most frequent 1000 words, and academic vocabulary). Laufer and Nation (1995) asserted that the LFP is a reliable and valid measure for evaluating productive vocabulary in L2 learners’ writings.

$$\text{Lexical sophistication} = \frac{\text{Number of advanced words} \times 100}{\text{Total number of words in a written text}}$$

Lexical variation is the percentage of the different words in a text to the total number of the running words in the same text. Laufer and Nation (1995) stated that LV has some problems because type/token ratio has seen to be unstable specifically in short essays. Even if the essays' length is standardized, there remain two more problems. If derivatives are accepted to be different words, then the percentage of lexical variation in a text will be high. However, if the derivatives are regarded as a one-word family then the lexical variation will be low. In conclusion, a learner who uses different derivatives of the same word can be distinguished from a learner who uses different word families.

$$\text{Lexical variation} = \frac{\text{Number of types} \times 100}{\text{Total number of tokens}}$$

Finally, lexical originality refers to the percentage of different words in a given piece of writing used by one particular writer and no one else in the same group (Laufer & Nation, 1995). Lexical originality measures the performance of each individual in the same group according to their usage of different words in their written production.

$$\text{Lexical originality} = \frac{\text{Number of different tokens written by one writer} \times 100}{\text{Total number of tokens}}$$

The table below shows lexical richness measures used by different researchers.

Table 3

Lexical Richness Measures by Different Researchers

Linnarud (1985)	
Lexical individuality	Ratio of lexical words that are unique to the writer to the total number of lexical words in the composition
Lexical sophistication	Ratio of lexical words above grade level to the total number of lexical words
Lexical variation	Ratio of different lexical words to the total number of lexical words
Lexical density	Ratio of lexical words to the total number of words in the composition
Harley and King (1989)	
Lexical variety	Ratio of verb types (except those provided in the instructions) to the total number of verb items
Lexical specificity	Ratio of verb types (except those provided in the instructions and 20 high frequency verbs) to the total number of verb items
Lexical sophistication	Ratio of verb types (except those provided in the instructions and 200 verbs on the frequency list <i>Le Frayais Fondamental</i>) to the total number of verb items
McClure (1991)	
Lexical diversity	Ratio of the number of different lexical words to the total number of lexical words in the composition
Lexical diversity of form classes numerators	Five ratios with the same denominator--total number of nouns + verb + adjective + adverb types 1. Total noun types 2. Total verb types 3. Total adjective types 4. Total adverb types 5. Total modifier (adjective + adverb) types
Laufer and Nation (1995)	
Lexical originality	Ratio of words in a given piece of writing that are used by one particular writer and no one else in the group
Lexical density	Ratio of lexical words to the total number of tokens in a text.
Lexical sophistication	Ratio of advanced words to the total number of tokens in a text.
Lexical variation	Ratio between different words in a text and total number of running words.

Note. Adapted from “The relationship of Lexical Proficiency to the Quality of ESL Compositions” by C. A. Engber, 1995, *Journal of Second Language Writing*, 4 p. 145. Copyright 1995 by “Elsevier”.

Note that lexical variation, lexical variety, and lexical diversity refer to the same measure. Similarly, lexical originality and lexical individuality represent the same measure.

As it is seen above, different conceptualisation of measures has been used by researchers so far. Some measures have been criticized more than others because of the problems they have. In conclusion, there is no consensus on which measure is the best one among the researchers.

2.10. Several Measuring Tools of Lexical Richness

Researchers have found different ways of measuring lexical richness up to now. These tools have sometimes been praised and sometimes criticized by scholars. For this reason, it would be unrealistic to claim there is only one measuring tool which works best. Together with the Lexical Frequency Profile (LFP) which is used for this study, some other prominent measuring tools will be highlighted in this section.

2.10.1. Type/Token Ratio

Without doubt, the type-token ratio (TTR) is the most frequently and the oldest lexical measure used up to this time. Essentially, the TTR calculates the quantity of various words that are called types over the total number of words (tokens) in a text (Agustin-Llach & Jimenez-Catalan, 2018). However, this proportion is exceedingly text length dependent, that's to say, the longer a text is, the lower the TTR will naturally be. For this reason, a number of possible solutions have actually been proposed in order to cope with this notorious problem. Some of these solutions are listed below.

2.10.2. Mean Segmental Type/Token Ratio

Alternatives for traditional TTR measure have aroused the attention of both applied linguists and mathematical linguists. In applied linguistics Engber (1995) recommended calculating texts which have equal length and this adapted measure called the Mean Segmental TTR (MSTTR). Additionally, different transformations have been proposed such as the Index of Guiraud which measures the number of types over the square root of the tokens, in this way decreasing the impact of the token length.

2.10.3. D Value

A current measure particularly created for child language acquisition is the D-value (Malvern, Richards, Chipere, & Durán, 2004). D value is actually designed to measure lexical diversity in order to overcome the problem of text-length created by TTR measurement. Value D is obtained by taking a number of random samples from a given text. It calculates the type-token ratios of these different samples and averages their results. However, D measure was later replaced by an alternate and stronger, as its creators claimed, measure which utilises from random sampling and for which special software was developed called Voc-D. Briefly, the calculation of Voc-D is the result of a number of random text samplings.

This measure starts its calculation by taking from the text 100 random samples of 35 tokens. After that, for each of these samples, the TTR is calculated, and the mean TTR is recorded. The same process is followed for samples from 36 to 50 tokens. Finally, an empirical TTR curve is formed from the means of each of these samples (McCarthy & Jarvis, 2010).

2.10.4. Measure of Textual Diversity

McCarthy (2005) proposed another measure called the measure of textual lexical diversity (MTLD) because none of the measures take the text structure into account so far. This method depends on protecting the text structure and analysing the content consecutively. MTLD cuts the text into sequences which have the same TTR and figures the mean length of the sequences which have the given TTR. The creators asserted that the MTLD does not depend on text length in the 100-2,000-word range but Treffers-Daller (2003) demonstrated that this claim is not generally valid as in her investigation of articles written in French, MTLD appeared to be text length dependent.

2.10.5. Lexical Frequency Profile (LFP)

Lexical frequency profile was created and tested by Laufer and Nation (1995) in order to evaluate lexical richness in a written text. Basically, LFP demonstrates the percentages of words that the learners use in their written productions with regard to the frequency bands. Frequency bands are classified within four categories which are the first 1000 most frequent words, second 1000 most frequent words, academic vocabulary or the University Word list (UWL) and finally the words that are not found in any of

these lists. The rationale behind LFP is that the higher amount of words which belong to the third most frequent word list, in other words, academic word list (AWL) means the richer lexical knowledge of the writer. To make it clearer, consider a written text having 300-word families; among these words, 240 are inside the first 1000 most frequent words, 30 are in the group of second 1000 most frequent words, 20 belongs to academic word list and 10 are not in any list. In order to calculate the LFP, these numbers are converted into percentages out of the total 300-word families. The index is processed and calculated with a special software program RANGE which can be downloaded from Paul Nation's website (<https://www.victoria.ac.nz/lals/about/staff/paul-nation>) and also from Tom Cobb's website (<https://www.lex tutor.ca/vp/>). This program compares the vocabulary word lists with the words in a text and generates a profile of used words. Hence, it enables us to see the Lexical Frequency Profile of essay writer. A sample of LFP analysis can be examined in Table 4 below.

Table 4

A Sample of LFP analysis

A. WORD LISTS	B. TOKENS	C. TYPES	D. FAMILIES
One	54/72.0	34/69.4	33
Two	2/ 2.7	2/ 4.1	2
Three	14/18.7	9/18.4	9
Not in the lists	5/ 6.7	4/ 8.2	?????
Total	75	49	44

Column A shows the categories of frequency lists. Word list one is the first 1000 most frequent words in English. Word list two is the second 1000 most frequent words in English. Word list three is mostly formed by the AWL and UWL. Lastly, not in the lists part is the words that are not in any the lists above. Row 1 of Column B shows the number and percentage of words in the text that come from the word list one. The program also analyses types and tokens in the written texts. As earlier underlined, a token is any occurrence of a word form in the given text, regardless of whether it is occurring for the 1st or the 50th time. A type, on the other hand, is any word form, which occurs once; regardless of how many more times it might occur in the text. Numbers and percentages of types and token are both provided in the sample output. Since the program operates on the 3 frequency lists, it cannot classify any words that do not appear in these

lists into their word families. That's the reason for the question marks in the 4th row of column D.

Research conducted by Laufer & Nation aimed to compare the LFP of learners with their achievement on standard vocabulary level tests. The research showed that there is a correlation between performance on vocabulary tests and the ratio of low and high-frequency words in the free-written texts of the learners. As a result, they provide the results below in Table 5 for correlation between the high and low frequency word families that the students studying at the University of Haifa use in their free-written texts and scores of the same students in vocabulary-based level tests.

Table 5

Correlation between Word Families from Each Frequency Band and Level Test Scores

A.	B.		C.		D.		E.	
	%	1st 1000	%	2nd 1000	% Academic	% Academic	% word families not in the other 3 lists (low frequency)	
	(high frequency) word families		(medium frequency) word families		(low frequency) word families			
			Text1	Text2				
	Text1	Text2			Text1	Text2	Text1	Text2
Levels	-.7	-.7	.01	.2	.7	.6	.6	.8
Test/LFP								

Note. Reprinted from "Vocabulary Size and Use: Lexical richness in L2 Written Production" by B. Laufer & I.S.P Nation, 1995, *Applied Linguistics*, 16, p. 317 Copyright 1995 by "Oxford Academic".

As it can be seen at the bottom of column B on Table 5, there is a negative correlation between the students' use of high-frequency words in their free-writing compositions and scores they get in the vocabulary test. That's to say, students' higher use of proportions of high-frequency words mean lower scores in the vocabulary level tests. However, the positive correlations in column D prove that learners who used higher proportions of academic words in their compositions scored higher in the vocabulary test. Furthermore, students who use words that are not in any of three lists also scored higher in vocabulary levels tests as the offlist words are low frequency words. Finally, Laufer & Nation concluded that use of low frequency words in students' free-written

texts is a sign of richness in their vocabulary. For this reason, Laufer & Nation confirmed that this procedure is a stable and reliable measure of lexical use in writing.

However, Maera (2005) tested LFP with a set of Monte Carlo simulations. Maera (2005) defined Monte Carlo analysis as a method which depends on randomly formed data sets that are used to sample complicated process. These simulations showed that LFP was not as sensitive as claimed by its developers. Laufer (2005) responded to this critique by stating that there are differences between simulations and reality and she added that there is no perfect way of measuring richness of vocabulary knowledge and use. For this reason, revisiting and revising existing tools is a useful and legitimate activity.

2.11. Related Empirical Studies in the Literature

There have been numerous related empirical studies conducted in the literature and the number of similar studies has been increasing recently as compared before. Topkaraoğlu (2013) studied vocabulary size and depth in lexical competence. He aimed to find out if studying vocabulary in both size and depth in lexical competence helps students to have a richer vocabulary range which affects their production in foreign language classroom. He used several vocabulary tests such as; Cambridge Quick Placement Tests (Syndicate, 2001), Vocabulary Level Tests, Productive Vocabulary Level Tests in order to collect necessary data from the participants who were students studying in foreign language departments. The results showed that students who received a large amount of vocabulary in class hours devoted to vocabulary teaching turned out to be better language users in target language.

Another study conducted by Ünalı (2011) set out two different goals. One of them which can be linked with the current study was to compare texts written by Turkish EFL students to texts written by native speakers of English. The aim was to determine lexical differences between the two groups and then utilize from corpus-based language learning activities in order to help the learners get through lexically related problems. He compared the essays written by 49 Turkish EFL learners and 100 native speakers. He used an online database called Coh-Metrix in order to compare lexical cohesion of texts written by EFL Turkish students to native ones. As a result, he found out that learners' essays were markedly different from those of natives' in term of referential, semantic, reading comprehensibility and syntactic aspects. He further stated that

interviews held with the focus group showed that these differences were mostly caused by lexicon related problems.

Öztürk (2014) aimed at examining Turkish and native English postgraduate students' and native scholars' use of lexical bundles in terms of frequency, functions, and structures of the lexical bundles. To achieve his aim, he used a corpus of 150 texts which are theses of Turkish and native English students as well as articles belonging to native scholars. He used a computer-based program called Wordsmith Tools 6 in order to retrieve lexical bundles in the research corpus. The results showed that Turkish students used far more lexical bundles than native English students and scholars. He, however, added that Turkish students overused those lexical bundles. Moreover; it was found out that Turkish students used different lexical bundles compared to English students and native scholars.

A corpus-based study conducted by Bozdağ (2014) targeted at investigating the acquisition and usage of lexical verbs which are in academic word list (AWL) (Paquot, 2010) by Turkish EFL learners. For his purpose, he used TICLE (Turkish sub-corpus of International Corpus of Learner English) and the LOCNESS (The Louvain Corpus of Native English Essays) corpus to describe the lexical profile of the students by establishing a frequency list of the verbs used by the students in the two related corpora. Afterward, the most frequent ten verbs were analysed within the frame of pattern grammar approach (Hunston & Francis, 2000). Results showed that some verbs were overused by non-native students while some verbs were underused in comparison to native students. This study also revealed students' level of implicit knowledge in terms of lexical items as well as their awareness of register of academic words.

White (2014) made a mixed-methods inquiry into how vocabulary develops across adolescence within the context of New Zealand secondary schools. She used a quantitative approach to investigate vocabulary use in authentically written essays produced by secondary school English students ($N=141$) who belong to three different age groups that's 13-14, 15-16, 17-18. Essays were analysed according to lexical sophistication, lexical variation and lexical density. Quantitative findings showed that, within the period of adolescence, the ages 15-18 are more specific and significant in terms of lexical development. The qualitative aspect of the same study aimed at revealing teacher's perspectives on how secondary school context affects the vocabulary development of the learners during this significant acquisition period. For this aim seven secondary school English teachers were interviewed on the subject of lexical development. More-

over; contributions from the school curriculum to vocabulary acquisition were examined. Non-schooling related aspects such as cognitive development, reading habits, attitudes towards vocabulary were also identified. In summary, the study enriched to the field of later language acquisition within the adolescent years. In addition, it also highlighted elements in students' everyday school lives which may contribute to their lexical development.

Yüksel (2012) aimed to evaluate the general and academic lexical competence and performance of Turkish ELT majors studying at faculty of education. Grounding on theoretical and empirical studies in the literature, she developed a tentative framework in order to evaluate 371 participants' receptive and productive vocabulary level. The students who are studying at first, second, third and fourth grades were compared via different kind of level tests such as; Vocabulary level tests developed by Schmitt et al. (2001), World Associates Tests (Read, 2000). She also used Vocabprofile and Word-smith analyses in order to determine participants' general and academic lexical performance. As a result, it was found that student's receptive and productive levels of vocabulary were high and their level of vocabulary differs in term of which grade they are in. In the further analysis, it was observed that there was a linear development in the size and production on academic vocabulary. Lastly, it can be concluded that there is gradual progress in Turkish ELT majors' students' general and academic vocabulary knowledge across the years and their lexical competence and performance does not follow the same developmental path.

Kwon (2009) aimed at finding lexical richness of L2 learners in writing skills. Different from current study he measured lexical richness of 50 texts written through dimension of lexical richness such as lexical sophistication, lexical density, and lexical diversity. Additionally, the researcher also analysed LFP of the learners by using software program Vocabprofile which is a similar to RANGE software used in the current study. With the aim of analysing LFP of 50 L2 learners, Kwon (2009) compared the word frequency levels of the texts written by 50 learners to 50 essays/articles of Time magazine which were in English (N=50) and were randomly selected from the website of Time magazine. Articles contained in Time magazine are authentic articles written mostly by native speakers of English in a formal writing style. As a result, in spite of significant lexical differences between L1 texts and L2 texts, the words in the L1 texts belonged to the most frequent 2,000 words by the percentage of around 83. It was observed in this study that although the L1 texts had more sophisticated vocabularies than

the L2 texts, the percentage of words beyond the most frequent 2,000-word level in the L1 texts showed a similar percentage value to that of texts in L2. The researcher found it surprising to observe similar usage of the most frequent 2000 words in L1 and L2 texts as the L1 were the news articles and essays from Time magazine. This research can be worthwhile for the current study since it provides a percentage of word levels that belong to articles in time magazine. This percentage, that's 83 %, can also be used as a threshold for the essays written by the 50 participants for the current study in terms of word frequency levels

As highlighted earlier, the second concern of this study is connected with the methods or special ways that teachers use with the aim of increasing their student's vocabulary knowledge. For this reason, it will be worth to highlight some studies which are linked with vocabulary teaching methods or technique. In his master thesis, Yükselir (2008) aimed to find which of three techniques is the most effective and useful one in vocabulary teaching. These three techniques are providing Turkish translation equivalent, using illustrations and using the word in context in English vocabulary teaching. The second purpose of his study was to find out the level of retention of lexical items following the three techniques. In order to measure participants' degree of achievement on lexical items multiple choice tests and fill in the blank tests were applied. Finally, three different non-paradigmatic tests were used in order to obtain the result of the study. The result of the study demonstrated that the three vocabulary teaching techniques, could be effective on learning L2 vocabulary in the mental lexicon of the learners and the learners may retain the target words more than the other inactive teaching techniques.

Tuzcu (2010) intended to find out the most and the least preferred vocabulary teaching techniques used by the English language instructors working at a public university in Turkey. She also aimed to discover the attitudes of these instructors towards vocabulary teaching. Moreover; she analysed whether there is a relationship between the instructors' technique of teaching new vocabulary and their attitudes towards vocabulary teaching. As for the methodology, both qualitative and quantitative approaches were used. The results demonstrated that the most frequently used vocabulary teaching techniques were; 'having students guess the meaning from context', 'simple definition', 'collocation', 'body language, mimes and gestures' 'antonym and synonym of the words' while the least frequently preferred techniques were: 'Turkish translation of the words', 'short stories', 'commands', 'games' and 'songs'. The attitudes of

the instructors were examined by their educational status and teaching experience. Consequently, there were observed little difference between bachelor and master degree instructors in terms of educational status. However, instructors who have Ph.D. degrees showed more positive attitudes towards all the vocabulary teaching techniques. Additionally, in the first five years of teaching, instructors had more favourable attitudes towards teaching techniques. Finally, correlation values showed that the participants' attitudes towards these vocabulary teaching techniques do not precisely mirror the techniques they utilize when they are introducing a new vocabulary item. The reasons for these differences which were intensive syllabus, time management, learner's interests, and awareness, learner's level and the lack of materials were revealed in the interviews held with the participants.



CHAPTER III

METHODOLOGY

3.1. Introduction

In this chapter, the overall design of the study will be explained. Then, information about the participants in the study will be given. Finally, the research questions of the study will be highlighted once again.

3.2. Overall Design of the Study

This study is based on mixed methodology. That's to say, quantitative, comparative and qualitative research methods are used for the study. Quantitative research methods focus on objective measurements and it provides the mathematical, statistical, or numerical analysis of data collected through different ways such as questionnaires, surveys, or using computational techniques. In this study computational techniques, that's RANGE and FREQUENCY will be used for the analysis. The emphasis in quantitative research is to gather numerical data and generalize it across groups of people or to clarify a specific phenomenon. There are two different dimensions in quantitative research which are descriptive dimension and experimental dimension. In descriptive dimension subjects are usually measure once while experimental dimension measures the subjects more than once (Babbie, 2013) This study has descriptive design since it measures the participants once.

Another method that is used in the study is the comparative method. As No' Voa, and Yariv-Marshall indicated "In the past decade, there has been an important process of re-acceptance of the comparative perspective within various disciplines, among them within educational research and after being ostracised for several decades, comparative approaches are regaining their popularity, both as a method of inquiry and as a frame of analysis (NO' VOA & Yariv-Mashal, 2003, p. 424). Simply put comparative research is the act of comparing two or more things with a view to discover something about one or all the things being compared. In this study, lexical richness among the students are compared with each other both individually and in group to see the relationship between their tests scores and Word frequency levels.

Final method that is used is qualitative research method. Hatch (2002) stated that qualitative research methods try to understand the world from the perspectives of people living in this world. The principal data for qualitative research is collected directly by the researchers themselves (Hatch, 2002, p. 127). Qualitative research is basically gathered via observing or interviewing. As for, the current study- semi structured interviews are held with the teachers of the participants.

3.3. Students

The population of the is determined according to convenience sampling method. Convenience or opportunity sampling is the most widely type of sampling in L2 literature where the only criterion according to Dörnyei is the convenience of the researcher (as cited in Farrokhi & Mahmoudi-Hamidabad, 2012, p. 784). For quantitative and comparative phase of the study 50 students who are at the 12th grade of high schools take part in the study. They are preparing for the university entrance exam, that's LYS-5 exam. Participants chose to study at foreign language departments of their high school at the end of the 10th grade. This department offers students approximately 460 hours of English at grade 11th, and 460 hours of English at grade 12th annually. Most of the participants are planning to become teachers of English in the future. They have 30 hours of English classes per week. In addition to the classes in their schools, they also have 12 hours of classes in the private language teaching institutions that they attend after school and at the weekends. Their level of English, as their teachers indicated, supposed to be at least B2 level of CEFR in all four skills. An equal number of students from two different private language teaching institutions participate in the study. These two private language teaching institutions are given pseudo names in order to protect their privacy. So, they will be called Anchor Language Institution and Bright Language Institution. All of the participants are native speakers of Turkish language. Most of the participants (80 %) are 18 years old. Broadly speaking, English language departments are preferred by girls more than boys in Turkey. Therefore, 75% of the participants is girls while 25% of them are boys.

3.4. Teachers

Qualitative phase of the study is conducted with 4 teachers of English language from the private language institutions. These teachers are teachers of the 50 participants

who initially took part in the quantitative phase of the study. Participants represent different experience levels which can be regarded as a desirable situation because Coxhead (2011) ascertained that teacher' attitudes towards vocabulary teaching were affected by the years of experience. Profiles of teachers are listed in the table below. Names used for the teachers are pseudonyms.

Table 6

Profile of Teachers Participated in the Study

Name	Years of experience	School		Educational Background
Teresa	3	Anchor School	Language	Bachelor's Degree
Hector	7	Anchor School	Language	Bachelor's Degree
Gerard	5	Bright School	Language	Bachelor's Degree
Oscar	10	Bright School	Language	Bachelor's Degree

As seen in Table 6, all of the teachers have a bachelor's degree. The most experienced teacher is Oscar with the teaching experience of 10 years while the teacher having the least teaching experience is Teresa with 3 years.

3.5. Research Questions

This study seeks to find possible answers to the questions listed below.

1. What is the lexical richness level in all the participants' essays?
2. What is the most frequent vocabulary used in all the essays written by the participants?
3. Is there a relationship between participants' LYS-5 pilot tests and lexical richness in their essays?
4. What do the teachers working with the participating learners do in order to enhance their lexical richness?

3.6. Data Collection Instruments

Two different data collection instruments were used in order to explain and answer the research questions listed above.

3.6.1. Essays

As the first aim of the study is to analyse and compare the written production of the participants, they were asked to write an essay containing at least 300 words. Twelve different essay topics were provided for the participants so that they can choose one of the topics that most appeal to them. The rationale behind this is the participants will be more eager to write when they are given a right of choice on the topics. Topics of the essays were taken from the sample writing essays of TOEFL examinations so they do not require specialized knowledge. Participants were asked to write about one more different topic if they write less than 300 words for the first topic they choose. The aim for this is to have at least 300 words for each essay. Topics were listed on a sheet of paper and participants were asked to use the back page of the same sheet for writing their essays. Extra sheets were provided for the participants who wrote more than one page. Additionally, participants were warned not to use dictionaries while writing their essays so that the measurement can be more reliable as the essays should reflect their own lexical richness at that moment. Participants were given one hour to complete their essays. In order to collect the essays, two private language teaching institutions which prepare participants for the foreign language university entrance exam were visited. These institutions are located in Hatay and they have been serving as institutions for more than 5 years. Participants were also told the study was fully confidential, and the results from the study would have no effect on their school grades. Principals of the institutions were informed about the study and necessary permissions were taken from them. ELT teachers of the participants were also informed about the study and their consents were taken. I also had participants' permission to inquire about their pilot English test scores, which makes it possible to find if there is a relationship between their pilot English test scores and lexical richness in their essays.

3.6.2. Semi-Structured Interviews

In addition to measuring students' lexical levels, within the scope of qualitative phase, semi-structured interviews were held with four of the students' teachers

with the main aim of finding which methods or authentic techniques they use in order to enhance their students' lexical richness in general (see Appendix C). A semi-structured interview is a qualitative data collection process that explores particular themes or responses by means of a pre-determined set of open-ended questions prepared by the researcher. Unlike a structured questionnaire, one of the main advantages of the semi-structured interviews is that they do not restrict the respondents to a set of pre-determined answers. Hence, they give the respondents the freedom of expressing their answers in their own terms. According to Bernard (as cited in Cohen, 2006) semi-structured interviews are influential when there is only one chance of interviewing someone. Cohen and Crabtree (2006) further state that as semi-structured interview questions are prepared in advance, the interviewer gets the chance of internalizing the required specifications that an interview entails thus giving him/ her ability to conduct the interview with much competence. All in all, the semi-structured interview can provide reliable, comparable qualitative data. Typically, a semi-structured interview is tape-recorded and then transcribed for the analysis. However, some researches prefer note-taking during a semi-structured interview. Voice recording procedure is used in the current study as it can record every detail and enables the researcher to make an in-depth inquiry.

Two private language teaching institutions are visited in order to conduct semi-structured interviews with 4 teachers. At the beginning of the interview, the matter of confidentiality is addressed to the interviewees clearly. The interviews are held in a room privately and it is voice-recorded with the help of recorder. The interviewees were informed about the recordings beforehand and their consent were taken on that issue. Each interview lasted about 25 minutes. The following questions were asked to the interviewees;

1. Which methods or vocabulary teaching techniques do you use in order to enhance your students' lexical richness (Vocabulary set)?
2. In your opinion, is there a positive correlation between student's lexical richness and their achievement in English? Why?
3. Do you think students' level of vocabulary richness differ according to the vocabulary teaching methods or techniques used by the teacher?
4. What do you think to be some reasons behind differences in vocabulary use (i.e. more advanced/less advanced) among students?

5. In your opinion, how does vocabulary use affect students' writing?

3.7. Data Analysis Instruments

The gathered data were analysed via three different instruments. For qualitative and comparative research, the computer programs RANGE and FREQUENCY were used. As for the analysis of semi-structured interviews, thematic analysis is used.

3.7.1. Software RANGE

The software RANGE is used in order to make analysis of the lexical richness. RANGE can analyse the vocabulary of up to 32 different texts at the same time. It gives a distribution figure in terms of how many texts a particular word occurs in, a headword frequency figure which means the overall number of times the actual headword type appears in all the texts (Gregori-Signes & Clavel-Arroitia, 2015). It also provides a family frequency figure, that's, the total number of times the word and its family members take place in all the texts and finally a range figure for each of the texts the word takes place. RANGE provides three ready-made base lists: the first (BASEWRD1.txt) includes the most common 1.000 words of English. The second (BASEWRD2.txt) includes the second 1.000 most frequent words, and the third (BASEWRD3.txt) includes words which are not in the first 2000 words, however, frequent in upper secondary school and university texts from a wide range of subjects. All the lists consist of the base and derived forms of each word. Therefore, the first 1.000 words include around 4.000 forms or types. The sources for the first 2000-word lists are a General Service List of English Words by Michael West (Longman, London 1953) and The Academic Word List by Coxhead (1998, 2011) containing 570-word families for the third list. The first thousand words of A General Service List of English Words are usually those which occur higher than 332 times per five million words as well as numbers, titles, months, days of the week, common greetings like *hi*, *good morning*, *bye*, etc. LFP of essays is calculated through the RANGE programme in terms of word tokens, word types and word families. RANGE software can also be used to compare texts against vocabulary lists in order to find out what words are included in the lists and what words are not included in the lists. RANGE enable researchers to compare the

vocabulary of two different texts to see the percentage of the same of different vocabulary they use. A sample output of RANGE analysis can be found in the figure below.

WORD LIST	TOKENS/%	TYPES/%	FAMILIES
one	5490/88.85	728/61.85	491
two	268/ 4.34	154/13.08	127
three	184/ 2.98	124/10.54	102
not in the lists	237/ 3.84	171/14.53	?????
Total	6179	1177	720

```

Number of BASEWRD1.txt types: 4119  Number of BASEWRD1.txt families: 998
Number of BASEWRD2.txt types: 3708  Number of BASEWRD2.txt families: 988
Number of BASEWRD3.txt types: 3107  Number of BASEWRD3.txt families: 570

```

Figure 3. A sample output of RANGE software

3.7.2. Software FREQUENCY

In addition to RANGE, the software program called FREQUENCY which is included in the same package with RANGE is used. FREQUENCY is a less sophisticated program than RANGE. Essays are converted into a single text file on the computer and FREQUENCY is run to uncover a frequency list of all the words in a text file. It allows to analyse just one text file at a time. The output is listed in alphabetical order or a frequency order. Finally, it gives the rank order of the words as well as their raw frequency and the cumulative percentage frequency. There is a sample output from FREQUENCY software below.

Total tokens: 278
 Total types: 146

... in frequency order ...

Word Type	Rank	Frequency	Percentage	Cumulative Percent
TO	1	15	5.40	5.40
I	2	10	3.60	8.99
BE	3	8	2.88	11.87
IS	4	8	2.88	14.75
A	5	7	2.52	17.27
IN	6	7	2.52	19.78
MY	7	7	2.52	22.30
AND	8	6	2.16	24.46
IT	9	6	2.16	26.62
WE	10	5	1.80	28.42
GO	11	4	1.44	29.86
ME	12	4	1.44	31.29
NEW	13	4	1.44	32.73
OWN	14	4	1.44	34.17
ABLE	15	3	1.08	35.25
BECAUSE	16	3	1.08	36.33
BUT	17	3	1.08	37.41

Figure 4. A sample output from FREQUENCY software

The word type *I* is the second most frequent word in the sample. It occurs 10 times in the text. It covers 8.99 % of the text together with *to* while it covers 3.60 % of the text on this own.

In order to perform the LFP analysis in this study, the original compositions written by learners were modified as follows before they were processed by the computer: As Laufer (2012) suggested “spelling errors that do not distort the word were corrected in order to make the word recognizable by computer and words that were semantically incorrect (e.g., wrong meaning, wrong collocation) were omitted since they cannot be regarded as known by the learners” (p. 1). Proper nouns, numbers, and non-English words, mainly Turkish words, were excluded. Words with wrong derivatives or with incorrect morphemes were not omitted as they can still show the knowledge of word families that the participants have. Function words such as article *a*, *about*, *am*, *is*, are in English were excluded from counting by using stop list. Finally, all the essays were typed into the computer manually and converted into txt file formats in order to be analysed in RANGE.

3.7.3. Thematic Analysis

Thematic analysis process is used in order to analyse the data gathered via semi-structured interviews. Thematic analysis is one of the most widely used qualitative analysis since it is easy to conduct, less time-consuming and flexible. Actual-

ly, this approach is suitable to be used with many sorts of qualitative data and different aims. Hence, thematic analysis has a key role also in other approaches of data analysis such as grounded theory, narrative analysis. Thematic analysis is often used as a first step to discover broader patterns and conduct a more fine-grained analysis. In essence, the fundamental goal of using this approach is to provide a description and understanding of the answers of respondents in semi-structured interviews.



CHAPTER IV

FINDINGS AND RESULTS

4.1. Introduction

This chapter presents the findings from lexical richness analyses of high school students' essays. These results are based on an analysis of 50 essays gathered from two different private language teaching institutions located in Hatay. The Analyses were made by the software program called RANGE, which is the latest version of LFP analyser program. Lexical Frequency Profile of these two groups were determined according to the vocabulary level lists, that's the three most frequent 1000, 2000 and 3000 words by Nation included in software RANGE as well as the words that are not in the first three lists and used by the participants. Participants' scores of pilot-tests were also compared with vocabulary frequency level of the words in their essays in order to find out what kind of relationship there is between participant's pilot test scores and usage of vocabulary frequency lists in their free written essays. FREQUENCY program, which is included in the RANGE package, was also used in order to reveal the most frequently used words in terms of their raw and cumulative percentages. Results of semi-structured interviews held with the English language teachers were also highlighted in the last part of the current chapter. Finally, the relationship, if there is any, between the interviews and the analyses gathered from the RANGE analyser were displayed.

As previously stated, the data for this study were collected from two different private language teaching institutions. These language schools are given pseudo names that are Anchor Language Institution and Bright Language Institution. The collection of students' written texts from Anchor Language Institution will be named as Corpus A while the collection of students' written text obtained from Bright Language Institution. will be named as Corpus B. Accordingly, from now on, Corpus A will represent Anchor Language Institution whereas Corpus B will represent Bright Language Institution.

The rest of the chapter will be followed by the research questions listed in Chapter 3 and the data for each research question will be presented.

4.2. Lexical Richness of Students' Essays

The first research question of the study was “what is the lexical richness level in all the participants' essays?” In order to determine the word frequency level of the essays written by the participants, two groups of essays collected for this research, that's corpus A and Corpus B. These two corpora were combined and transferred to a single txt format file. Later, the file was processed with RANGE software. First, the analysis was made without using a stop list. By stop list we mean the functional words such as a, an, the, verb to be, numbers, pronouns etc. All the function words in the stop list can be found in Appendix B. The result is shown in the table below.

Table 7

Word Frequency Level in All the participants' Essays Excluding Stop List

Word lists	Tokens / %	Types / %	Families
One	13598/87.92	1184/53.89	671
Two	766/ 4.95	362/16.48	263
Three	471/ 3.05	232/10.56	180
Not in the list	631/ 4.08	419/19.07	339
Total	15466	2197	1114

As can be seen in Table 7 above, there are four different word frequency lists. Word list one and two, that's first 2000 most frequent word lists are from General Service list of English words compiled by Michael West (1953) while the source for list three is Academic Word list (AWL) containing 570-word families prepared by Coxhead (1998, 2011). Participants of the study (N=50) used 15466 tokens in their essays in total. To remind again, tokens are the all the running words in a piece of writing regardless of how many times they reoccur. Therefore, if these 15466 tokens divided by participants' number, that is 50, then it can be found that each participant used approximately 309 tokens. As stated before, each participant was required to use a minimum of 300 words for their essays. Hence, the total number of words was adequate. When the first row of Table 7 examined, it is seen that 13598 running words that make up 87.92 % of the tokens used by the participants belong to the first 1000 most frequent words in English. However, 4.95 % of the tokens in the participant's writings belong to the second 1000 most frequent words in English. As for the list three, only 3.05 % of tokens were observed to be contained in the third 1000 most frequent word list, in other words, academic word list. The rest, which makes 4.08 % of the running words, does not be-

long to any of the first three lists. These words may belong to higher or lower vocabulary lists which are not included in any of the lists or they may be proper names or city, county, district names etc.

The second column in Table 7 above depicts types. Types can be defined as any word form that occurs only once in a piece of writing regardless of how many more times it may occur in the same text. There are 2197 types used by the participants in 50 different writings. 1184 types that make 53.89 % of words belong to word list one. In turn, 362 types which make 16.48 % of running words belong to word list two. For the third word frequency list level, the participants use 232 types, which makes up 10.39 % of the words. Finally, 419 types making up 19.07 % running words do not belong to any of the first three lists.

The third column shows word families used by the participants. A word family simply means a base form of a word with its derived and inflected forms such as drive, drives, and driver. It is obvious that these three words are lexically and semantically closely connected to each other, therefore, they are a member of the same word family. Laufer and Nation (1995) argued that in addition to the use of low frequency words, word families that are used in learners' compositions are the most powerful indicator of lexical richness.

As for the third column, 671-word families were used from list one while 263-word families used from list two. Finally, 180-word families were used from the third list. Normally, RANGE software cannot classify words that are not included in the fourth frequency list into their word families, however it provides types that are not found in any these lists in the output. When the types that aren't found in any of these three lists were counted according to their word families, 339 word families were found to be in the offlist.

Figure 5 below shows the distribution of tokens and types in percentages according to frequency levels without using stop list.

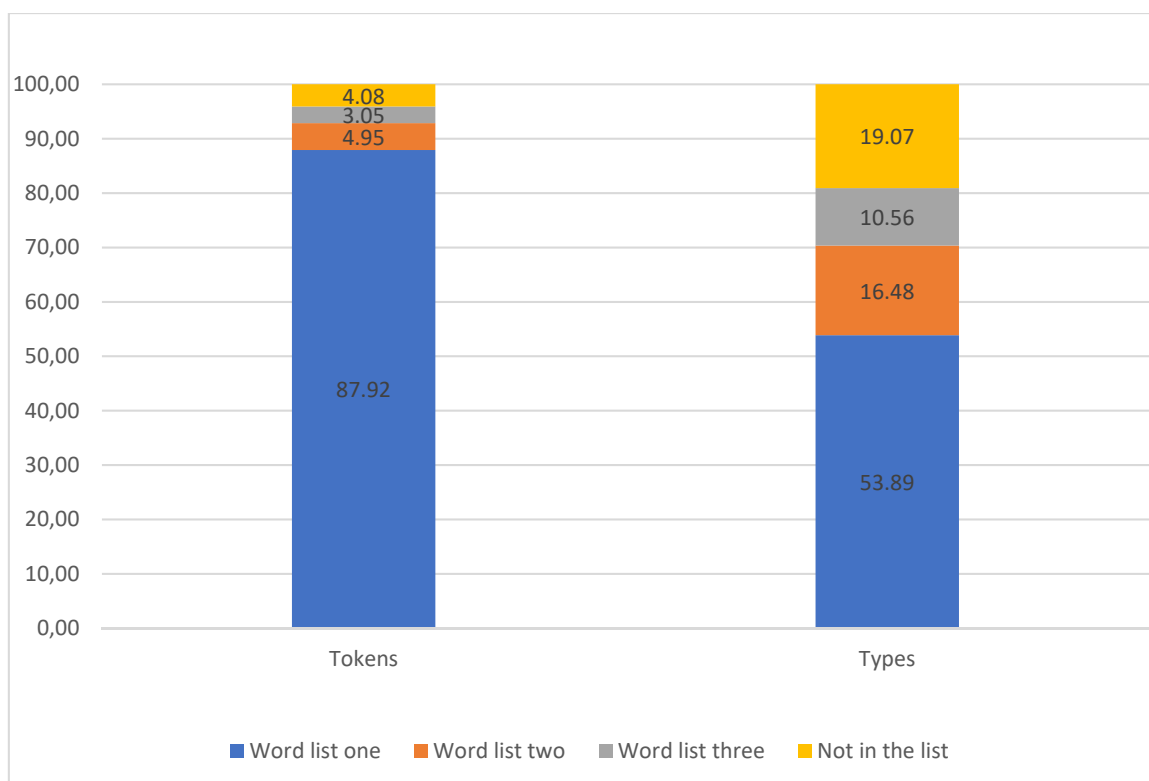


Figure 5. Distribution of tokens and types according to frequency levels

A second analysis of the compositions was made by using the stop list. As highlighted earlier, stop list excludes function words such as a, an, the, verb to be, numbers, pronouns etc. from the analysis. Therefore, these function words did not take place in the second analysis. The results of the second analysis are given in Table 8 below.

Table 8

Word Frequency Level in All the Participants' Essays Including Stop list

Word lists	Tokens %	Types %	Families
One	5040/73.6	975/49.12	555
Two	762/ 11.05	361/18.19	262
Three	465/6.76	230/11.59	178
Not in the list	631/ 9.15	419/21.11	339
Total	6898	1985	995

It can clearly be seen that the total number of words decreased almost by half when stop list is applied to the analysis. This proves that most of the functional words are included in the first 1000 most frequent words. It also shows that words most of the words used by 50 participants are functional words. Another point is that the percentage of first 1000 most frequent words decreased while percentages in the other three lists increased. Graphic below shows the distribution of the words according to the frequency level by using the stop list.

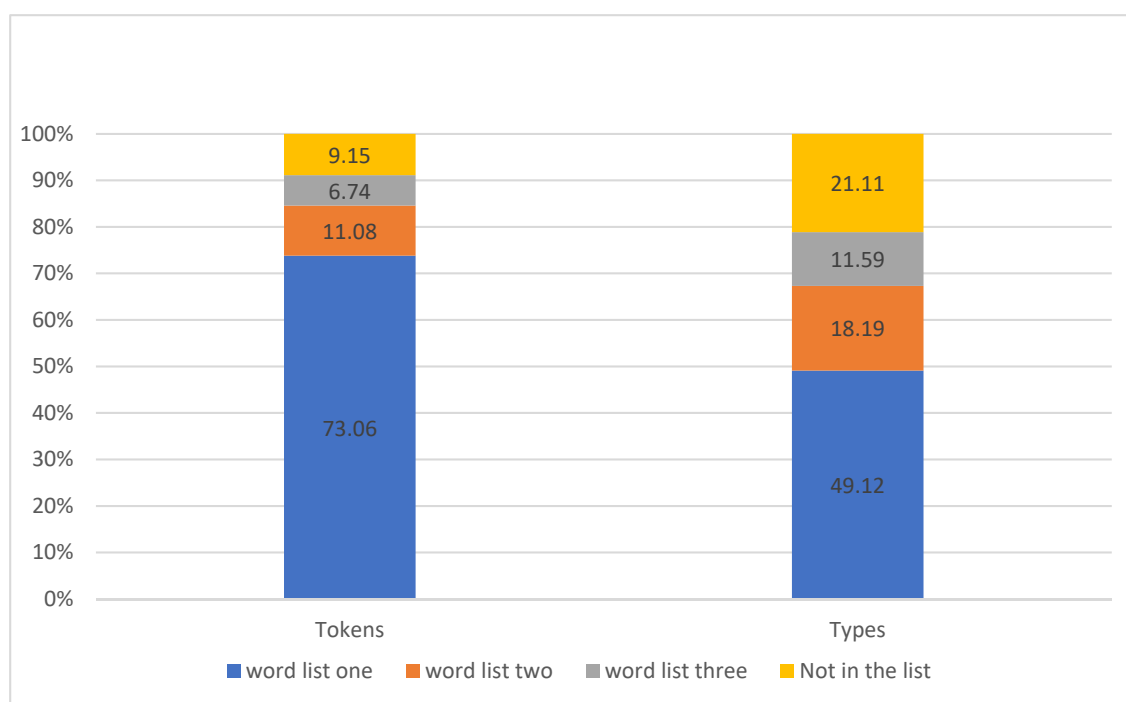


Figure 6. Distribution of tokens and types according to frequency levels by using stop list

Nation (2001) stated that academic word list (AWL), that's word list three, typically covers around 8.5 % of the running words in an academic text. Similarly, Coxhead (1998) revealed that her academic word list (AWL) covered 10% of the tokens in her 3,500,000 running words in academic corpus and about 8.5% in a free corpus. From this point of origin, if tokens, that's to say, running words in the analysis above are taken into consideration, tokens that are used by 50 participants in this study belong to word list three by percentage of 6.74 % as it is seen in the graphic above. This percentage value is lower than the percentage value that Nation and Coxhead asserted. Since lexical richness in the essays is principally measured with the percentage of AWL, lexical richness of the participants seems to be slightly inadequate under this circumstance. Another significant point is that the percentage of tokens that belong to word list one is 73.06

while the percentage of token that belongs to word list two is 11.08. As stated in Chapter two, in a study carried out by Kwon (2009) texts that are written in L1 and appeared in Time magazine included tokens from the most frequent 2000 words by the percentage of 83. When the percentage of tokens from word list one and word list two are totaled, the percentage of tokens amounts to 84.14. This percentage value is higher than the percentage value that Kwon found in written texts appeared in Time Magazine which shows participants' high use of most frequent words.

Finally, tokens that are not included in any of the lists make up of 9.15 % of the essays written by the participants. Some of these words that are not included in any of the three lists and used by the participants are listed in the table below.

Table 9

Some of the Types Not Found in Any of the First Three Lists

EMOTIONS	FOREHEAD	GUITARIST	BEAUTIES
HOMETOWN	FRANCE	HERO	BORING
MOOD	PYRAMIDS	INDIA	COOKIES
POLLUTION	TEAMWORK	INDISPENSABLE	DARLING
INTERNET	TV	LAUNDRY	DRUG
HARMONY	VITAL	OXYGEN	DURABILITY
TURKEY	AGONY	RHYTHMS	ENTHUSIASM
CAREER	ALCOHOL	RURAL	EXAMS
COPE	ALTRUISM	SOLO	FABRICATED
EMOTIONAL	ANTIDOTE	SPAIN	FEEDS
TRAFFIC	BORED	SWITZERLAND	FESTIVAL
VEGETABLES	CIGARETTE	AIRLESS	FESTIVALS
AMERICA	COUNTRYSIDE	ARCHITECTURE	FRENCH
BOSS	EMOTION	BAN	GENRE
CINEMA	FATAL	BANNED	GENUINE
DEPRESSIVE	EGYPT	GENUINELY	GRATIFICATION

As can be seen from Table 9 above, some of these words are country names like Turkey, America, France, and India. In fact, such kind of words does not reflect lexical richness in English. However, there are also sophisticated words like altruism, fatal, durability, and genre. These words, on the other hand, can be regarded as rich vocabulary and belong to the high level of frequency lists. However, how many of the words that are not in any of the three lists can be classified as rich vocabulary in terms of percentages cannot be determined by the software.

4.3. The Most Frequent Words Found in All the Essays

The second research question of the study was “What is the most frequent words found in all the essays written by the participants?” The software called Frequency was used in order to answer the second research question. Frequency provides the rank order of the words, their raw frequency percentage as well as their cumulative percentage. Below there is the output of the words analyzed by FREQUENCY which depicts the most frequent 20 words.

Table 10

The Most Frequent 20 Words Used by the Participants

Word Type	Rank	Frequency	Percentage	Cumulative Percent
TO	1	501	3.24	3.24
THE	2	387	2.50	5.74
IS	3	386	2.50	8.24
I	4	384	2.48	10.72
IN	5	374	2.42	13.14
AND	6	331	2.14	15.28
A	7	286	1.85	17.13
OF	8	253	1.64	18.76
ARE	9	216	1.40	20.16
FOR	10	209	1.35	21.51
PEOPLE	11	196	1.27	22.78
IT	12	187	1.21	23.99
THEY	13	187	1.21	25.20
THAT	14	181	1.17	26.37
YOU	15	181	1.17	27.54
NOT	16	175	1.13	28.67
WE	17	167	1.08	29.75
CAN	18	158	1.02	30.77
MUSIC	19	142	0.92	31.69
BECAUSE	20	129	0.83	32.52

As it is seen in Table 10, the word type “to” is the most frequent word used by the participants. It is used 501 times and it constitutes 3.24 % of all the texts. In fact, the first 10 words in the table are all functional words and as previously emphasized, functional words are included in stop list as they are not regarded to reflect lexical richness. The eleventh word, that’s “people” is not a functional word and it is the most commonly

used word with 196 reoccurrences by all participants. It belongs to word list one. Unfortunately, stop lists cannot be applied in frequency software in order to prevent counting functional words. Luckily, the same analysis can be made by Software RANGE. However, RANGE does not provide the percentages and cumulative percent of the word types used. Still, RANGE can apply stop lists and prevents functional words from appearing in the list. Below there is an analysis processed by RANGE.

Table 11

Types Found in Base List One

Type	Range	Freq	F1
People	1	196	196
Music	1	142	142
Life	1	97	97
Want	1	78	78
Think	1	76	76
So	1	75	75
Big	1	65	65
City	1	63	63

As stated above the word *people* is the most commonly used word by the participants belonging to word list one. The word *music* follows it with 142 reoccurrences. The Range column in Table 11 shows the number of texts in which the words are encountered. Since all the essays are unified as a single text, the range column is 1 for all the words analyzed because all of the essays written by the participants are merged as a single text file. The Freq column shows the number of words occurrence in the text. Lastly, F1 stands for the number of texts. If there were more than one text analyzed, then we would see other texts as F2, F3 etc.

Table 12

Types Found in Base List Two

Type	Range	Freq
Prefer	1	25
Smoking	1	22
Parents	1	17
Education	1	13
Information	1	12
Sad	1	12
Debt	1	11

Table 12 shows the most frequent words belonging to word list two. The verb *prefer* ranks first and it is used 25 times by all the participants. Still, it is used less than the most frequent seventh word which is *city*, belonging to word list one.

Table 13

Types Found in Base List Three

Type	Range	Freq
Job	1	17
Stress	1	16
Technology	1	12
Areas	1	10
Illustrate	1	8
Negative	1	8
Corporate	1	7
Focus	1	7

Finally, the most frequent seven words belonging to word list 3 are listed in Table 13 above. The word *job* is the most frequently used word belonging to word list three. It is used 17 times by the participants.

All in all, it can be said that the most frequently used functional word is “to” with 501 reoccurrences. However, the most frequently used word by the participants is *people* which is not a functional word. It is used 196 times by the participants. It is from the most frequent 1000-word list. The word *prefer* is the most widely used word by the participants belonging to word list two. Finally, the word *job* is the most frequently found word in participants’ essays belonging to the word list three.

Findings of the second research question are consistent with the findings of the first research question because, when the number of reoccurrences taken into considera-

tion, the most widely used words belong to word list one and word list two by far rather than word list three which is an indication of participants' low lexical richness.

4.4. Relationship between Participants' Test Score and Their Lexical Richness

The third research question of the study is "Is there a relationship between participants' scores on LYS-5 pilot tests and lexical richness in their essays?" In order to affirm or refute this, it is necessary to analyze participants' collected essays and then compare them with their pilot test scores. For this aim, first, 10 participants' essays were chosen to be analyzed individually. Five of these participants have the highest average of pilot test scores while five of them have the lowest average of pilot test scores. Later, in order to reflect the whole picture, 50 participants are divided into three groups. These groups are formed according to the pilot test scores they got. Then, these three groups are analysed and compared with each other.

The analysis is done starting with five participants having the highest pilot test scores. Their essays are processed into the software RANGE individually and obtained data from RANGE are compared with their average pilot test scores. After individual analysis of each essay, participants' essays are merged within one single file and analyzed again as a single essay. The same procedure is followed for the participants having the lowest average pilot test scores.

Before stating the average pilot test score of the participants, it is necessary to give a brief information about LYS-5 language exam. There are 80 multiple-choice questions in LYS-5 test, which is an English examination for university entrance. Candidates are supposed to answer the questions in 120 minutes. About 48 of these questions measure reading comprehension, 12 questions are about translation from English to Turkish and vice versa. Finally, 20 questions measure vocabulary and grammar knowledge of candidates. Since vocabulary knowledge is a key component in language learning, it can inevitably affect the success of students in reading comprehension and translation too. Private language teaching institutions, which prepare candidates for LYS-5 exam, regularly apply the pilot LYS-5 test to their students and observe their exam score. These pilot tests are equal to actual LYS-5 test in terms of hardship.

Scores of the students are calculated according to the 100-top score. As there are 80 questions, each question equals to 1.25 point. Therefore, a student who marks 77 correct answers out of 80 questions gets 96.25 points out of 100. Five participants with

the highest scores are shown in Table 14 below. Student H1, refers to the participant having the highest average test score. Respectively, Student H2 refers to the participant having the second highest test score. Student H3, Student H4, and Student H5 are listed in the same manner from the highest score to the lowest.

Table 14

Highest Average Score of Five Participants

Student H1	96.25
Student H2	95
Student H3	93.75
Student H4	93.75
Student H5	92.50

As can be seen above, student H1 has the highest average score of English pilot test. Student H2 score is the second highest with an average mark of 95. Two participants, student H3 and student H4, have the same average test score which is 93.75. Finally, H5 has an average score of 92.50 which the lowest score among the five participants listed.

As a next step, these five students' essays are processed and analyzed with RANGE by using stop list. Their usage of vocabulary frequency levels is depicted in the diagram below. Note that the percentages given below depict types because the lexical richness that the learners have can be expressed with the distribution of types more accurate than the tokens since the repeated occurrence of the same words may not prove that the learners have large vocabulary richness.

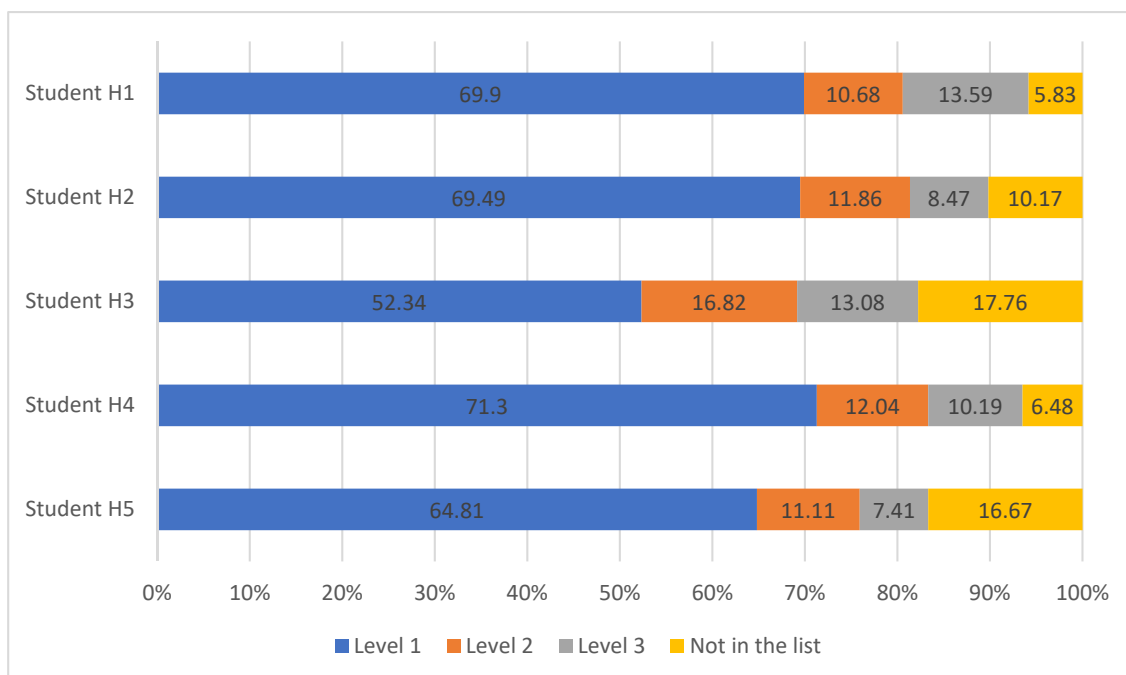


Figure 7. Vocabulary frequency levels of five participants with highest average pilot test scores

According to Figure 7, the student who has the highest score in English pilot test, that's student H1, uses 69.9 % of words from the most frequent 1000 words in his/her essay. On the other hand, 10.68 % of the words used by the same student belong to word list two. Words from the third list make up 13.59 % of the essay. Since lexical richness is mostly reflected by academic word list, it can be said that the essay written by student H1 can be considered rich by the percentage of 13.59. Finally, the words that are not in any of the first three lists make up 5.83 % of the essay. These words are “antidote, cope, grumble, stress-filled and yoga.” Student H2 who has the second highest that is 95 uses 8.47 % of the words from AWL. Additionally, the percentage of words that do not belong to any of the three lists is 10.17. Therefore, it can be argued that the essay written by student H2 is rich by the percentage of 8.47. Words which are not in any of the three lists are “affluent, anytime, emotion, gratification, handsome, idiosyncratic, impress, nature, surrounding, unsatisfied”. Student H3 has an average score of 93.75 from the English Pilot test. His /her usage of words from AWL is 13.08 % while the percentage of words from the not in the list is 17.76 %. So, student H3 essay can be considered rich by the percentage of 13.08. The words that are not found in any of the first three lists and used by student H3 in his/her essay are “bomb, cranny, custody, fab-

ricate, hound, intrude, invade, jail, journalist, nervously, nook, note down, privacy, sensationalist, slander, speculation, sue, TV, victim.” Student H4 has the same average score as student H3. However, his/her usage of words from AWL is 10.19 % and the percentage of words that are not found in any of the three lists is 6.48. These words are “accomplish, apt, compulsory, deliberately, obscure, resume and score.” Finally, the lowest score among the students with the highest scores belongs to Student H5 with an average score of 92.50. When it comes to the percentage of words from AWL, it is determined to be 7.41 % and percentage of words that are not in any lists is 16.67. These words are “amplify, cello, chime, dispute, emotion, genre, guitar, harmony, mood, nullify, pang, piano, riff, saxophone, solo, teamwork, violin.”

After individual analysis of essays of five participants with highest test scores, the next step is to merge essays of these 5 participants as a single file unit and process them with software RANGE. The result of the analysis is depicted in the pie chart below.

As it is seen in the pie chart, 59.91 of the words used by five participants belongs to word list one. Word list two makes up %14.58 of the words. Percentage of words that belong to AWL is 11.62 %. Finally, the words are used by the participants and not included in any of the three lists are 13.90 %. This analysis is going to be used in the comparison of the total essays of 5 students having the lowest pilot test scores.

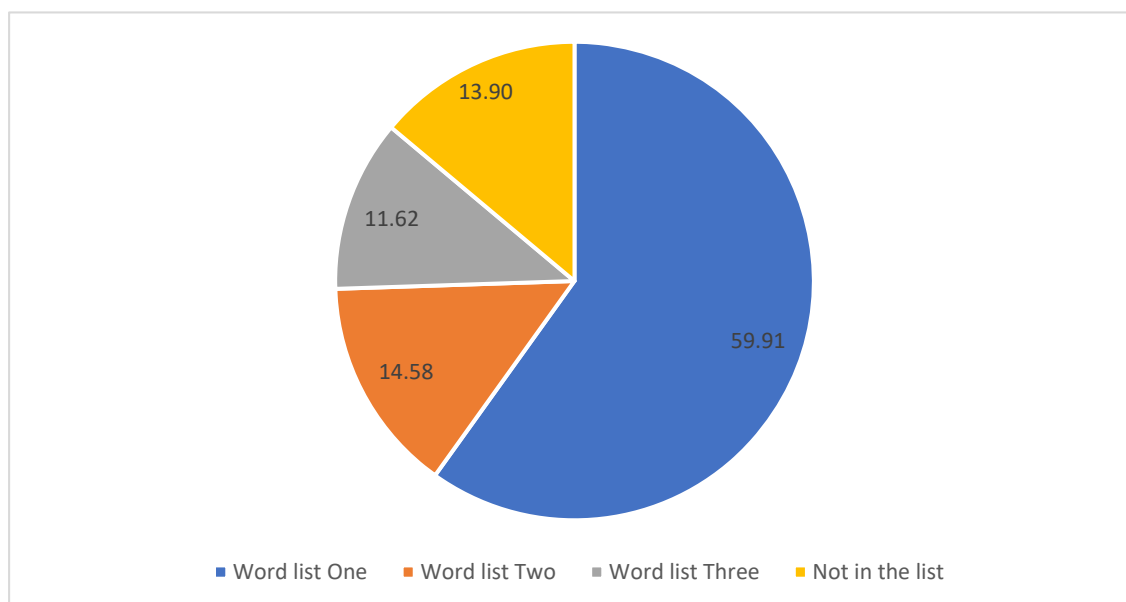


Figure 8. The total analysis of five participants with the highest test scores

The Range analysis of the students having the lowest pilot test scores is processed in the same way. First of all, average pilot test scores of five students with the lowest scores are listed below.

Table 15

Lowest Average Pilot Test Scores of Five Participants

Student L1	70
Student L2	70
Student L3	68.75
Student L4	67.50
Student L5	66.35

Student L1 has an average of the highest English test score among the lowest test scores. Then, respectively, student L2, L3, L4 and L5 follows from the highest to the lowest test scores. There is not a big difference among these 5 students in terms of pilot test scores. Yet, the difference of word frequency levels in the essays written by them is revealed by the analysis done through RANGE. The lexical richness of the students having the lowest exam scores is matched with the scores of the students with the highest scores. Five students' essays with the lowest English test scores are processed with RANGE software by using stop list and their distributions of types in terms of percentages are displayed in the graphic below.

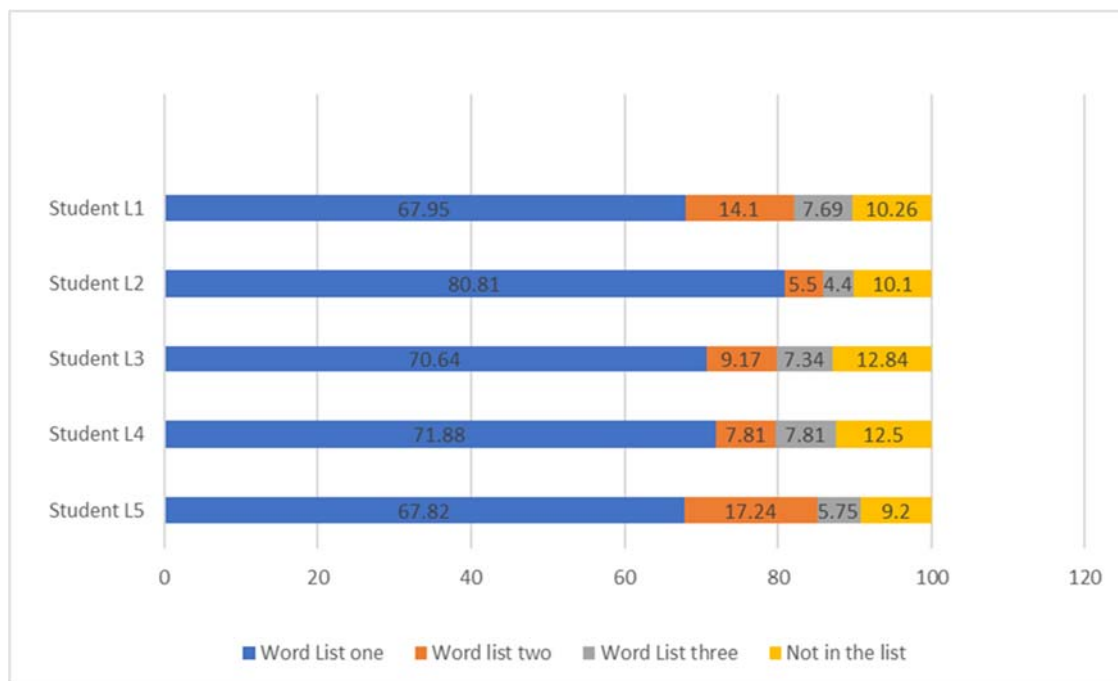


Figure 9. Vocabulary frequency levels of five participants with the lowest average English pilot test scores

According to Figure 9, student L5 who has the lowest test score only uses 5.75 % of the words that belong to AWL. The same student uses words that are not included in any list is 9.2 %. These words are “feed, immunity, livestock, nourish, self-confidence, solidarity, vegetables, and yogurt.” All in all, the percentage of words that are regarded rich lexically in student L5 essay is 5.75%. 7.81 % of the words used by student L4 belongs to AWL. The same student uses words from not in the list by 12.50 %. These words are “anniversary, mafia, patent, slang, Tesla, Turkey.” It can be said that lexical richness of the essay written by student L4 is 7.81 %. Next participant, that’s student L3, uses words from AWL by the percentage of 7.34. The words that are not included in any of the three lists are “anti-sociality, basketball, countryside, fiddle, internet, mobile, pollution, radiation, rural, sparse, strive, surfing, technologic, teenage.” These words make up 12.84% of the essay. The lexical richness of essay written by Student L2 can be accepted to be 4.4 % as this percentage value belongs to AWL. When it comes to words that are not included in any of the lists, they are “depressive, drug, devoid, emotional, headphones, mood, mutter, rhymes, romantic.” Lastly, student L1 who has the highest average score among the lowest students uses words from the list three by the percentage of 7.69. Words that are not included in any of the three lists have the percentage of 10.26. These words are; “boring, Instagram, internet, opera, rec-

ipe, video, YouTube.” After the individual analysis of the five students having the lowest English test score, their essays are combined as a single essay and the same analysis was done. The result of the analysis is shown below in the pie chart below.

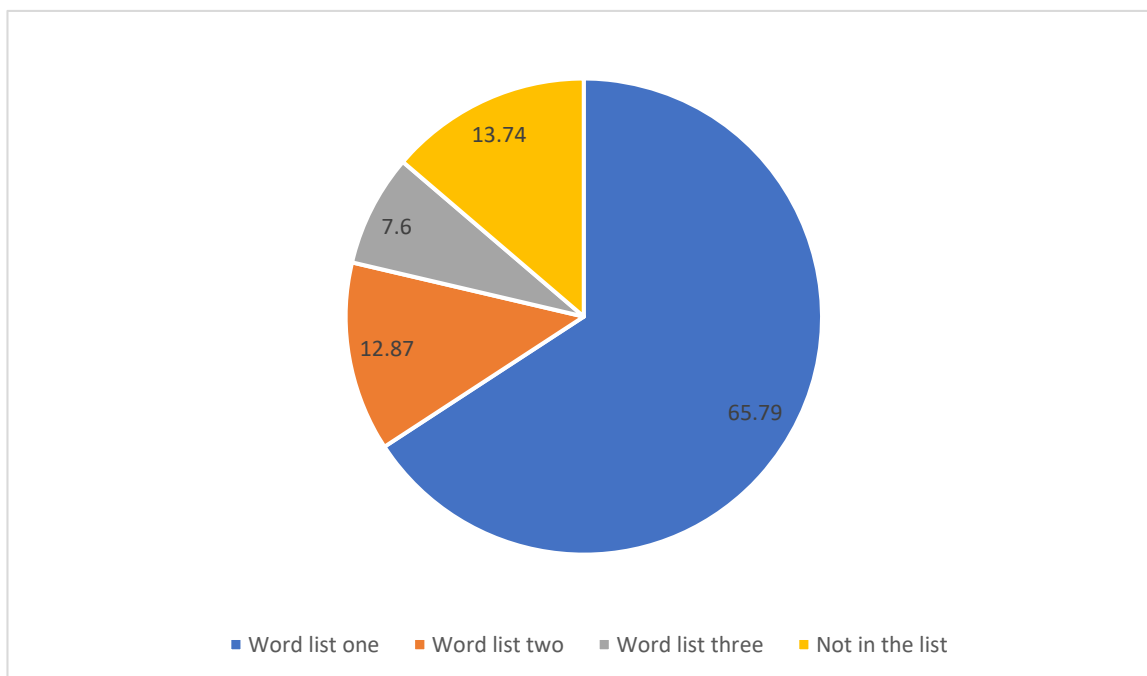


Figure 10. The total analysis of five participants with the lowest test score

When the essays of the students having the lowest test scores are combined as a single essay, it is seen that 65.79 % of the essays consist of words from word list one. Words that belong to word list two form 12.87 % of the essays. Finally, the essay contains 7.6 % of words from AWL and 13.74 % from words not in the list. The same procedure was applied to the participants having the highest test score. In the graphic below, word frequency lists belonging to the 5 participants with the highest average scores and 5 participants with the lowest average scores are shown.

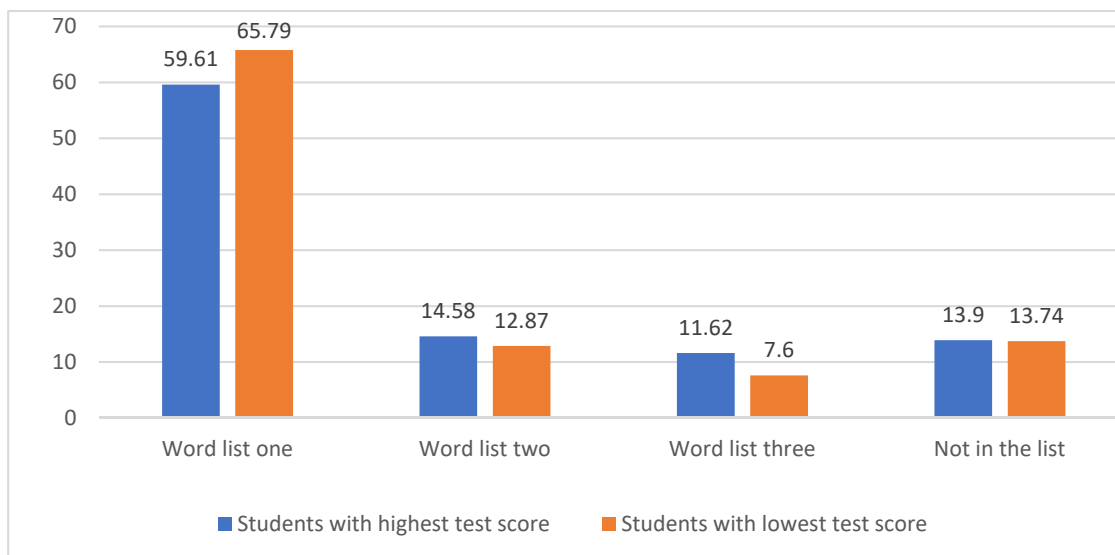


Figure 11. Comparison of the word frequency levels of the participants

As it is seen in Figure 11, essays of students with the highest scores contain words from the first 2000 most frequent words by the percentage of 74.19 (the total of 59.61 and 14.58) while essays written by the students having the lowest test scores include words from the most frequent 2000 words by the percentage of 78.66 (the total of 65.79 and 12.87). This finding seems to be acceptable as less successful students usually tend to use more frequent words from the first most common 2000 words. When the percentage of words that belong to AWL are examined, it is seen that students having a high average test score from the English test, uses 11.62 % of words from AWL whereas students with lowest scores are found to use 7.6 % of the words from AWL. Similarly, it is an expected finding that more successful students are supposed to use more words from the academic word list compared to the students with low English test scores.

Nevertheless, when analyzed and compared individually, students with the highest English test scores and students with the lowest English test scores seem to use different percentages of words belonging to different word lists. It is useful to list the scores of the ten students together with the percentage of the words that they use in order to make the comparison more transparent. The students are listed according to their English test scores, starting from the highest score to the lowest score.

Table 16

Score of 10 Students and the Percentage of the Words They Use Belonging to Different Word Lists

Students	English Test Score	Word list one	Word list two	Word list three	Not in the list
STUDENT H1	96.25	69.9	10.68	13.59	5.83
STUDENT H2	95	69.46	11.86	8.47	10.17
STUDENT H3	93.75	52.34	16.82	13.08	17.76
STUDENT H4	93.75	71.3	12.04	10.19	6.48
STUDENT H5	92.50	64.81	11.11	7.41	16.67
STUDENT L1	70	67.95	14.11	7.69	10.26
STUDENT L2	70	80.81	5.05	4.04	10.1
STUDENT L3	68.75	70.64	9.17	7.34	12.84
STUDENT L4	67.50	71.88	7.81	7.81	12.5
STUDENT L5	66.25	67.82	17.24	5.75	9.2

As it is seen, student H1 has the highest English exam score with 96.25 together with the highest percentage of words from AWL with 13.59%. Student H2 who has the second highest test score has a percentage of 8.47 from AWL. This percentage value is the lowest value among the 5 students with the highest scores. However, making a comparison among having the 5 highest test scores may not sound judicious as the average test scores of them are very close to each other. The same circumstance is valid for the students having the lowest test scores. One surprising point that should be noted down is the usage of words from the AWL by student H5. The average score of this participant is 92.50 and this average score is about 25 points higher than that of student L1, student L3, and student L4. However, the percentage of words from AWL is 7.41 which is almost a similar percentage value to that of student L1, student L3 and student L4 whose usage of words from word list there are successively 7.69%, 7.34%, and 7.81%. This finding is important since it demonstrates that individual analysis and comparison of the essays may not reveal a parallelism between the test scores and use of words from the academic word list.

In addition to the analysis of two groups of students with the highest and the lowest test scores as well as the individual analysis of 10 students, 50 students are grouped according to the average scores they get from the pilot English tests. In this sense, three different groups of participants were created. Group 1 is formed with participants having the lowest test scores whose scores range from 62.5 to 75, Group 2 con-

tains participants whose scores are between 76.25 and 87.5. Finally, Group 3 contains the highest scores which are between 88.75 and 100. Participants' essays that belong to these three groups are analyzed via RANGE and the following findings based on the percentages of types and tokens are depicted in Table 17 below. The analysis below belongs to Group 1.

Table 17

Word Frequency Analysis of Group 1

WORD LIST	TOKENS	TYPES	FAMILIES
One	1630/75.36	480/ 57.55	339
Two	228/10.54	134/ 16.07	109
Three	91 /4.21	64/ 7.67	56
Not in the lists	214 / 9.89	156/ 18.1	110
Total	2163	834	504

According to Table 17, essays written by the students in Group 1 contains 75.36 % of tokens from word list one. Percentage of types from word list one drops to 57.55 % and number of families that belong to level one is 339. Tokens that are from word list two are 10.54 % while types from the same word list make up 16.07 %. Number of word families that are included in word list two are 109. Percentage of tokens from AWL is 4.21 %. However, this percentage increases to 7.67 % for types. Word families that are included in AWL are 56. Finally, the percentage of tokens that are not included in any of the three lists is 9.89 and this percentage value increases to 18.1 for types. In total, essays in Group 1 include 2163 tokens, 834 types and 504 word families.

Table 18

Word Frequency Analysis of Group 2

WORD LIST	TOKENS	TYPES	FAMILIES
One	1941/ 74.83	555/ 55.39	388
Two	249 / 9.60	153 / 15.27	126
Three	174 / 6.71	123 / 12.28	101
Not in the lists	230 / 8.87	171 / 17.07	139
Total	2594	1002	615

The table above shows the distribution of word frequency lists that belong to essays in Group 2. According to the table percentage of tokens from word list one is

74.83. This percentage value decreases to 55.39 for types. Percentage of tokens from the word list two is 9.60 % and percentage of types from the same list is 15.27. Percentage of tokens that belong to AWL is 6.71 and this percentage value increases to 12.28 for types. Finally, the percentage of tokens that are not included in any of the three lists is 8.87 and this percentage value is 17.07 for types. 2594 tokens are used by the participants in group 2 in total. Number of types 1002 and lastly the number of word families are 615.

As seen in Table 19 below, essays in Group 3 include tokens from word list one by 67.72 percent. Types' percentage for the same word list is 54.55. Percentage of tokens from the word list two 12.67 and percentage of types for word list two is 16.52. Essays in Group 3 include tokens from AWL by 10.65 %. However, this percentage value increases slightly to 10.71 % for types. Percentage of tokens that do not belong to any of the three lists is 10.65. As for types, it is 18.22 %. The total number of tokens that are found in essays of group three are 2178. Number of types are 999 while number of word families is 618.

Table 19

Word Frequency Analysis of Group 3

WORD LIST	TOKENS	TYPES	FAMILIES
One	1475 / 67.72	545 / 54.55	392
Two	276 / 12.67	165 / 16.52	134
Three	195 / 10.65	107 / 10.71	92
Not in the lists	232 / 10.65	182 / 18.22	154
Total	2178	999	618

In addition to separate tables listed above, Figure 10 below demonstrates the distribution of types according to word levels belonging to the 3 groups.

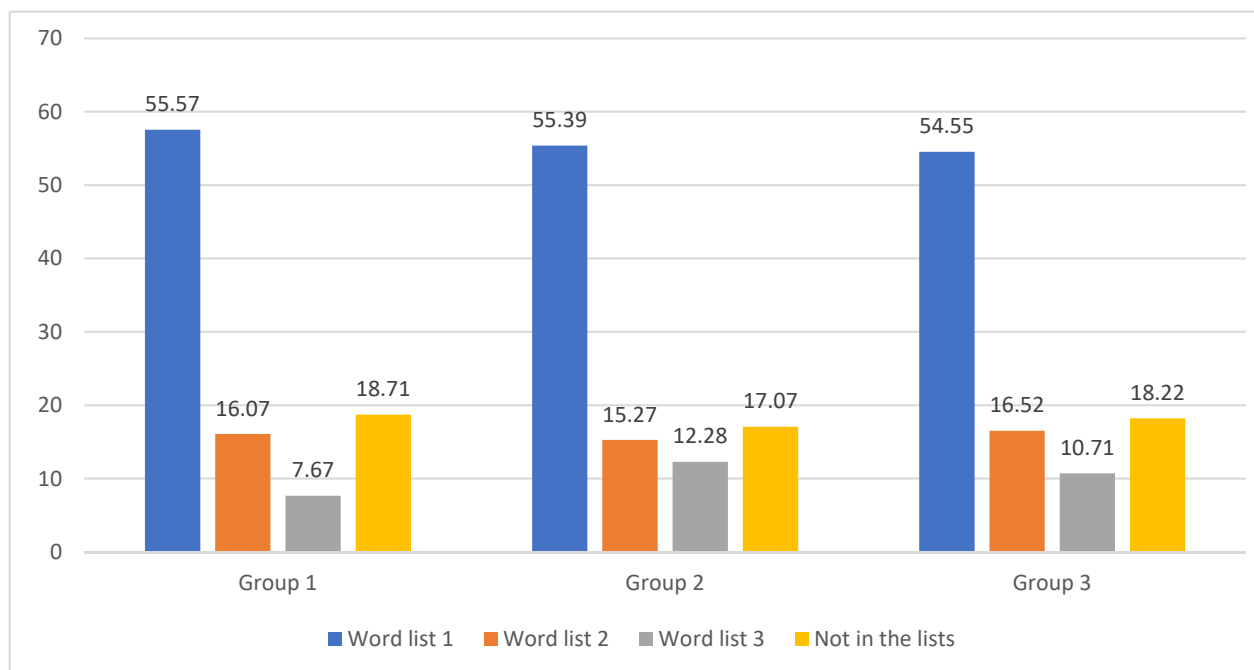


Figure 10. The distribution of types according to world levels belonging to the 3 groups

According to Figure 10, as expected, types that belong to word list level one were used by the students in Group 1 with the highest percentage value. Students in group 2 use words from word list one by the percentage of 55.39. Students in Group 3, that's the students with the highest test-scores, use types from the word list level one by the percentage of 54.55. This order of percentage values can be regarded as natural and expected since students with lower scores are supposed to use words from word list one more than the other two groups. However, when usage of words from the word list two is examined, it is observed that students having the highest average-test scores have the highest percentage value among these three groups. This finding does not correspond with the idea that the second most frequent 1000 words are used more by the students with lower academic success. Most importantly, the third list, that's to say the academic word list which is considered to reflect academic success of the participants most, is surprisingly used by students in Group 2 whose average scores are lower than group 3 but higher than Group 1. It can be concluded from this finding that frequency level of words in the essays written by the participants may not reflect their academic success in LYS-5 pilot test scores or the average test scores that the participants have may not always guarantee the usage of words that belong to academic word list.

4.5. Methods and Techniques That the Teachers Use in Order to Enhance Students' Lexical Richness

Methods and techniques that the teachers mainly use to enrich their students' lexical sets are of great importance in language teaching. A number of familiar techniques for teaching vocabulary have already been highlighted in chapter two. Some teachers prefer to use enthusiastic and creative techniques in vocabulary teaching while others just regard it as a burden and tell their students to memorize chunks of words from dictionaries. The question is what methods or authentic techniques teachers of participants of these study use, if they ever do so, in order to enhance students' lexical richness. To find the answer to the last research question, four teachers, that's two from Anchor Language Institution and two from Bright Language Institution are interviewed face to face. They are asked questions mainly regarding lexical richness and vocabulary teaching. Prior to the interview, they are given brief information about the study and some key terms of the study such as lexical richness, RANGE software, corpus linguistics and vocabulary teaching. Their answers are analyzed by using thematic analysis. The interviews began with collecting demographic information about the interviewees. As highlighted in the previous chapter, interviewees have different years of experience. Teresa has been teaching English for 3 years and she is a graduate of bachelor's degree. Hector has been working as an English teacher for 7 years. He has a bachelor's degree in ELT. Gerard has an experience of 5 years of teaching English. Finally, Oscar has the longest experience in English language teaching with 10 years. The transcription of voice recording has been analysed more than a few times in order not to miss any details and stick to the original interview.

The first question of the interview was inquiring which methods or vocabulary teaching techniques the interviewees use in order to enhance students' lexical richness or vocabulary set. Hector stated that:

After presenting the relevant vocabulary, we start doing some exercises such as writing short stories and dialogues, filling the blanks and solving tests. Furthermore, I ask them to prepare some activities and slideshows so as to make them use the relevant vocabulary. By doing these activities I think vocabulary teaching becomes more permanent...

When further asked if he gives students any task or assignment regarding vocabulary, he expressed that he asks the students to prepare slide shows and some activities about the vocabularies they have learned, yet he did not specify the activities.

Teresa stressed that she uses two methods which are Audio-Lingual Method and Communicative Language Teaching. When further asked which techniques, she uses she stated that she uses drills that belongs to Audio-Lingual method such as repetition of the vocabulary for correct pronunciation, replacement of vocabularies with each other.

Another interviewee Gerard stated that he uses flashcards and videos for vocabulary teaching. Although flashcards and videos may seem an effective way of teaching vocabulary, they are not instrumental in teaching abstract words and words with higher frequency levels. Oscar indicated his ideas as follows;

I was skeptical about asking students to keep a vocabulary notebook but over my studies, I have learned that it might be an effective way. For example, students are encouraged to draw a word if it is some kind of a tool or machine, match the word with a person or a thing in their life if the target word is an adjective, write down when they or someone they know did it if the word is a verb.

The second question of the interview tried to find answer to whether interviewees think there is a relationship between student's lexical richness and their English pilot test scores. Three of the interviewees claimed that there is a positive relationship between success in English tests and lexical richness in students' essays while one of them stated that there may not be any correlation negative or positive. Hector stated that lexical richness is a key factor in learning a foreign language. Without enough vocabulary knowledge, a learner cannot achieve the other skills (reading, writing, listening, speaking). Therefore, learners can be more successful in English tests if they have lexically richer words. Oscar indicated that lexical richness is correlated with overall success in L2 learning which in turn affects test scores of students. Gerard argued that there is a substantial correlation between lexical richness and students test scores by adding;

I think, there is a substantial correlation. Students who have lexical richness feel more secure in the class and have more self-confident while speaking, so it is

obviously seen from their quizzes and exam results. They perform better than the others.

However, Teresa highlighted that although students may have a high level of lexical richness and be good at memorizing words, they may not use these words in their essays or they may be getting high exam results from English tests.

The third interview question was “Do you think students’ level of vocabulary richness differs according to the vocabulary teaching methods or techniques used by the teacher?” To begin with, all the interviewees had a consensus on the idea that acquiring new vocabulary and enriching vocabulary set is primarily student’s own responsibility. However; Oscar, for example, stated that teachers can guide students in vocabulary learning and they can accelerate the process of students’ gaining vocabulary richness. Hector underlined that level of vocabulary richness of the students differs to a certain extent because every language learner’s motivation is the key point in the process. Teresa stated that teachers’ methods and techniques can develop students’ level of vocabulary richness to a great extent because via techniques and methods they use, teachers can show different and permanent ways of learning new vocabulary. Finally, the statements made by Gerard are given below:

Mostly, it differs but it is not only about the methods or techniques used by the teacher, but also about the students’ self-studies or concentration while learning. Teachers can use many different techniques or methods. Unless the students are physically and mentally ready to learn this new vocabulary, there is nothing to be done. I mean, first of all, the students should be ready to learn. So, both the teachers and the students should use the best time and method to learn.

The fourth question of the interview was what interviewees think to be the most influential reason for use of different vocabulary (more advanced or less advanced words) among the students. To Teresa, it is simply “student’s interest”. When further she is asked if student’s interest can be the only answer or not, she stated that the student’s ability to comprehend new vocabulary and use them actively is another key aspect. Hector explained the different use of vocabulary among the students as follows:

The reason is the different level of lexical richness that the students have. If a student has limited vocabulary knowledge, he/she will not be able to tell what he/she actually thinks or he/she will keep using the same vocabulary. On the other hand, if a student has enough vocabulary knowledge, he/she will use different words and will be able to tell his feelings better.

He highlighted the importance of lexical richness and regarded it as a key factor in different vocabulary use of students in their essays.

Similar to Teresa's answer, Gerard underlined the importance of interest of the learners. He pointed out two different interest. One of them is the learner's interest in the field of study. He stated that if the learner, for example, is interested in mechanics he/ she will have a lexical knowledge of mechanics. The second interest he highlighted is the learner's general interest in learning a foreign language. He put forward that if the student is eager to learn, s/he will be motivated and learn more different words. So, the usage will differ from one another.

The last interviewee Oscar explained his ideas as follows:

As Schmidt postulates, noticing is the key factor – I think. There needs to be explicit attention on the form and function of a word. Those with focal attention on vocabulary use will have better chances of acquiring it compared to those with peripheral attention. Therefore, students with explicit attention to the form and function of vocabulary tend to use more advanced vocabularies than students with peripheral attention.

As seen in the statements above, Oscar quoted Schmidt and put forward that the main reason behind the different vocabulary use is the explicit attention on the form and function of the vocabulary.

The last interview question was “how does rich vocabulary use affect students' writings? Teresa stated that with the use of rich vocabulary students can have a wider point of view which in turn helps them to reflect themselves and their ideas better in their writings. Hector said;

It affects to a great extent if he/she has enough knowledge of words. The students will feel more confident because they will be able to express their thoughts easi-

ly. However, it is just the opposite for the student who doesn't have enough vocabulary knowledge. He/she will feel uneasy and troubled."

To sum up, Teresa and Hector highlighted that rich vocabulary use means a better and easier expression of ideas in writings.

Oscar simply remarked that rich vocabulary use can help students succeed both in writing and speaking skills. He further added that students should learn and use chunks of words rather than single units. Lastly, Gerard stated that rich vocabulary use in writing is crucial because students should use different and rich vocabulary in order to support their ideas in their writings. When asked what is the negative point in not using a rich vocabulary, he expressed that in these circumstances, students may not be able to give the main idea of the topic correctly and efficiently, so the reader of the text may get bored while reading their essays because of the repetition of similar words.

CHAPTER V

CONCLUSION AND DISCUSSION

5.1. Introduction

In this chapter, first, an overall summary of the study will be presented. Then, a brief review of the findings in accordance with the research questions will be highlighted. Implications of the study for English language learning and teaching will also be emphasized. Finally, suggestions for possible further research will be stated.

5.2. Summary of the Study

First of all, this study set out to analyse lexical richness of the L2 students studying in Foreign language departments of high schools and attending to two different private language teaching institutions. The purpose and importance of the study together with its limitations and assumptions were stated in the introduction part. Research questions that we seek answers for were:

1. What is the lexical richness level in all the participants' essays?
2. What is the most frequent vocabulary used in all the essays written by the participants?
3. Is there a relationship between participants' LYS-5 pilot tests and lexical richness in their essays?
4. What do the teachers working with the participating learners do in order to enhance their lexical richness?

The significance of vocabulary learning and teaching were underlined in the literature review. Briefly stating, as Schmitt (2000) highlighted lexical knowledge is important for communication ability in target language as well as language acquisition. Moreover; vocabulary learning and teaching are often seen as a significant phase for foreign language learners because a limited vocabulary knowledge in foreign language hinders improvement of 4 skills that are reading, writing, speaking and listening. Nation (2011) emphasized the same point by stating that in English as a second language (ESL)

and English as a foreign language (EFL) learning lexical items have a major role in developing four skills.

Prerequisite definitions of terms for the current study as well as similar theoretical and empirical studies conducted in the literature were also summarized in the literature review part.

This study was based upon mixed method research which are quantitative, qualitative and comparative research. For quantitative and comparative data analysis RANGE AND FREQUENCY software were used. For qualitative research method thematic analysis were used.

Finally, Findings and results of the study were listed one by the according to the research questions listed.

5.3. Discussion of Findings

Discussion and review of the quantitative and qualitative findings of the study is summarized in this section. First, the research questions that are answered via quantitative and comparative research method will briefly be highlighted. Then, research questions answered via qualitative research method, that's semi-structured interviews will be stated.

The answer to the first research question "what is the lexical richness level in all the participants' essays?" was found by applying RANGE software. Findings of the first research question showed that when stop list is excluded from the analysis, 50 participants use running words from the most frequent 1000 words by the percentage of 87.92. The percentage of tokens that belong to the second most frequent 1000 words is 4.95. The percentage of academic word list is only 3.05. Finally, words that are not included in any of the three lists is 4,08 (See table 7). However, when the stop list is applied to the analysis, the total number of words decreases almost by half which proves that most of the functional words are included in the first 1000 most frequent words. As for the frequency levels, the percentage of tokens that belong to word list one regressed to 73.06, the percentage of word list two increased to 11.05. The percentage of AWL decreased to 6.76 % (See Table 8). As underlined in the findings chapter, in both circumstances that's with or without applying stop list, the percentage value of word list three, that's the academic word list found to be indistinctly insufficient because according to Nation (2000) such vocabulary, that's academic vocabulary word list three typi-

cally covers around 8.5 % of the running words in an academic text thus it is a vital learning goal for students having academic purposes. Similarly, when word list one and word list two examined, it was observed that the percentage of running words from these two lists made up 92.87 %. As stated in literature review chapter, Kwon (2009) found that the percentage of tokens from the most frequent 2000 words observed to be 83 % in the texts included in time magazine. For this reason, this finding again demonstrated the participants' high use of words from the first 2000 most frequent words.

There were also words which did not belong to any of the lists (See Table 9). Some of these words might reflect lexical richness since they belong to a higher level of word list while some of them are proper names or country names.

The second research question was "What is the most frequent word found in all the essays written by the participants?" Two different tools were used in order to find an answer to the second research question. The first analysis was carried out by using FREQUENCY. As stated in methodology chapter FREQUENCY is used to uncover a frequency list of all the words in a text file. Hence, the findings gathered via FREQUENCY revealed that the most frequently used word by all the participants was "to" which is a functional word, it is used 501 times (See Table 10). It forms 3.24 % of all the texts. Other most commonly used 6 words are again functional words which are respectively "the, is, I, in, and, for,". Eventually, the seventh word that is not a functional word is "people". It is used 196 times.

Second analysis done to find the most commonly used words was carried out by RANGE (See Table 11). RANGE software has the advantage of excluding functional words however, it does not provide the percentage of words. According to the analysis done by RANGE software, the most frequently used words are, respectively, "people, music, life, want, think, so, big and city". All of these words belong to word list one. Thus, this finding demonstrated that participants were more familiar with words that belong to word list one which went parallel with the finding of first research question as both revealed participants use of high frequent words.

The first finding also corresponded with the result of Bozdağ's study since he found that Turkish learners have a limited repertoire of academic verbs and they had tendency of underusing academic verbs. Similarly, participants in this study had tendency of using function words and words from word list one and two in high numbers while their use of words from AWL observed to be few.

The third research question aimed at finding out whether there is a relationship between participants' average English test scores and their lexical richness levels. To this end, first of all, 10 participants' essays with the highest average pilot test scores and with the lowest average pilot test scores were analysed. When these students' essays were grouped into two as the highest and the lowest test scores and analysed, it was found out that students with highest average test scores used fewer words from the most frequent 2000 words while they used more words from the academic word list compared to the students with the lowest test scores (See Figure 7 & Figure 9) However, when individual analysis was made among these 10 students, it was revealed that some of the students who have lower average test scores used a higher percentage of words from the third list than one of the students with the highest test score (See Table 16) This finding provides evidence that learners with a higher average test score may not necessarily use a higher percentage of word from the word list three. Finally, all 50 participants are divided into 3 groups according to the average test scores they have and a final analysis was made among these 3 groups (See Figure 10). The use of words from the most frequent 1000 words found out to be highest in the essays of Group 1 students with the percentage of 57.55. Group 1 was followed by Group 2 and Group 3 percentages, respectively 55.39 and 54.55. As students with lower average test scores are generally known to use words from the most frequent 1000 words, this finding was not considered to be surprising. However, when it comes to the percentage of word list two, contrary to expectations, Group 3, the group embodying students with the highest scores, has the highest percentage of words belonging to word list 2. The last but not the least, percentage distribution of academic word list, that's word list three, is highest in Group 2 who has students with lower average scores compared to Group 3. Taking into account all of these findings, it might be asserted that essays written by the participants may not reflect their academic success in English test scores or the average test scores that the participants have may not always guarantee the usage of words that belong to academic word list, namely their having high level of lexical richness.

Yet, this finding seemed to contradict with the finding of a study conducted by Laufer and Nation (1995). In their research, they compared the LFP of learners with their achievement on standard vocabulary level test. The research showed that there is a correlation between performance on vocabulary tests and the ration of low and high frequency words in students' free-written texts of the learners. This contradiction might be because of the nature of the tests in the current study and vocabulary level tests. It

might also be connected with the participants' language level and different educational background.

The last research question aimed at discovering methods and techniques that teachers of participants use in order to enhance their students' lexical richness level. Within this scope, four teachers were interviewed and they were asked five questions. After getting information about their years of teaching experience, teachers were asked which methods or vocabulary teaching techniques they use in order to enhance their students' lexical richness. Participants indicated that they use techniques such as asking their students to write short stories about the new vocabulary they have learnt, multiple choice tests of vocabulary, repetition and pronunciation drills, flashcards and videos, keeping a vocabulary notebook, using the words in context. Actually, some of these techniques such as repetition and pronunciation drills that belong to ALM may sound traditional however providing the words in the context, using videos are recent techniques in vocabulary teaching. Participants did not state to use providing Turkish translation equivalent of words however, in his thesis, Yükselir (2008) found that providing Turkish translation equivalent together with using illustrations and using word in context techniques can be effective on learning L2 vocabulary in the mental lexicon of the learners

Next question was asked to find out whether teachers thought there was a relationship between their student's lexical richness and score of their English pilot tests. Three of the interviewees claimed that there is a positive relationship between success in English tests and lexical richness in students' essays while one of them stated that there may not be any correlation, negative or positive. The study showed there is a positive correlation between student's lexical richness and score of their English pilot tests to a large extent. However, there may also be some expectations such as a student with lower score may outperform a student with higher score in terms of lexical richness. (See Table 16). One interviewee stated that students may be good at memorising vocabulary but cannot use these vocabularies in their essays productively. This statement actually underlines the difference between receptive and productive vocabulary highlighted in the literature review.

For the next interview question, that is "Do you think students' level of vocabulary richness differ according to the vocabulary teaching methods or techniques used by the teacher?" Teachers indicated that methods or techniques have an important role in enhancing students' lexical richness, however, it is the student's own responsibility to

improve and enrich their vocabulary set. This idea showed that teachers think learners should take responsibility for their own learning process rather than relying on methods or techniques for vocabulary learning.

Two of the teachers indicated that behind the use of different vocabulary by the students is students' interests while one of them stated that the reason behind the use of different vocabulary is students' level of different lexical richness. Additionally, another teacher asserted that differences in the use of vocabulary by the students can be linked with students' explicit attention to the form and function of the vocabulary. When lexical richness analysis of 10 students were done individually, it was found out that though some students share same average test score, they use different percentages of words from the same word list. So, it can be inferred that these students have different sense of responsibility and interest towards their own learning process as teachers indicated.

Finally, all of the teachers agreed that rich vocabulary help students produce better quality essays because students having a wide range of rich vocabulary can express their ideas effectively. Therefore, it can be said that all of the teachers are aware of the importance of rich vocabulary in essay writing.

5.4. Pedagogical Implications of the Study

The findings of this study show that first of all students and teachers should realize that usage of academic word list of the students should be higher than what was found because these students are at their last year of high schools and they aim to study at departments of universities such as English Language Teaching, English Language and Literature, Translation and Interpreting. In addition to the English classes they get in their school, they also take extra education in the private language teaching institutions. For this reason, being so much exposed to English classes should yield richer lexical knowledge.

Secondly, teachers and students should be aware that having a high average score of English pilot tests does not necessarily assure high usage of words from the academic word lists in their free written essays. For this reason, they should keep it in mind that getting high scores in pilot English test may not mean their having high proficiency in terms of Academic words. One reason for this may be that the difference between students' receptive and productive vocabulary level. In other words, when stu-

dents encounter a word in English test, they may understand its meaning. However, when it comes to use the same word in writing they may not recall it or they may not use it in productive phase. This point actually stresses the notion of what knowing a word really is.

Another point that should be highlighted is the nature of LYS-5 foreign language exam. This exam actually measures only reading and receptive vocabulary of the learners and lacks to measure listening, writing and speaking skills. What's more according the findings of third research questions, it may be argued that LYS-5 cannot classify students according to their lexical richness level. So, it may be wise to think on a better and comprehensive language exam which can measure four skills.

Implications of qualitative findings are that Although interviewees emphasized that increasing lexical richness is mainly the responsibility of learners themselves, still, they should make use of planned, systematic methods and techniques in order to facilitate this process and guide the students.

5.5. Suggestions for Further Research

The collected corpora for this study were analysed by using two different analysing tools that's RANGE and FREQUENCY. Other analyses tools such as Voc-d, TTR or measure of textual lexical diversity (MLTD) developed by McCarty (2005) can be used for further studies similar to current study.

Another suggestion is that lexical richness levels of the words that are included in University English tests can also be analysed by using RANGE software. English course books determined for students in high schools can also be analysed by RANGE in order to find out their coverage of vocabulary word lists.

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APPENDICIES

Appendix A. Topics of the essays taken from the sample writing essays of TOEFL examinations

Sevgili öğrenciler,

Çukurova Üniversitesi Sosyal Bilimler Enstitüsü İngiliz Dili eğitimi alanında yaptığım Yüksek Lisans tez çalışmam için sizlerin yardımına ihtiyaç duymaktayım. Yaptığım çalışmada, Liselerin Yabancı dil bölümlerinde öğrenim görmekte olan öğrencilerin sahip olduğu sözcük zenginliğini ve yazdıkları İngilizce kompozisyonlardaki kullandıkları sözcüklerin seviyelerini ölçmeyi amaçlamaktayım. Bu amaçla sizlerin aşağıda belirtilen başlıklardan istediğiniz bir tanesi seçip, en az 300 kelimelik bir kompozisyon yazmanızı rica etmekteyim. Seçtiğiniz ilk konu başlığında en az 300 kelime yazamazsanız ikinci bir konu başlığı seçebilirsiniz. Bu çalışma dersane veya okul notlarınızı hiçbir şekilde etkilemeyecektir. Vermiş olduğunuz bilgiler sadece bu araştırma için kullanılacak ve farklı amaçlar için kullanılmayacaktır.

Vakit ayırdığınız teşekkür eder, hayatınızın her döneminde başarılar dilerim.

Cinsiyet:..... Anadil:.....Sınıf:.....

Yaş:.....YDS deneme sınavı net ortala-

ması:.....

1. It is sometimes said that borrowing money from a friend can harm or damage the friendship. Do you agree? Why or why not? Use reasons and specific examples to explain your answer.

(Arkadaşınızdan borç para almanın genelde arkadaşlığa zarar verdiği veya bozduğu söylenir. Bu fikre katılıyor musunuz? Neden? Cevabınızı açıklamak için sebepler ortaya koyunuz ve örnekler veriniz)

2. When students move to a new school, they sometimes face problems. How can schools help these students with their problems? Use specific reasons and examples to explain your answer

(Öğrenciler yeni okula nakledildiğinde bazen sorunlarla karşılaşmaktadırlar. Okullar öğrencilere bu sorunların çözümünde nasıl yardımcı olabilir? Cevabınızı açıklamak için sebepler ortaya koyunuz ve örnekler veriniz)

3. Some students prefer to study alone. Others prefer to study with a group of students. Which do you prefer? Use specific reasons and examples to support your answer.
(Bazı öğrenciler tek başlarına çalışmayı tercih eder. Bazıları ise grup çalışmasını tercih eder. Hangisini tercih edersiniz? Cevabınızı desteklemek için belirli nedenler ve örnekler kullanınız)
4. People listen to music for different reasons and at different times. Why is music important to many people? Use specific reasons and examples to support your choice.
(İnsanlar farklı zamanlarda farklı sebeplerden dolayı müzik dinler. Müzik birçok insan için neden önemlidir? Seçiminizi desteklemek için belirli nedenler ve örnekler kullanınız)
5. Many students choose to attend schools or universities outside their hometown. Why do you think students choose this? Use specific reasons and details to explain your answer.
(çoğu öğrenci yaşadığı şehrin dışında bir yerde üniversitede okumayı tercih ediyor. Sizce, neden tercih ediyorlar? Cevabınızı desteklemek için belirli nedenler ve örnekler kullanınız)
6. Your school has enough money to purchase either computer for students or books for the library. Which should your school choose to buy- computers or books? Use specific reasons and examples to support your recommendation.
(Okulunuzun bir miktar parası var ve bu parayla ya öğrencilere bilgisayar ya da kütüphane için kitap alınacaktır. Sizce okulunuz hangisini satın almalıdır? Bilgisayar mı kitap mı? Önerinizi desteklemek için sebepler ortaya koyarak örnekler sununuz.)
7. You have the opportunity to visit a foreign country for two weeks. Which country would you like to visit? Use specific reasons and details to explain your choice.
(Yabancı bir ülkeyi iki haftalığına ziyaret etme fırsatınız vardır. Hangi ülkeyi ziyaret ederdiniz? Seçiminizi açıklamak için nedenler ve ayrıntılar sununuz.)
8. If you could ask a famous person one question, what would you ask? Why? Use specific reasons and details to support your answer

(Ünlü birisine bir soru sorabilseydiniz ne sorardınız? Cevabınızı desteklemek için belirli sebepler ve ayrıntılar kullanınız.)

9. If you could travel back in time to meet a famous person from history, what person would you like to meet? Use specific reasons and examples to support your choice.

(Zamanda geçmişe seyahat edebilseydiniz, Hangi ünlü/ bilindik kişiyle konuşmak isterdiniz? Seçiminizi desteklemek için nedenler ve örnekler sununuz)

10. What discovery in the last 100 years has been most beneficial for people in your country? Use specific reasons and examples to support your choice.

(Son yüz yıl içinde yapılan hangi icat ülkedeki insanlar için en faydalı icat olmuştur? Seçiminizi desteklemek için nedenler ve örnekler sununuz)

11. A foreign visitor has only one day to spend in your city. Where should this visitor go on that day? Why? Use specific reasons and details to support your choice.

(Yabancı birinin şehrinizde gezmek için 1 günlük süresi vardır. Bu ziyaretçi o günde nerelere gitmelidir? Neden? Seçiminizi desteklemek için nedenler ve örnekler sununuz)

12. Many teachers assign homework to students every day. Do you think that daily homework is necessary for students? Use specific reasons and details to support your answer.

(Bazı öğretmenler öğrencilerine hergün ödev vermektedir. Sizce günlük ödev öğrenciler için gerekli midir? Cevabınızı desteklemek için nedenler ve örnekler sununuz)


Appendix B. List of function words included in the stop list

a	didn't	have	next
about	do	haven't	nine
above	does	having	nineteen
across	doesn't	he	nineteenth
after	doing	he'd	ninetieth
against	don't	he'll	ninety
albeit	done	he's	ninth
all	down	her	no
along	during	hers	nobody
although	each	herself	none
am	eight	him	noone
among	eighteen	himself	nor
amongst	eighteenth	his	not
an	eighth	home	nothing
and	eightieth	how	notwithstanding
another	eighty	however	of
any	either	hundred	off
anybody	eleven	hundredth	on
anyone	eleventh	I	once
anything	enough	I'd	one
are	every	I'll	onto
aren't	everybody	I'm	or
around	everyone	I've	other
as	everything	if	others
aside	except	in	ought
at	few	into	oughtn't
away	fewer	is	our
back	fifteen	isn't	ours
be	fifteenth	it	ourselves
because	fifth	it's	out
been	fiftieth	its	over

before	fifty	itself	per
behind	first	last	plus
being	five	less	round
below	for	like	second
beneath	forth	many	seven
beside	fortieth	may	seventeen
besides	forty	me	seventeenth
between	four	might	seventh
beyond	fourteen	million	seventieth
billion	fourteenth	millionth	seventy
billionth	fourth	mine	several
both	from	minus	shall
but	get	more	shan't
by	gets	most	she
can	getting	much	she'd
can't	got	must	she'll
certain	had	mustn't	she's
could	hadn't	my	should
couldn't	half	myself	shouldn't
despite	has	near	since
did	hasn't	neither	six
sixteen	they'd	unless	whoever
sixteenth	they'll	unlike	whom
sixth	they're	until	whose
sixtieth	third	up	why
sixty	thirteen	upon	will
some	thirteenth	us	with
somebody	thirtieth	via	within
someone	thirty	was	without
something	this	wasn't	won't
still	those	we	would
such	though	we'd	wouldn't
ten	thousand	we'll	you

tenth	thousandth	we're	you'd
than	three	we've	you'll
that	thrice	were	you're
that's	through	weren't	you've
the	throughout	what	your
their	till	whatever	yours
theirs	to	when	yourself
them	towards	whence	yourselves
themselves	twelfth	whenever	zero
there	twelve	where	which
these	twentieth	whereas	while
they	twenty	wherever	whither
two	twice	underneath	who

Appendix C. Interview Questions

1. Which methods or vocabulary teaching techniques do you use in order to enhance your students' lexical richness (Vocabulary set)?
 2. In your opinion, is there a positive correlation between student's lexical richness and their achievement in English? Why?
 3. Do you think students' level of vocabulary richness differ according to the vocabulary teaching methods or techniques used by the teacher?
 4. What do you think to be some reasons behind differences in vocabulary use (i.e. more advanced/less advanced) among students?
 5. In your opinion, how does vocabulary use affect students' writing?
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CURRICULUM VITAE

PERSONAL DETAILS

Name / Surname : Özhan HARMAOĞLU
Place of Birth : ANTAKYA
Date of Birth : 10. 02. 1988
E-mail : ozhanharmaoglu@gmail.com
Foreign Language : English

EDUCATIONAL BACKGROUND

2014 – 2019 : MA, Çukurova University, Institute of Social Sciences, English Language Teaching, ADANA
2006-2010 : BA, Anadolu University, Faculty of Education, English Language Teaching, ESKİŞEHİR
2002-2006 : Hüseyin Özbuğday High School, HATAY

WORK EXPERIENCE

2012- Present : English Language Instructor
Kilis 7 Aralık University, School of Foreign Languages
2012- 2012 : English Language Teacher
Ortaklı Elementary School, GAZİANTEP
2011- 2012 : English Language Teacher
Serinyol Uzunaliç Elementary School, HATAY