



Tarbiat Moallem University

Department of Foreign Languages

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in Teaching English as a Foreign Language (TEFL)**

**Lexical Bonds, Breadth and Depth of
Vocabulary Knowledge in EFL Learners' C-test
Performance**

Supervisor: Dr. E. Babaii

Advisor: Dr. M.R. Atai

By:

Mostafa Janebi Enayat

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In the Name of God,

the Compassionate,

the Merciful

To My Beloved Parents

For

Their Unfailing Love & Unfading Support

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Abstract

The variables affecting the nature of reading comprehension can be classified into two general categories: reader's variables, and text variables (Alderson, 2000). Despite the wave of research on vocabulary knowledge as reader's variable, the role of this knowledge in C-test as a text-dependent test and its interaction with lexical cohesion of the test as a text feature has remained an under-researched issue. The purpose of this study was threefold: first, the role of breadth and depth of vocabulary knowledge as reader's variables in EFL learners' C-test performance was examined. Second, the effect of lexical bonds and readability indices as text variables was probed. Third, the interaction of these variables was studied to find how they can contribute to the test takers' C-test performance. For this purpose, Vocabulary Levels Test (VLT) and Word Associates Test (WAT) were administered to 50 lower-intermediate and 85 upper-intermediate EFL students. The participants then took a C-test with two sub-tests, one with high and the other with low lexical bonds determined by Hoey's (1991) lexical cohesion analysis and WordNet online dictionary. The sub-tests were also monitored to have high and low readability indices but all of which had average lexical difficulty determined by ADELEX ANALYSER tool. The results indicated that: (a) depth of vocabulary knowledge could not affect C-test performance of lower-intermediate students but it affected the performance on high-bond C-test for the upper-intermediate students, (b) breadth of vocabulary knowledge did not affect the performance on C-test for neither upper-intermediate nor lower-intermediate students, (c) the interaction of breadth and depth could not influence C-test performance, (d) performance on vocabulary breadth contributed to the prediction of EFL learners' C-test performance and its two sub-tests for both lower and upper-intermediate levels, (e) breadth of vocabulary knowledge contributed to the prediction of C-test performance and its two sub-tests for lower-intermediate students while for

upper-intermediate students, both breadth and depth of vocabulary knowledge predicted the performance, (f) depth of vocabulary knowledge predicted the performance on high-bond C-test for upper-intermediate students while breadth of vocabulary could not, which means more proficient students can make use of contextual cues while lower students may not, (g) lexical bonds significantly affected EFL learners' C-test performance at both lower and upper-intermediate levels, and (h) readability indices were found to be inadequate determinants of text difficulty level. The findings have pedagogical implications for students, teachers and materials developers to concentrate more on aspects of vocabulary knowledge especially depth of vocabulary. Furthermore, the results draw test designers' attention to the significance of lexical cohesion as a determinant of text difficulty and inadequacy of readability indices.

Keywords: Lexical cohesion, Lexical chain, Lexical bond, Breadth of vocabulary knowledge, Depth of vocabulary knowledge, Reduced redundancy principle, C-test

Table of Contents

Acknowledgements	iii
Abstract	v
List of Tables	xi
List of Figures	xiii
List of Abbreviations Used in the Study	xiv

Chapter One: Introduction

1.1. Overview	2
1.2. Statement of the Problem.....	3
1.3. Significance of the Study	6
1.4. Research Questions and Hypotheses.....	11
1.5. Definition of the Key Terms.....	13
1.6. Limitations and Delimitations of the Study.....	16

Chapter Two: Review of the Related Literature

2.1. Overview	18
2.2. Vocabulary Knowledge.....	19
2.2.1. Breadth and Depth of Vocabulary Knowledge.....	23
2.2.1.1. Relationship between Breadth and Depth of Vocabulary Knowledge.....	24
2.2.1.2. Aspects of Depth of Vocabulary Knowledge	26
2.2.1.3 Measuring Breadth of Vocabulary Knowledge	29
2.2.1.3.1. Using Dictionary.....	30

2.2.1.3.2. Sampling from Word Frequency Lists	31
2.2.1.3.3. The Yes/No Format	32
2.2.1.3.4. Vocabulary Levels Test.....	33
2.2.1.4. Measuring Depth of Vocabulary Knowledge	34
2.2.1.4.1. Word Associates Format (WAF).....	34
2.2.1.4.2. Vocabulary Knowledge Scale (VKS).....	35
2.2.1.4.3. Lex30.....	36
2.2.1.5. Problems with Measures of Breadth and Depth	37
2.2.1.6. Empirical Studies on Breadth and Depth of Vocabulary in Productive Skills	39
2.2.1.7. Empirical Studies on Breadth and Depth of Vocabulary Knowledge in Receptive Skills	41
2.3. Cohesion and Coherence as Text Variables	46
2.3.1. Lexical Cohesion and its Categories	47
2.3.1.1. Lexical Links and Chains.....	49
2.3.1.2. Lexical Bonds	51
2.3.1.3. Methods for Lexical Cohesion Analysis.....	52
2.3.1.3.1. Halliday & Hasan’s Taxonomy of Cohesive Devices.....	53
2.3.1.3.2. Hoey’s (1991) Lexical Analysis	54
2.3.1.3.3. Morris & Hirst’s Algorithm for Lexical Chain Analysis	54
2.3.1.3.4. Hirst & St-Onge’s Automatic Analysis.....	55
2.3.1.3.5. Coh-Metrix: Analysis of Text Cohesion.....	56
2.3.1.4. Empirical Studies on Lexical Cohesion	57
2.4. C-test: Some Theoretical Background	60
2.4.1. Reduced Redundancy Principle.....	61
2.4.2. The Rule of Two	62
2.4.3. The C-test Criteria	63
2.4.4. The Advantages and Disadvantages of C-test	64
2.4.5. Functions of C-test	66
2.5. Empirical Studies on Factors Affecting C-test Performance.....	67
2.6. Lexical Knowledge, Lexical Cohesion and Text Comprehension: A Necessary Link.....	69

Chapter Three: Methodology

3.1. Overview	74
3.2. Participants.....	74
3.3. Instrumentation.....	74
3.4. Procedure	86
3.4.1. Data Collection	86
3.4.2. Scoring the Tests	87
3.4.2.1. WAT and VLT.....	87
3.4.2.2. C-test	87
3.4.3. Design.....	88
3.4.4. Data Analysis.....	88

Chapter Four: Results and Discussion

4.1. Overview	91
4.2. Categorizing the Participants into Lower and Upper-intermediate.....	91
4.3. Restatement of the First Five Research Questions and Null Hypotheses.....	92
4.3.1. Data Analysis and Results for the First Five Research Questions	94
4.3.1.1. Lower – intermediate Level.....	94
4.3.1.2. Upper – intermediate Level	104
4.3.2. Discussion of the Results Related to the First Five Research Questions.....	114
4.4. Restatement of the Sixth and Seventh Research Questions and Null Hypotheses.....	125
4.4.1. Data Analysis and Results for the Sixth and Seventh Research Questions	125
4.4.1.1. Lower – intermediate Level.....	126
4.4.1.2. Upper – intermediate Level	129
4.4.2. Discussion of the Results for the Sixth and Seventh Research Questions.....	133

Chapter Five: Conclusion, Implications and Suggestions for Further Research

5.1. Overview	139
5.2. Summary of the Main Findings and Concluding Remarks.....	139
5.3. Implications.....	143
5.4. Suggestions for Further Research.....	144

References	145
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Appendices

Appendix A: C-test.....	161
Appendix B: Sample of High-bond Text and its Analysis.....	163
Appendix C: Glossary of Terms Used in WordNet.....	165
Appendix D: Sample of Analysis by WordNet.....	168
Appendix E: Word Associates Test (WAT) Version Four.....	170
Appendix F: Vocabulary Levels Test (VLT) Version Two.....	176
Appendix G: Oxford Quick Placement Test (2004).....	181

List of Tables

Table 2-1. Categories of lexical cohesion	48
Table 3-1. Scoring criteria of Oxford Quick Placement Test.	75
Table 3-2. Characteristics of the C-test and its subtests (early version)	84
Table 4-1. Descriptive statistics and Independent Sample t-test results for proficiency classification	92
Table 4-2. Between subject factors for depth of vocabulary variable and its values (lower-intermediate)	95
Table 4-3. Independent Sample t-test results for depth of vocabulary in C-test and its two subtests	95
Table 4-4. Between subject factors for breadth of vocabulary variable and its values (lower-intermediate)	96
Table 4-5. Independent Sample t-test results for breadth of vocabulary in C-test and its two subtests (lower-intermediate)	97
Table 4-6. Between subject factors for vocabulary breadth and depth and their values	98
Table 4-7. Descriptive statistics for the interaction of breadth and depth in C-test and its two subtests (lower-intermediate)	99
Table 4-8. One-way ANOVA for the interaction of breadth and depth in C-test and its two subtests (lower-intermediate)	100
Table 4-9. Pearson Correlation for VLT levels on C-test performance and its sub-tests (lower-intermediate)	101
Table 4-10. Multiple Regression analysis for VLT levels on total C-test performance and its two sub-tests (lower-intermediate)	102
Table 4-11. Multiple Regression analysis for breadth and depth of vocabulary in EFL C-test performance and its sub-tests (lower-intermediate)	103
Table 4-12. Between subject factors for depth of vocabulary variable and its values (upper-intermediate)	104
Table 4-13. Independent Sample t-tests for depth of vocabulary knowledge in C-test performance and its two sub-tests (upper-intermediate)	105

Table 4-14. Between subject factors for breadth of vocabulary and its values (upper-intermediate)	106
Table 4-15. Independent Sample t-tests results for breadth of vocabulary in C-test performance and its sub-tests (upper-intermediate)	107
Table 4-16. Between subject factors for vocabulary breadth and depth and their values	108
Table 4-17. Descriptive results of One-way ANOVA for the interaction of breadth and depth in C-test and its two sub-tests (upper-intermediate)	109
Table 4-18. One-way ANOVA results for the interaction of breadth and depth in C-test and its sub-tests (upper-intermediate)	110
Table 4-19. Pearson Correlation for VLT levels on C-test performance and its sub-tests (upper-intermediate)	111
Table 4-20. Multiple Regression analysis for VLT levels on total C-test performance and its two sub-tests (upper-intermediate)	112
Table 4-21. Multiple Regression analysis for breadth and depth of vocabulary in EFL C-test performance and its sub-tests (upper-intermediate)	113
Table 4-22. Paired Sample t-test results for the effect of lexical bonds in C-test (lower-intermediate)	126
Table 4-23. Repeated Measures ANOVA results for the effect of readability indices (lower-intermediate)	127
Table 4-24. Paired Sample t-test results for the effect of lexical bonds in C-test (upper-intermediate)	130
Table 4-25. Repeated Measures ANOVA results for the effect of readability indices (upper-intermediate)	131

List of Figures

Figure 2-1. Two ways of looking at relation between breadth and depth of word knowledge	..25
Figure 2-2. Depth of word knowledge model of the mental lexicon	.....28
Figure 2-3. Sample of Yes/No test format of vocabulary size.	.....32
Figure 2-4. Sample of Vocabulary Knowledge Scale.	.....36
Figure 2-5. Sample of a completed Lex30 test	.....37
Figure 2-6. A model hypothesizing the relationships among various factors in the chain of vocabulary knowledge-reading comprehension	.....45
Figure 2-7. Algorithm for building lexical chains	.....50
Figure 2-8. Visual representation of lexical chains	.....51
Figure 2-9. Visual representation of lexical bonds	.....52
Figure 3-1. Sample of Word Associate Test (WAT) Item.	.....76
Figure 3-2. A Sample of Vocabulary Levels Test.	.....78
Figure 3-3. Overall Structure of the C-test	.....83

List of Abbreviations Used in the Study

ADA: ADELEX ANALYSER

ADELEX: Assessing and Developing Lexis through the Internet

ANOVA: Analysis of Variance

CATSS: Computer Adaptive Test of Size and Strength

CBT: Computer-based Test

CEFR: Common European Framework of Reference for Languages

DIWK: Depth of Individual Word Knowledge

DVKT: Depth of Vocabulary Knowledge Test

KEPT: Kanda English Proficiency Test

PBT: Paper-based Test

SEM: Structural Equation Modeling

TCF: Test de Connaissance du Francais

TOEIC: Test of English for International Communication

VKS: Vocabulary Knowledge Scale

VLT: Vocabulary Levels Test

WAF: Word Associates Format

WAT: Word Associates Test

Chapter One:
Introduction

1.1. Overview

Research on second language and foreign language vocabulary development has been thriving for the last decades or so and many studies have been conducted in applied linguistics journals to target this issue (Read & Chapelle, 2001). This wave of research has brought into focus many issues ranging from studying vocabulary knowledge and its aspects as key elements in reading comprehension (e.g., Qian, 1998, 2002; Nassaji, 2006; Shiotsu & Weir, 2007; Kaivanpanah & Zandi, 2009), in writing (Laufer & Nation, 1995; Engber, 1995; Lee, 2003; Baba, 2009), speaking (Batty, 2007), and listening (Mehrpour & Rahimi, 2010).

As pointed out by Alderson (2000), readers' and text variables are both significant in language skills and test performance. Text variables include lexical cohesion (Halliday & Hasan, 1976), text authenticity and genre (Atai & Soleimany, 2009), syntactic complexity (Babaii & Jalali Moghaddam, 2006) and grammatical cohesion (Ozuru et al. 2009) to name but a few. This study addressed both readers' variables and text variables as important elements in EFL test performance focusing on breadth and depth of vocabulary knowledge and lexical cohesion and bonds. C-test as one of the context-dependent tests (Read & Chapelle, 2001) capable of measuring general language proficiency (Klein-Braley, 1997; Grotjahn, 2006; Lee-Ellis, 2009) was considered as a text-dependent test the performance of which calls upon both readers' variables and text variables. In this chapter, breadth and depth of vocabulary knowledge are mentioned as key elements in text-dependent test performance which can interact positively with lexical cohesion and bonds on the part of the text. The problem and its significance will be discussed along with research questions, definition of the key terms followed by limitations and delimitations of the study.

1.2. Statement of the Problem

During the past decades or so, many studies have been conducted to probe the factors which are capable of affecting performance in language tests (e.g., McNamara & Kintsch, 1996; McNamara, 2001; Hidi, 2006; Kobayashi, 2009; Ozuru et al., 2009). These factors can be classified into three main sets (Bachman, 2002): (1) characteristics inherent in the task itself; (2) attributes of test takers; and (3) interactions between test takers and task characteristics. As Alderson (2000) mentioned, many aspects of text or task itself that might facilitate or make difficult the text comprehension process have been studied from a variety of different disciplines. He pointed out that these factors range from “aspects of text content, to text types or genres, text organization, sentence structure, lexis, text typography, layout, the relationship between verbal and nonverbal text, and the medium in which the text is presented” (p. 61). Among test takers’ characteristics that affect test performance are cultural background, background knowledge, cognitive characteristics, native language, ethnicity, sex and age (Bachman & Palmer, 1996).

Many studies have tried to investigate the influence of text features and readers’ variables in test takers’ performance on text-dependent tests such as reading, cloze test and C-test. They ranged from examining the text difficulty (Young & Bowers, 1995; McDaniel et al., 2002; Babaii & Jalali Moghaddam, 2006; Veisi, 2007), text organization (McNamara & Kintsch, 1996; Akbari et al., 1999; McNamara, 2001; Frestl & Cramon, 2001; MacMillan, 2007; Ozuru et al., 2009), to readers’ variables like prior knowledge (Potelle & Rouet, 2003; Calisir & Gurel, 2003), reading skill (Jackson, 2005; Ozuru et al., 2009), grammatical knowledge (Shiotsu & Weir, 2007), and vocabulary knowledge (e.g., Schoonen & Verhallen, 1998; Qian, 1998, 2002; Nassaji, 2004, 2006; Zhang & Anual, 2008; Kaivanpanah & Zandi, 2009). These studies were mostly concerned with either text features or readers’ variables and thus did not attempt to find the interactions of

these two variables which Bachman (2002) mentioned as the third set of factors affecting test takers' performance. Furthermore, the influence of lexical features of text and vocabulary knowledge of readers was mostly examined in reading as the well-known text-dependent test. Other types of context-dependent tests such as C-test have not gained proper attention as to the interaction of text and readers' variables in general and the role played by vocabulary aspects and text organization in particular.

C-test has undergone the process of validation several times (e.g. Grotjahn, 1986, 1987; Jafarpur, 1995, 1999; Chihara, et. al., 1996; Babaii & Ansary, 2001; Eckes & Grotjahn, 2006; Rouhani, 2007; Sahragard, et. al., 2008; Lee-Ellis, 2009) and has proved to be a valid measure of language proficiency. Taking into account the importance of C-test as a well-known test of language proficiency and the fact that it has been used and validated for different languages and contexts (Cohen, 1984; Grotjahn & Stemmer, 1985; Coleman, 1994; Linnemann & Wilbert, 2010; Reichert et al., 2010), the current study aimed at exploring the effect of aspects of vocabulary knowledge as the readers' variables and lexical cohesion as text features in EFL students' C-test performance. Text cohesion as pointed out by Hoey (1991), is formed not only by links between words, but also by semantic relationships between sentences. A cohesive relation between sentences was named by Hoey as a lexical bond. A lexical bond exists between two sentences when they are connected by a certain number of lexical links. These lexical chains can contribute to the performance of test takers in C-test (Babaii & Ansary, 2001).

As Fulcher (1997) claimed, text features should be considered in determining the readability of texts. C-test constructors are thus advised to make use of lexical cohesion as one of the criteria to make sure of the readability and validity of C-tests. Graesser et al. (2004) questioned the usability of this index for judging the readability of texts and believed that "readability formulas

ignore dozens of language and discourse components that are theoretically expected to influence comprehension difficulty” (p. 194). Furthermore, Akbari, Atai, and Marefat (1999) questioned this index for not taking into account the discourse elements of the text among which is text cohesion in general and lexical cohesion in particular. Consequently, the present study made an attempt to provide evidence for readability formula as ‘an invalid’ index.

The problem under investigation is that some of the students may not use the lexical bonds as one of the key cues to fill in the mutilated words of a C-test. In other words, they may perform differently in using the lexical bonds or similarity chains of a text. As found by Ozuru, Dempsey, and McNamara (2009), not all test takers can make use of text cohesion for performing better in a text-based test such as reading comprehension. The use of lexical bonds is deemed to be closely related to the test takers’ breadth and depth of vocabulary knowledge since depth of vocabulary refers to the syntagmatic and paradigmatic relations between lexical units (Read, 1993) and lexical bonds are formed by means of these relations as well. In other words, syntagmatic and paradigmatic relations can be formed by means of synonymy, hyponymy, antonymy, and collocations (Schoonen & Verhallen, 2008). Lexical chains and bonds are also formed by such relations (Morris & Hirst, 1991; Hoey, 1991; Sardinha, 2001). The effect of breadth and depth of vocabulary knowledge and their interaction with lexical bonds as text features have been considered a gap in the previous literature on C-test, vocabulary and text cohesion, which this study tried to fill.