THE RELATIONSHIP BETWEEN BREADTH AND DEPTH OF VOCABULARY KNOWLEDGE AND READING COMPREHENSION

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I am indebted to the bravery and audacity of the martyrs of my country who died with respect and honor and left such peace and freedom for us and

To my beloved parents, thank you for always being there for me, supporting me and encouraging me to be the best that I can be.
ACKNOWLEDGMENT

This research would not have been possible without the support of many people. I am heartily thankful to my supervisor, Prof. Madya Dr. Zaidah bt. Zainal, who was abundantly helpful and offered invaluable assistance, support and guidance. Without her continued support and interest, this thesis would not have been the same as presented here. My sincere appreciation also extends to my dear husband who has provided assistance at various occasions. His views and tips are useful indeed. Also, I wish to express my love and gratitude to my beloved families for their supports and endless love, through the duration of my studies. Lastly, I offer my regards and blessings to all of those who supported me in any respect during the completion of the research.
ABSTRACT

The aim of this study is to investigate the role played by learners' vocabulary knowledge in their reading comprehension performance. It intends to determine whether the breadth and depth of vocabulary knowledge are related to EFL learners' reading comprehension, and to investigate which one of these variables, that is, depth or breadth of vocabulary knowledge, makes a more important contribution to reading comprehension. Finally, it attempts to investigate whether there is a relationship between these two dimensions of vocabulary knowledge. The participants of the study were 58 EFL Iranian students of Intensive English Course (IEC) in UTM based on purposive non-random sampling. To collect data, three tests were administered to the students during their class time to measure the students’ breadth and depth of vocabulary knowledge along with their reading comprehension ability. The results obtained from the analysis of the data indicated that while both breadth and depth of vocabulary knowledge play an important role in EFL learners’ reading comprehension performance, depth of vocabulary knowledge makes a more important contribution. The results further revealed that depth and breadth of vocabulary knowledge are positively correlated, that is, those learners who had large vocabulary size tend to have a deeper knowledge of the words, too.
Matlamat kajian ini adalah untuk menyelidik peranan yang dimainkan oleh pelajar-pelajar pengetahuan kosa kata dalam prestasi kefahaman mereka melalui pembacaan. Ia bercadang untuk menentukan sama ada keluasan dan kedalaman pengetahuan kosa kata berkaitan dengan kefahaman dalam pembacaan oleh pelajar EFL atau tidak, dan menyelidik pemboleh ubah yang manakah, keluasan atau kedalaman pengetahuan kosa kata, lebih penting sumbangannya kepada kefahaman dalam pembacaan. Akhirnya, ia cuba menyelidik sama ada terdapat hubungan antara kedua-dua dimensi kosa kata. Penyertaan dalam kajian ini adalah dikalangan 58 pelajar-pelajar EFL dari Iran dari Kursus Intensif Inggeris (Intensive English Course (IEC)) di UTM berdasarkan kepada persampelan bukan-random purposif. Untuk mengumpul data, tiga ujian telah diberikan kepada pelajar-pelajar semasa di kelas untuk mengukur keluasan dan kedalaman pengetahuan kosa kata bersama-sama dengan keupayaan pemahaman membaca mereka. Hasil yang diperoleh daripada analisis data menunjukkan bahawa, semasa kedua-dua kedalaman dan keluasan terhadap pengetahuan kosa kata memainkan peranan penting dalam prestasi pemahaman membaca pelajar–pelajar EFL, kedalaman pengetahuan kosa kata didapati lebih memberi sumbangan. Hasil lebih lanjut mengungkapkan bahawa kedalaman dan luasnya pengetahuan kosa kata berkorelasi positif, maksudnya, mana-mana pelajar yang mempunyai saiz kosa kata yang besar akan cenderung mempunyai lebih pengetahuan terhadap perkataan-perkataan itu.
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LIST OF ABBREVIATIONS

BNC  British National Corpus
EFL  English as a Foreign Language
ESL  English as a Second Language
ETS  Educational Testing Service
L1   First Language
L2   Second Language
PBT  Paper Based Test
SPSS Statistical Package for Social Sciences
TOEFL Test Of English as a Foreign Language
VKS  Vocabulary Knowledge Scale
VLT  Vocabulary Levels Test
WAT  Word Associates Test
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CHAPTER 1

INTRODUCTION

1.1 Introduction

Language acquisition is an active procedure, which requires on the part of the learners to continually acquire vocabulary of the target language. Acquiring adequate words to build one’s mental library of lexicon is crucial, so as to allow the learners to function well in a given context. Several studies in both first language (L1) and second language (L2) have indicated that vocabulary knowledge is one of the best predictors of reading ability and the capability to obtain new details from texts (Nation, 2001; Qian, 2002; Read, 2000).

Grabe and Stroller (2001) highlight the part of extensive vocabulary knowledge in reading comprehension; they think that students need to recognize a wide number of words to be able to read effortlessly. In teaching reading, for instance, a teacher may need to scaffold students’ knowledge on difficult vocabulary found in the text. This process is considered important for students to comprehend the text. Furthermore, in selecting text for teaching reading, a teacher may need to be aware of the number of difficult words found in the text. A text with no difficult words may not be challenging for the students, while a text with too many difficult words may be demotivating for them. This suggests that fluent reading is closely related to the vocabulary knowledge of the students.
Hu and Nation (2000), and Schmitt (2000) also hold the opinion that the amount of familiar and unfamiliar vocabulary is one of the most significant elements in discerning the complication of a text. Likewise, Stahl (2003) says that the relationship between vocabulary and reading comprehension is a “robust” one and that vocabulary knowledge has constantly been the “foremost predictor of a text’s difficulty” (p.241). Although it can be assumed that the same prediction be made for foreign language acquisition, only a few studies have been found to qualify this assumption (Akbarian, 2010; Baleghizadeh and Golbin, 2010; Farvardin and Koosha, 2011).

One of the reasons of lack of research in this area is that people make mistakes in differentiating L2 and foreign language acquisition. L2 generally is the language that is learned or acquired after L1; however the term has a restricted picture when it is contrasted to the term foreign language, in which L2 acts as an identified medium of communication among people who speak some other languages as their mother tongue, and the foreign language plays no significant role in the community and is mostly learnt only in the classroom (Elis, 1994). Ignorance of the differences between L2 and foreign languagewill result in confusion in the practice of language learning, teaching and research work.

This chapter further explains the background of the study, statement of problem, purpose of the study, objectives of the study, research questions, significance of the study, scope of the study, vocabulary knowledge framework, definition of terms and summary.

1.2 Background of the Study

This study has been initiated by my interest to study the relationship between vocabulary size and depth and reading comprehension among Iranian students. Since the last 20 years, there has been an influx of Iranian students studying in foreign
universities all over the world. These foreign universities, such as those in Malaysia, require students to be proficient in English language in order to survive the academic environment which particularly required them to master reading skills. However, professors complain about the English proficiency level of Iranian students. This has sparked my interest to investigate this issue.

A number of investigations have been conducted on the area of the relationship between vocabulary and reading comprehension. Koda (1989) conducted a study on 24 college students who were learning Japanese as a foreign language, the outcomes showed strong correlations between self-made vocabulary test and two reading tests, one including cloze test and the other, paragraph comprehension. Koda reported a correlation of .74 between their grades on the vocabulary test and their paragraph comprehension test. This shows that vocabulary and reading skill are interrelated and correlate strongly with each other; however this research does not show which aspect of vocabulary knowledge has been a predictor of reading comprehension performance.

In addition, Zhang and Anual (2008) carried out a study to examine the role of vocabulary knowledge on reading comprehension. The outcomes indicated that students' vocabulary knowledge at the 2,000-word and the 3,000-word levels were correlated to their reading comprehension. This also acknowledges the significant role of vocabulary knowledge in reading comprehension performance.

Moreover, Nassaji (2006), one of the Iranian scholars, investigated the specific role of learners’ depth of vocabulary knowledge in lexical inference in an Iranian context. The outcomes demonstrated that those who had inadequate depth of vocabulary knowledge were not able to use particular types of strategies effectively in comparison to those who had stronger depth of vocabulary knowledge. These findings substantiate the outcomes of Frantzen’s (2003) study, which indicated that student’ vocabulary knowledge was the most crucial element influencing L2 readers’ proficiency to employ context clues.
Although recent research in Iranian context demonstrated the significant role of vocabulary knowledge in reading comprehension performance, it is still not clear which aspects of vocabulary knowledge are the best predictors of language ability. While Baleghizadeh and Golbin (2010) discovered that vocabulary size correlates higher with reading comprehension scores ($r = .84$, $p < .05$), they call for more replication to add to the precision of such a relationship. Meanwhile, Akbarian (2010) and Farvardin and Koosha (2011) assert that in their study, they figured out vocabulary size and depth might play an equal role in predicting reading comprehension performance, especially as the learners’ proficiency increases.

Considering the aforementioned Iranian contexts, little research has been conducted on the relationship between the breadth and depth of vocabulary knowledge and reading comprehension in Iranian contexts. The context of the learning state and cultural values of the learner’s society is supposed to have an intense impact on vocabulary acquisition. It is a normal observation that students from dissimilar English experience do not always learn equally (Griffiths and Parr, 2001; Pennycook, 1997; Pierson, 1996; White, 1989).

English as a Foreign Language (EFL) and English as a Second Language (ESL) distinction has been important in language pedagogy because, in each case the contexts in which the teaching takes place, is very different and requires different materials, syllabus and pedagogy. Hence, the current research aims at discovering the effects of vocabulary knowledge on Iranian EFL learners’ reading comprehension and finding out which aspect of vocabulary knowledge would be a better predictor of reading comprehension performance.

### 1.3 Statement of Problem

Lack of vocabulary is one of the main problems for EFL/ESL learners, particularly among Iranian students. Vocabulary learning is dominant in language
acquisition, whether the language is a second or a foreign language (Decarrico, 2001) and crucial to the learners’ overall language acquisition (Gao, 2003). One of the fundamental reasons for this notion is that a lot of unknown words, which learners encounter while reading could cause difficulties in processing the text. Students and teachers alike know that many of the reading comprehension breakdowns experienced by students involve word recognition and lexical access.

A text with many common words, in comparison to rare words, would allow the learners to understand easily. For instance, let us study the following texts:

1. Flabbergasted by the incident, the crowd roared for justice.
2. The angry crowd shouted for justice.

Text one contains two rare words that their meaning may be difficult for learners to process in comparison to text two. Inability to recognize the meaning of the rare words, due to lack of vocabulary knowledge, may lead to comprehension problem.

Reading is a challenging task for foreign language learners. The number of vocabulary students know will aid them in comprehending a text. Hancock (1998) has an idea that in reading, “comprehension involves understanding the vocabulary, seeing relationships among words and concepts, organizing ideas, recognizing the author’s purpose, evaluating the context, and making judgments” (p. 69). This means that the reader should have a good understanding of vocabulary knowledge and the way words are connected to each other and the way they make sense. This enables readers to read between the lines and comprehend the message of the author. As a result of its complication, researchers have explored and investigated many different areas of reading. Some have probed the impacts of vocabulary knowledge (Alderson, 2000; Joshi and Aaron, 2000; Martin-Chang and Gould, 2008; Nagy and Scott, 2000; Pressley, 2000). The fact that how vocabulary knowledge assists reading comprehension would be a critical area to investigate because it could provide teachers with new methods to teach.
L1 reading researchers have long mentioned the significance of both breadth and depth of vocabulary knowledge in reading comprehension (Anderson and Freebody, 1981; Beck et al., 1982; Mezynski, 1983). While numerous studies were documented on the breadth of vocabulary knowledge (Koda 1989; Laufer 1992a, 1996; Qian 1999), not many can be found on the depth of vocabulary knowledge.

In L2 study, there has been minor understanding of the role of depth of vocabulary knowledge up to now, and not many research have been reported on the relationship between depth of vocabulary knowledge and reading comprehension (De Bot et al., 1997; Qian, 1998, 2002). Similarly, studies on the depth of vocabulary knowledge in the context of EFL are limited (Alshwairkh, 2002; Farahani, 2006; Kaivanpanah and Zandi, 2009; Nassaji, 2006). This is likely since depth of vocabulary knowledge is harder to gauge than is vocabulary size (Schmitt and McCarthy, 1997).

Meantime, Vermeer (2001, p. 218) expresses that “too little is known about the relationship between these various aspects of word knowledge” (i.e. size and depth of word knowledge). Additionally, Milton (2009) calls for further investigation on vocabulary acquisition to provide more details and enlighten the area so that an obvious, comprehensive, and clear explanation of the conception of vocabulary knowledge is formed.

In summary, to build a mental representation of a text, one should be able to have a good understanding of a text and this sounds inevitable without having good vocabulary knowledge. Since the concept of vocabulary knowledge and the relationships of its various aspects (breadth and depth) have been conducted in ESL context and the results were sporadically contradicted to some research done in Iran, the present study tries to shed some light on the issue and open new horizons to EFL language researchers.
1.4 Purpose of the Study

Having established the background and problems of the study, it is deemed important that an investigation into vocabulary knowledge area is called for. Therefore, the main purpose of this study is to investigate the relationship between vocabulary knowledge aspects (breadth and depth) and reading comprehension performance.

In particular, this study investigates whether there is a correlation between vocabulary size and depth of vocabulary, vocabulary size and reading comprehension, depth of vocabulary and reading comprehension and to determine which aspect of vocabulary knowledge would be a better predictor of reading comprehension performance.

The results of this study would give more insights to teachers, program developers and policy makers who are responsible for developing guidelines for teaching and learning of vocabulary and the skills of reading, which in turn would have implications for assessment and evaluation of these knowledge and skills.

1.5 Objective of the Study

The objectives of this study are as follows:

1. To investigate the correlation between vocabulary size and depth of vocabulary.
2. To investigate the correlation between vocabulary size and reading comprehension.
3. To investigate the correlation between depth of vocabulary and reading comprehension.
4. To identify which aspect of vocabulary knowledge (breadth or depth) would be a better predictor of reading comprehension performance.
1.6 Research Questions

Based on the objectives of the study four research questions are addressed:

1. Is there any correlation between vocabulary size and depth of vocabulary?
2. Is there any correlation between vocabulary size and reading comprehension?
3. Is there any correlation between depth of vocabulary and reading comprehension?
4. Which aspect of vocabulary knowledge (breadth or depth) is a better predictor of reading comprehension performance?

1.7 Significance of the Study

Reading and vocabulary appear to be the most significant and functional activities in any language class. Studies on these two aspects can be of great value for management of education both at secondary and tertiary levels. Lafford et al. (2000) also propose that the study of L2 vocabulary knowledge is fundamental since lexical errors are the most recurring ones and, concurrently, they form an important obstruction to communication. Considering the key role of vocabulary knowledge, not much is known about how and what aspect of vocabulary knowledge can have significant effect on reading comprehension in the Iranian context.

EFL teachers sometimes challenge students’ incapability to deal with hard words in reading comprehension. Considering the fact that breadth and depth are two connecting aspects of vocabulary knowledge, knowing an abundant vocabulary cannot assist learners a great deal if their comprehension is insubstantial and shallow. This means to have a good understanding, both aspects of vocabulary knowledge- depth and breadth- are required. Therefore, although the size of vocabulary knowledge is a crucial element on evaluating the reading comprehension, depth of vocabulary, in addition to what is expected, plays a significant part in reading comprehension performance.
This study is to contribute more understanding of the relationship between breadth and depth of vocabulary knowledge and reading comprehension. Moreover, it identifies the most effective predictor of reading comprehension performance.

1.8 Scope of the Study

The study only concentrates on the relationship between breadth and depth of vocabulary knowledge and reading comprehension among Iranian students of Intensive English Course (IEC) of UTM in Johor Bahru, Malaysia.

As this study tackles the issue of breadth and depth of vocabulary knowledge, it does not include students’ understanding of clauses, although I note the importance of this aspect. This is to ensure that the research is of manageable size. In addition, this study attempts to relate vocabulary knowledge and reading comprehension; therefore, other EFL or ESL macro skills such as listening, writing and speaking are not included. By setting the parameter of these variables clearly, the results obtained are more reliable and valid.

1.9 Vocabulary Knowledge Framework

Various but compatible frameworks have been suggested by L2 researchers to explain vocabulary knowledge. For instance, Chappell (1998) believes that vocabulary knowledge includes four aspects: 1) vocabulary size; 2) lexicon organization; 3) process of lexical access; and 4) knowledge of word characteristics. This means the relationship, and model of words in the cognitive glossary of a learner, understanding the features of the words, lexical access and the number of words are at the focus of attention.
Moreover, Henriksen (1999) proposes that lexical proficiency should include three aspects: 1) receptive and productive knowledge; 2) depth of knowledge; and 3) precision of knowledge. Henriksen’s first aspect reflects enhancements of lexical knowledge, her second aspect describes knowledge elements also recognized in the vocabulary depth aspect discussed earlier (Chapelle, 1998; Qian, 1998; 1999), and her third aspect espouses the status – shared by (2001) – that word knowledge is composed of two aspects: receptive and productive.

The framework that is suggested by Qian (2002) and is enhanced on the basis of initial models of vocabulary knowledge (Chapelle, 1998; Qian, 1998; 1999; Henriksen, 1999; Nation, 2001), presents that vocabulary knowledge consists of four inherently linked aspects: 1) vocabulary size which points out the number of words of which a learner has at least some shallow knowledge of meaning; 2) depth of vocabulary knowledge, which incorporates all lexical attributes, such as phonemic, graphemic, morphemic, syntactic, semantic, collocational, and phraseological features, together with rate of occurrence and register; 3) lexical arrangement, which points out the storage, link, and statement of words in the cognitive lexicon of a learner; and 4) automaticity of receptive-productive knowledge which refers to all basic procedures through which access to word knowledge is attained for both receptive and productive roles. The four aspects appear to be inherently linked and cooperate with one another in all central processes of vocabulary usage and growth.

1.9.1 Nation’s Multidimensional Vocabulary Knowledge Framework

In a sort of simplistic way we could say that vocabulary knowledge means knowing words’ form, meaning and use (Nation: 2001: 35). This is a very empirical way of explaining vocabulary knowledge, but it is clearly a restricted one. Following (Nation 2001:23) “words are not isolated units of language, but fit into many interlocking systems and levels, there are many things to know about any particular word and there are many degrees of knowing”. Several frameworks that describe and
explain the different characteristics of word knowledge were explained. A moderately perfect framework can be seen in Table 1-1.

**Table 1-1:** Nation’s Multidimensional Vocabulary Knowledge Framework (adapted from Nation's (2001) Table 2-1, p. 27)

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<td>How is the word pronounced?</td>
</tr>
<tr>
<td>Written form</td>
<td>What does the word look like?</td>
<td>How is the word written or spelt?</td>
</tr>
<tr>
<td>POSITION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grammatical patterns</td>
<td>In what patterns does the word occur?</td>
<td>In what patterns must we use the word?</td>
</tr>
<tr>
<td>Collocations</td>
<td>What words or types of words can be expected before and after the word?</td>
<td>What words or types of words must we use with this word?</td>
</tr>
<tr>
<td>FUNCTION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>How common is the word?</td>
<td>How often should the word be used?</td>
</tr>
<tr>
<td>Appropriateness</td>
<td>Where would we expect to meet this word?</td>
<td>Where can this word be used?</td>
</tr>
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<td>MEANING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concept</td>
<td>What does this word mean?</td>
<td>What word should be used to express this meaning?</td>
</tr>
<tr>
<td>Associations</td>
<td>What other words does this word make us think of?</td>
<td>What other words could we use instead of this one?</td>
</tr>
</tbody>
</table>

*Note.* R: Receptive knowledge, P: Productive knowledge
Receptive knowledge usually means recognition of vocabulary when listening or reading while productive knowledge means use of words in speech and writing. To learn a word, a person must obtain both receptive and productive knowledge of all above aspects. This is a big project for all but the most frequent words for language learners on account of the amount of knowledge that should be obtained.

This study adapts Nation's (2001) multi-componential framework as a starting point to identify the aspects of word knowledge to be investigated, because it is the most comprehensive and subsumes all past efforts at modeling a multidimensional framework.

As Table 1-1 shows, word knowledge is composed of both receptive and productive knowledge. Since reading is a receptive task, we deal with the receptive knowledge of the word knowledge. Regarding the divisions of the framework, and considering the aspects of vocabulary knowledge (breadth and depth), which are investigated in this study, written form of the words and their frequency are considered as breadth of vocabulary knowledge; and the grammatical patterns, collocations, appropriateness, concept and associations that they have are considered as depth of vocabulary knowledge. All these dimensions are tested in Vocabulary Level Test and Word Associates Test respectively, to see which aspect is a predictor factor of language ability. Further elaboration is provided in Chapter 2.

1.10 Definition of Terms

The following are the definitions of terms, which are used in this research and are defined according to the purpose of this research in order to assist better comprehension of the readers. The extended definitions are taken from the linguist points of view as follows:
• **First language** in this study refers to Persian, which is generally a person’s mother tongue or the language acquired first.

• **Second language** in this study refers to English, which one has learnt after learning the mother tongue; however, it functions as a recognized means of communication among members who speak some other languages as their mother tongue (Ellis, 1994).

• **Foreign language** in this study refers to English, which one has learnt after learning the mother tongue; however, it plays no major role in the community and is primarily learnt only in the classroom (Ellis, 1994).

• **Vocabulary knowledge** constitutes knowing a word in terms of forms (spelling, pronunciation), meanings (translation, synonyms), function (morphological patterns, multiword units) and relation with other words (Nation, 2001).

• **Breadth of vocabulary knowledge** (**vocabulary size**) is the number of words the learners know in the target language (Nation, 2001).

• **Depth of vocabulary knowledge** is what learners know about a target word, e.g. meaning, register, and morphological, syntactic, and collocational properties (Nation, 2001).

• **Receptive vocabulary** is a form of word that is perceived while listing or reading (Nation, 2001).

• **Word associates test** is generally used in second language vocabulary acquisition research studies to measure the learner's depth of vocabulary knowledge (Read, 1993) and to investigate the connections L2 learners hold in their developing mental lexicons (Wharton, 2011).

• **Reading comprehension** is the understanding of the contents of a written text after perceiving it.

As mentioned above, the terms are explained according to the purpose of this research. For example second language and foreign language are distinguished, although they are interrelated; and only specific aspects of vocabulary knowledge have been defined.
1.11 Summary

As established earlier about the relationship between vocabulary knowledge and reading comprehension, the present study therefore, attempts to explore the relationship between breadth and depth of vocabulary knowledge and reading comprehension among Iranian IEC students of UTM. Further accounts of these two aspects will be given in the literature review.
REFERENCES


Lexicography, 6, 1–27.


Acquisition and Language Testing Research, (p. 32-70).
students in Hong Kong. Asian Journal of English Language Teaching, 16, 1-
23.
exposure in children: Associations with vocabulary, general knowledge, and
spelling. Journal of Educational Psychology, 83, 264-274.
computer-assisted practice on reading attainment. Journal of Research in
Reading, 19 (2), 102-110.
Classroom. Cambridge: Cambridge University Press.
in a Foreign Language, 17 (1).
model for the study of second language vocabulary acquisition. Studies in
Decarrico, J. S. (2001). Reading for academic purpose: Guideline for the ESL/EFL
University Press.
problems of second language readers. In P. Carrell, J. Devine, and D. Eskey
(Eds.), Interactive Approaches to Second Language Reading. Cambridge,
UK: Cambridge UP.
Farahani, F. (2006). The relationship between depth of vocabulary knowledge and
EFL learners' lexical inferencing strategy use and success (Unpublished
Farvardin, M. T. and Koosha, M. (2011). The Role of Vocabulary Knowledge in
Iranian EFL Students’ Reading Comprehension Performance: Breadth or
Houghton Mifflin Company.


Second Language Acquisition, 21, 303-317.


