

*In the Name of God
the Compassionate
the Merciful*



**University of Isfahan
Faculty of Foreign Languages
Department of English**

M.A. Thesis

**The Effect of the Utilization of Electronic Dictionaries on Depth
and Breadth of Vocabulary Knowledge:
A Case of Iranian EFL Learners**

**Supervisor:
Dr. Mansoor Tavakoli**

**Advisor:
Dr. Ahmad Moinzadeh**

**By:
Edna Yegani**

November 2009

کلیه حقوق مادی مترتب بر نتایج مطالعات، ابتکارات و
نوآوری های ناشی از تحقیق موضوع این پایان نامه
متعلق به دانشگاه اصفهان است.



دانشگاه اصفهان
دانشکده زبان های خارجی
گروه زبان انگلیسی

پایان نامه کارشناسی ارشد رشته ی آموزش زبان انگلیسی
خانم ادنا یگانی تحت عنوان

ارزیابی تاثیر به کارگیری فرهنگ لغت های الکترونیکی بر روی عمق و
گسترش دامنه لغات در فراگیران زبان انگلیسی در ایران

در تاریخ ۱۳۸۸/۷/۱۹ توسط هیأت داوران زیر بررسی و با درجه عالی به تصویب نهایی رسید.

امضاء

۱- استاد راهنمای پایان نامه دکتر منصور توکلی با مرتبه علمی استادیار

امضاء

۲- استاد مشاور پایان نامه دکتر احمد معین زاده با مرتبه علمی استادیار

امضاء

۳- استاد داور داخل گروه دکتر زهره کسائیان با مرتبه علمی استادیار

امضاء

۴- استاد داور خارج از گروه دکتر بتول علی نژاد با مرتبه علمی استادیار

امضای مدیر گروه

Acknowledgements

First and foremost, I would like to express my sincere gratitude to my supervisor, Dr. Mansoor Tavakoli, who generously devoted his time to helping successfully finish this project. It was his invaluable suggestions and constant encouragement which made this study possible. He is a wonderful person as he always provided me with helpful advice when I encountered problems in other aspects of my life.

My heartfelt thanks and appreciation also go to my advisor, Dr. Moinzadeh, whose help and support was not confined to the stages of the completion of the thesis. He always welcomed me when I encountered problems not only in my education, but also in my life.

I would like to thank all the faculty members at the English Department at the University of Isfahan especially Dr. Vahid and Dr. Moinzadeh who let me use the time of their classes for the administration of the tests through data collection procedure.

I really appreciate the participation of the senior and junior English students of the University of Isfahan in this project.

I am also grateful to Mr. Taheri for his skillful assistance with preparing the final printable draft of the project, and also my cousins, Fereshteh and Negar, and my friends for their encouragement and support.

Finally, my genuine and deepest thanks go to my beloved parents to whom I owe everything, and my lovely brothers, Davood and Mohamad.

*To my wonderful parents,
Vida & Parviz,
for their incredible love and never-ending
support*

Abstract

The current study is an attempt to investigate the effect of the utilization of dictionaries, one of the important vocabulary learning aids, on vocabulary knowledge in a group of EFL learners. The focus of this research is on electronic dictionaries vs. paperback dictionaries and their effect on the development of breadth and depth of vocabulary knowledge. Firstly, this research intends to examine whether using electronic dictionaries has any special effect on size and then secondly, on depth of vocabulary knowledge. Moreover, the study makes an effort to investigate whether there is any significant difference between depth and breadth of vocabulary knowledge in relation to users of electronic dictionaries and then, non-users of electronic dictionaries. And finally, it investigates EFL learners' preferences of use and attitudes toward electronic dictionaries.

The participants of the study, in the first stage, were 150 senior and junior students majoring in English Language Translation and Literature at the University of Isfahan. In the first stage, a questionnaire was distributed among them in order to discriminate users from non-users and in the second stage, 30 users and 30 non-users were randomly selected among them. The questionnaire was also used in order to collect information about the participants' preferences of use and attitudes toward using electronic dictionaries. To collect the relevant data, two tests measuring breadth and depth of vocabulary knowledge, the Vocabulary Levels Test and the Word-Associates Test, were administered to both groups of users and non-users.

As a result of data analysis, the findings indicated that the utilization of electronic dictionaries has significant effect on the improvement of breadth of vocabulary knowledge but it does not have any significant effects on the improvement of depth of vocabulary knowledge. Analysis also reveals that there is significant difference between depth and breadth of vocabulary knowledge in relation to users and also non-users of electronic dictionaries. In other words, for both users and non-users, breadth of vocabulary knowledge is higher than depth of vocabulary knowledge but this difference is higher in the user group. Regarding the attitudes of the students and their preferences of use, the analysis shows that most of the learners prefer to use electronic dictionaries because of their great speed, ease of use, and portability. But they mostly complain about electronic dictionaries' lack of sufficient information.

Keywords: Electronic dictionary, paper-back dictionary, depth of vocabulary knowledge, breadth of vocabulary knowledge, EFL.

Table of Contents

Title	Page
Chapter One: Introduction	
1.1. Background to the study	1
1.2. Statement of the problem	5
1.3. Research Questions and Hypotheses	9
1.4. Purpose and Significance of the Study	10
1.5. Definition of Key Terms	11
1.5.1. Breadth of Vocabulary Knowledge.....	11
1.5.2. Depth of Vocabulary Knowledge.....	12
1.5.3. Electronic Dictionaries	12
1.5.4. Paperback Dictionaries.....	13
1.5.5. EFL (English as a Foreign Language	13
1.6. Outline and Organization of the Study	13
Chapter Two: Review of Literature	
2.1. Introduction	15
2.2. Lexical Knowledge and Vocabulary Ability	17
2.2.1. Vocabulary size: How much vocabulary does a second or foreign language learner need.....	18
2.2.1.1. How many words are there in English.....	18
2.2.1.2. How many words do native speakers know.....	19
2.2.1.3. How many words does a language user need to know to do things	20

Title	Page
2.2.2. Receptive vs. Productive Vocabulary	21
2.2.3. Breadth and Depth of Vocabulary Knowledge.....	22
2.2.3.1. Assessment tools for testing breadth and dept Of vocabulary knowledge	23
2.2.3.2. The relationship between depth and breadth of vocabulary knowledge	24
2.3. Vocabulary Acquisition and Learning Strategies	26
2.3.1. Processes of Vocabulary Acquisition – Implicitvs. Explicit Learning	26
2.3.2. Language learning strategies.....	28
2.4. Vocabulary Learning Strategies.....	29
2.4.1. Guessing From Context (GFC).....	30
2.4.2. Using dictionary	32
2.5. Dictionaries	34
2.5.1. A short overview of major types of dictionaries.....	36
2.5.2. CALL and Electronic Dictionaries	40
2.5.3. Electronic vs. Paperback Dictionaries	47
2.6. Summary	51

Chapter Three: Methodology

3.1. Introduction	52
3.2. Participants	53
3.3. Materials.....	54
3.3.1. Vocabulary Levels Test (VLT)	55
3.3.2. Word-Associates Test (WAT).....	56
3.3.3. Questionnaire	57

3.4. Procedures	57
Title	Page
	b
3.5. Data Analysis	58
 Chapter Four: Results	
4.1. Introduction	60
4.2. Findings.....	61
4.2.1. The Effect of Electronic Dictionaries on Breadth of Vocabulary Knowledge.....	61
4.2.2. The Effect of Electronic Dictionaries on depth of Vocabulary Knowledge.....	64
4.2.3. The difference between depth and breadth of vocabulary knowledge in user group	66
4.2.4. The difference between depth and breadth of vocabulary knowledge in non-user group.....	69
4.2.5. EFL learners' preferences of use and attitudes toward using electronic dictionaries.....	72
4.3. Summary and Findings	73
 Chapter Five: Discussion and Implications	
5.1. Introduction	75
5.2. Restatement of the Problem	76
5.3. Discussion of the Findings.....	77
5.4. Conclusions	84

5.5. Pedagogical Implications	
5.6. Limitations of the Study	
Title	Page
5.7. Suggestions for Further Research c	88
Appendices	90
References	104

List of Tables

Title	Page
Table 4.1. Group Statistics for users and non-users regarding breadth ..	62
Table 4.2. Descriptive Statistics of Independent Sample Test on breadth test	63
Table 4.3. Group Statistics for users and non-users regarding depth	65
Table 4.4. Descriptive Statistics of Independent Sample Test on depth test	65
Table 4.5. The percentage scores of breadth test for users	67
Table 4.6. The percentage scores of depth test for users	67
Tables 4.7. Paired Sample Statistics for users	68
Table 4.8. Paired Samples Correlations for users	68
Table 4.9. Descriptive statistics of Paired Sample Test for users	68
Table 4.10. The percentage scores of depth test for non-users	70
Table 4.11. The percentage scores of breadth test for non-users	70
Tables 4.12. Paired Sample Statistics for non-users	71
Tables 4.13. Paired Sample Correlations for non-users	71
Table 4.14. Descriptive statistics of Paired Sample Test for non-users ..	72
Table 5.1. purpose of using electronic dictionaries	80
Table 5.2. The participants' ideas about electronic dictionaries	82

List of Figures

Title	Page
Figure 3.1. The visual representation of the number of users and non-users	54
Figure 4.1. Visual representation of users and non-users' breadth means	62
Figure 4.2. Visual representation of users and non-users' depth means .	64
Figure 5.1. The process of finding the meaning of an unknown word in a text using electronic and paper dictionaries.....	79

Chapter One

Introduction

1.1. Background to the study

Vocabulary is central to language and is of great significance to language learners. Words are the building blocks of a language since they label objects, actions, ideas without which people cannot convey the intended meaning. The prominent role of vocabulary knowledge in second or foreign language learning has been recently recognized by theorists and researchers in the field. Accordingly, numerous types of approaches, techniques, exercises and practice have been introduced into the field to teach vocabulary (Hatch & Brown, 1995). It has been suggested that teaching vocabulary should not only consist of teaching specific words but also aim at equipping learners with strategies necessary to expand their vocabulary knowledge (Hulstijn, 1993, cited in Morin & Goebel, 2001).

Word knowledge is an essential component of communicative competence (Seal, 1991), and it is important for both production and comprehension in a foreign language. Knowing a word involves knowing:

- A great deal about its general frequency of use, syntactic and situational limitations on its use,
- Its underlying form and the forms that can be derived from it,
- The network of its semantic features and,
- The various meanings associated with the item. (Richards, 1976)

Knowing a word is also defined as knowing its spelling, pronunciation, collocations (i.e. words as they co-occur with other words), and appropriateness (Nation, 1990). Therefore, lexical competence is far more than the ability to define a given number of words and covers a wide range of knowledge which in turn requires a variety of strategies to gain the knowledge. Foreign language learners may then use various strategies to acquire the target language word knowledge.

Vocabulary as "the building block of language" (Schmitt, Schmitt, & Clapham, 2001, p.53), is considered by some to be the single most important aspect of foreign language learning (Knight, 1994). Learners also regard learning vocabulary as one of the most important and at the same time difficult aspects of learning a language (Laufer, 1986). Yet, for a long time, this aspect of language research was largely neglected (Harlech-Jones, 1983; Laufer, 1986; Read, 1988). According to Laufer (1986), the majority of researchers studied grammar and phonology as these were more amenable to making generalizations in contrast with vocabulary, which does not lend itself so easily to making abstractions and generalizations. However, there has recently been a renewed emphasis on the importance of lexical knowledge and vocabulary acquisition research (Herman, 2003; Jones, 1995; Laufer, 1986; Read, 1988). Bachman (2000) speaks of the revival of vocabulary acquisition research and is hopeful that this will result in "new insights into the nature of vocabulary and a broadened view of its role in language use" (p. 9). In fact, there have been so many researchers turning their attention to vocabulary that according to Zahar, Cobb and Spada (2001), this line of research is no longer the "neglected area" that Meara (1980) spoke of. Research on vocabulary acquisition involves having an understanding of what 'knowing a word' means, and then based on the definition of the concept of word one can use appropriate tools and procedures to measure vocabulary knowledge (Bogaard, 2000).

Vocabulary knowledge is not "an all-or-nothing phenomenon" (Laufer, 1998; Laufer & Paribakht, 1998), but involves degrees of knowledge (Meara, 1990). Lexical knowledge is "a continuum consisting of several levels and dimensions of knowledge," from just a familiarity with the word to the ability to use it correctly in free production (Laufer & Paribakht, 1998, p.367) Cronbach (1942, as cited in Bogaard, 2001, p. 491), refers to five aspects of vocabulary knowledge: "generalization (knowing the definition), application (knowledge about use), breadth of meaning (knowing different senses of a word), precision of meaning (knowing how to use the word in different situations), and availability (knowing how to use the word productively)." Nation (1990) proposed four aspects of vocabulary knowledge: form (spoken, written), position (grammatical, collocations), function (frequency, appropriateness), and meaning (conceptual, associative) (cited in Laufer & Paribakht, 1998). Laufer's proposal for the different dimensions of lexical knowledge includes "form (phonological, graphic, morphological), syntactic behavior, meaning (referential, associative, pragmatic) and relations with other words (paradigmatic and syntagmatic)" (Laufer & Paribakht, 1998, p. 368). However, two particular aspects of vocabulary knowledge discussed in the research literature are especially relevant to the present study: breadth and depth. Although these constructs have been defined in different ways (e.g., Cobb, 1999; Nassaji, 2004; Qian, 1999; Zareva, 2005), here *breadth* of vocabulary knowledge indicates a person's vocabulary size, or approximately how many words one knows. In contrast, *depth* of vocabulary knowledge concerns the quality of a person's knowledge of a word – how well someone knows a specific word or set of words. In a useful discussion of the distinction between depth and breadth of vocabulary knowledge, Read (2004a) noted three main lines of research on 'depth' knowledge, dealing with precision of meaning, comprehensive word knowledge, and lexical networks (pp. 211–212). The focus here is on depth as quality knowledge in relation to precise meaning and use (semantic and syntactic word knowledge).

Nowadays one of the significant issues in EFL/ESL is the advent of new technology in language learning and especially in vocabulary learning. Computer-assisted language learning (CALL) has been actively applied to second language (L2) and foreign

language (FL) reading. Along with this, researchers have tried to examine the usefulness of computer-assisted reading activities in various ways. Related to research on reading skill development, considerable attention has been given to vocabulary learning in CALL (Conrad, 1996; Ellis, 1995). Computer-assisted vocabulary learning can be an effective way of getting help with vocabulary. Computers and vocabulary learning are very well matched. Tom Cobb describes it as a marriage made in heaven (1999). Computer technology and CALL offer promising possibilities for both language learning and research into language acquisition. Students can read online texts with a variety of learning aids at their disposal. They can look up the meaning of a word in an online dictionary, or they can practice vocabulary by using online materials and resources (e.g. concordance, on-line and interactive exercise, etc.) (Horst, Cobb, & Nicolae, 2005).

While giving an overview of previous research on dictionary use in vocabulary learning in CALL environments, this research aims to investigate the use of the computer for vocabulary learning in terms of using electronic dictionaries in contrast with paperback dictionaries in vocabulary instruction. For the research, it highlights two main types of dictionaries: electronic and paperback. There have been some studies on different kinds of dictionaries, monolingual or bilingual, electronic or printed and their characteristics or differences. Also the effect of their use on some aspects of vocabulary knowledge for example recall or retention and also their effect on some aspects of reading ability has been the matter of interest for some researchers (several examples of such studies are mentioned in chapter 2). Considering the fact that in this new age of technology most of the EFL and ESL students are using electronic dictionaries such as on-line, software or on cell phone as a great aid when they encounter with unknown words, this research attempts to see their effect on two aspects of vocabulary knowledge, size and depth, in comparison with paper back dictionaries.

The following part of this chapter is going to introduce the problem under investigation. Following this, the questions guiding this research and the formulated hypotheses will be presented. It is then intended to discuss the significance of the present study and to provide definitions for the key terms.

1.2. Statement of the Problem

One of the major movements in recent SLA research which has been occurring since the 1980s has been a revival of interest in vocabulary teaching and learning. Since that time, marked by Paul Meara's landmark article "Vocabulary acquisition a neglected aspect of language learning" (Meara, 1980), there has been an explosion of research, theory and practice on vocabulary teaching and learning.

Computer-assisted vocabulary learning can be an effective way of getting help with vocabulary. Computer-assisted vocabulary learning covers a wide range of possibilities. For example it can include computer-based analysis of vocabulary which has resulted in the creation of frequency-based word lists (Nation, 2006), the Academic Word List (Coxhead, 2000), and procedures for determining technical vocabulary (Chujo & Utiyama, 2006). It can include the analysis of texts to determine their suitability for particular learners or to indicate how they should be adapted or sequenced. It can also include programs designed for the deliberate learning of vocabulary (Cobb, 1999). And more related to the present research, it can include the use of text-linked aids such as spoken support, hyper-text, glosses, concordances, dictionary look-ups and electronic dictionaries, which support reading (Cobb, 1997; Cobb, Greaves, & Horst, 2001).

When learners first encounter a new word, they might guess its meaning and usage from available clues but some learners might proceed to look it up in the dictionary. The question which can receive the most attention is: Which is better, using a dictionary or simply guessing from context? Or to put it another way: Do dictionaries make a difference?

Guessing from context is one of the mostly recommended strategies used by learners when they come up with unknown words during reading. But a number of questions have often been asked in the literature:

- Does guessing lead to incidental vocabulary learning in a second language?
- How many exposures are needed to learn a word incidentally?
- Is incidental vocabulary learning better than intentional learning? And,
- Is guessing enough for vocabulary development in a second language?

A handful of studies done by some researchers such as Herman, Nagy, and Anderson (1987), Pitt, White and Krashen (1989) and Day, Omura, and Hiramatsu (1991) on L1 incidental vocabulary learning or in second or foreign language context reveal that both L1 and ESL/EFL studies have provided evidence showing the possibility of incidental vocabulary learning through repeated exposure. However, EFL/ESL studies tended to produce results that reveal significantly lower gains in incidental vocabulary learning than L1 studies. And most EFL/ESL studies have been conducted on intermediate to advanced learners of English. Moreover, some EFL/ESL studies suggest that learners are often unable to guess the meaning of an unknown word from a text (Haynes, 1993; Kelly, 1990). This suggests that

1) L2 learners in general, due to their inadequate grasp of target language skills, are less effective guessers and less effective incidental learners of English vocabulary; and this is true for intermediate to advanced learners,

2) Beginning L2 learners who do not have the basic language skills in the target language to make sense of new words and their contexts would have much more trouble learning vocabulary incidentally.

Rather than guessing from context students can look the new words up in a dictionary. The debate of whether dictionaries should be used in the foreign language classroom, and what dictionaries, if at all, should be used has always been a lively one amongst language teachers and lexicographers. Empirical research on dictionaries has largely focused on comparing the usefulness of dictionaries with that of guessing (Knight, 1994). And only a handful of these studies took vocabulary growth as their dependent variable (Knight, 1994; Luppescu & Day, 1993), most others investigated the usefulness of dictionaries in reading comprehension. Dictionary strategies, if at all encouraged, have normally been proposed in a prescriptive manner (Thompson, 1987).

Like it or not, a dictionary is amongst the first things a foreign language student purchases (Luppescu & Day, 1993), and learners carry their dictionaries around, not grammar books (Krashen, 1989). Empirical research on whether dictionaries are helpful and how best dictionaries can be used, however, has only begun to catch up.