

The Relationship between Iranian EFL Learners' Reading Comprehension, Vocabulary Size and Lexical Coverage of the Text: The Case of Narrative and Argumentative Genres

Nader Assadi Aidinlou¹, Mitra Taghinezhad Vaskehmahalleh^{2*}

1, 2. Young Researchers and Elite Club, Ahar Branch, Islamic Azad University, Ahar, Iran

**Corresponding author: Mitra_vaskeh@yahoo.com*

.....
Received: 2017.4.12

Accepted: 2017.9.25
.....

Online publication: 2017.12.10

Abstract

This study explored the relationship between EFL learners' vocabulary size, lexical coverage of the text and reading comprehension texts (narrative & argumentative genres). To this end, 120 male and female out of 180 students studying at Talesh Azad University were selected based on their performance on the Nelson Proficiency Test. A Nelson reading proficiency test was also administered in order to check the homogeneity of the learners in their reading proficiency. After that, the researcher administered reading comprehension tests with narrative and argumentative genres in order to find the lexical coverage and vocabulary size for such reading tests. Learners' Vocabulary size was measured by the Levels Test, while their lexical coverage was measured by the newest version of Vocabulary Profile. In order to probe any significant relationship between the variables of the study, Pearson Correlation was run. Results of the study showed that there was a strong relationship among vocabulary size, text coverage, and reading comprehension test at different genres.

Keywords: reading comprehension, vocabulary size, lexical coverage, narrative genre, argumentative genre

Introduction

Regarding the relationship between vocabulary and reading, most researchers agree that vocabulary is a good predictor of reading, if not the best (Bernhardt & Kamil, 1995; Laufer, 1992; Nation, 2001, 2006; Qian, 1999, 2002; Ulijn & Strother, 1990). As for the lexical threshold of reading, opinions vary. Before surveying the literature on lexical threshold, three key terms should be clarified whose understanding is essential in any discussion of reading and vocabulary. They are lexical coverage, sight vocabulary and “adequate” comprehension. If we say that a group of words, for example, the Academic Word List (AWL), which consists of 570 different words (Coxhead, 2002) provides coverage of 10% of an academic text, it means that 10% of an academic text (10% of all word tokens) consists of the AWL words. From the reader's perspective, this means that the knowledge of the AWL will assure the comprehension of 10% of the vocabulary in an academic text. We can also refer to coverage as the percentage of words that a reader understands. If, for example, readers have reached 95% text coverage, this means that they understand 95% of the running tokens of the text. The term “sight vocabulary” is used to refer to words whose meaning is so familiar to a person that they can be understood out of context. Therefore, when encountered in a text, these words are recognized and decoded quickly and without any cognitive effort. For example, if readers encounter the word “hypothesis” in a text and the word is in their sight vocabulary, they do not need to rely on the surrounding context to comprehend its meaning. Hence, a large sight vocabulary contributes to reading fluency and frees cognitive effort for higher level reading processes that is engaging with comprehending the text content and its implications (Mezynski, 1983; Pulido, 2007; Segalowitz, 2007). Lexical text coverage and the reader's sight vocabulary size are, therefore, two related factors of lexical threshold. The larger the sight vocabulary, the higher is the coverage of a text. Therefore, any statement about the text coverage that enables comprehension will inevitably bear on how much vocabulary the learner should acquire to read reasonably well. But how well is reasonably well?

The term “adequate” or “reasonable” comprehension has no clear definition since it may refer to different levels of comprehension in different contexts, and yet statements about lexical thresholds depend on what is considered adequate. Different university disciplines may require different levels of reading

proficiency on an identical university entrance test due to different quantities of reading material in English as L2. Moreover, the same discipline may require a higher reading standard for a higher academic degree.

The first attempt to relate reading comprehension to lexical coverage was made by Laufer (1989). The coverage was calculated by learners' self-report, underlining the unknown words in the text, adjusted for "bluffing." The latter was checked through a translation test which included most of the infrequent words of the text and subsequent comparison with the underlining in order to disclose discrepancies between self-report and translation. The lexical coverage was the total number of words in the text minus the real number of unknown words, converted into percentage. Reading comprehension was measured by a reading test and an "adequate" comprehension was set at a score of 55%, which at the time of the study happened to be a passing score of the English for Academic Purposes course which the participants were enrolled in. The results showed that at 95% coverage there were significantly more participants with a score of 55 and above than with a score below 55. This was not true for other levels of coverage even though at every coverage level, some learners received passing reading grades. This means that the threshold as reflected in lexical coverage is of a probabilistic nature. Adequate comprehension may happen below it, but the chance is low. In this early study "adequate" comprehension was set at a rather low score of 55. However, most educators, including ourselves, would probably not be satisfied with such a low score .

Hu and Nation (2000) also investigated the relationship between lexical coverage and reading comprehension. They created four coverage groups (80%, 90%, 95%, 100%) by replacing some text words with non-words in the below 100% groups. The other words of the text belonged to the 2,000 most frequent vocabulary. They used two comprehension tests and defined "adequate" comprehension as the score that most learners in the 100% coverage group received; 12 correct answers out of 14 on a multiple choice test, (i.e., around 85.7% and a score of 70 out of 124 on a written recall test, [i.e., 56.5%]). If we average out the two scores, we receive 71%. However, a written recall test requires learners to demonstrate their writing ability as well. This may explain the relatively low "adequate" test score. Maybe a more valid comparison between the measures of comprehension in Laufer and Hu and

Nation would involve comparing their multiple choice tests only. In this case, the difference between what was considered “adequate” in the two studies would be much larger, 55% as opposed to 85.7%. Hu and Nation found that nobody could read adequately at 80% of coverage, some learners could at 90% and 95% coverage, but they were in the minority. The conclusion of the study is that 98% is the lexical coverage for adequate comprehension. However, the two different coverage suggestions above, of Laufer and Nation, relate to two different reading scores considered to represent “adequate” comprehension. Hence, both suggestions could be correct depending on what level of comprehension is expected.

Nation, (2001) reporting on the two studies, says that:

the probabilistic threshold is 98%. With this coverage almost all learners have a chance of gaining adequate comprehension. If, instead of adequate comprehension, a standard of minimally acceptable comprehension is applied (as Laufer did in her study), then 95% coverage is likely to be the probabilistic threshold. (p. 147)

The second factor related to the threshold issue has to do with finding out the vocabulary level, in terms of the size of sight vocabulary, which learners need to reach in order to read adequately. This can be approached in two ways: by examining the coverage that words of different frequency levels provide to texts in representative corpora, or by testing students on text comprehension and relating different reading scores to learners’ vocabulary size.

The problem addresses by the present study is generally confined to research on vocabulary knowledge as one of the effective factors in reading comprehension. In addition, the effect of the percentage of the words that cover the reading texts and text coverage, on the performances of the Iranian EFL learners in the different reading comprehension text types will be discussed. Since no previous study has attempted to carry out such an exploration in the EFL contexts, the present study seeks to fill this gap in literature by analyzing the issue of the reading comprehension performances of some EFL Iranian university students. In addition, it is expected that the study will inspire other researches in this field especially focusing on suggesting methods of teaching vocabularies. Furthermore, it is hoped that the findings of the study will help and encourage syllabus designers and material developers to know how the appropriate selection of the reading text types makes the language learning

process more effective and enjoyable. The idea can also be applied in teaching realm that draws the instructors' attention to know how the appropriate selection of reading comprehension types of the texts help their students perceive and comprehend the assigned reading materials adequately.

The aim of this study is to investigate the relationship between EFL learners' reading comprehension their lexical coverage of the text and vocabulary size while reading.

Accordingly, what differentiates the present study from previous researches in this field is the great emphasis that is placed upon the performances of the learners on the different genres (narrative & argumentative genres).

Based on the theoretical frameworks of the study the present study addresses the following questions.

RQ1: Is there any relationship among EFL learners' reading comprehension, vocabulary size, and lexical coverage of the text?

RQ2: Is there any relationship among different reading comprehension texts (narrative & argumentative genres) and vocabulary size?

RQ3: Is there any relationship among different reading comprehension texts (narrative & argumentative genres) and lexical coverage of text?

Method

Participants

A total of 180 male and female pre-intermediate level students took part in this study were university students in Talesh-Iran and were doing a general reading course for academic purpose. Prior to the university, they studied English for seven years at high school. Many of them did not continue their studies immediately after school. All of them were Iranian foreign language learners.

The researcher tried to determine their homogeneity through Nelson proficiency test and 120 participants whose scores fall one SD above and below the mean were selected to take part in this study. This test was first piloted with 30 students to check its reliability and then the test was implemented for the purpose of homogenizing the sample of the study and to make sure that the study enjoys homogeneous and identical participants with respect to the participants' English language proficiency.

Instrumentation

Nelson Proficiency Test. Nelson test was administered to the experimental and control groups to ensure their homogeneity regarding their proficiency level. The validity and reliability of the Nelson test have been estimated several times before by other researchers and it is considered as highly valid test of English proficiency (Shahivand & Pazhakh, 2012). The test was implemented for the purpose of homogenizing the sample of the study and making sure that the study enjoyed homogeneous and identical participants with respect to their English language proficiency. The reliability of the test then was calculated as 0.87 based on Cronbach's alpha coefficient method which is an acceptable reliability.

Nelson Reading Proficiency Test. The first instrument was a Nelson reading proficiency test (Brown, Fishco, & Hanna 1993). This test consisted of 30 multiple choice items in which three passages were used. Learners were asked to answer the questions in 45 minutes. This test was first piloted with 30 students with similar characteristics to that of the main participants of the study to check its reliability and then the test was implemented for the purpose of homogenizing the sample of the study and to make sure that the study enjoys homogeneous and identical participants with respect to the participants' English language proficiency. The reliability of the test then was calculated as 0.79 based on KR-21 method which is an acceptable reliability.

Vocabulary Levels Test. Learners' vocabulary size was measured by the new version of Vocabulary Levels Tests, 20 vocabulary frequency lists including 20,000 most frequent words (Nation, 2006; Nation & Beglar, 2007) which was validated by Beglar (2009). According to the level of the participants, intermediate, the researcher chooses items from the 2000, 3000, and 5000 most frequent words. Each word in Vocabulary Level Test represents a word family, (the word, its inflections and derivations). Each frequency level test includes 10 items and each item represents knowledge of 100 words. Every correct answer receives one point, an incorrect answer or no answer receives 0 points. Due to the participants' level, intermediate, they were not given the 10,000 level as it is too difficult for them. A test is not a precise measure of vocabulary size; it can be considered as a tool to measure the learners' knowledge of items from particular levels.

Lexical Coverage of Texts. To measure the lexical coverage of the texts, the researcher used a new version of the vocabulary profiler which matches a text to 20 vocabulary frequency lists created on the basis of the British National Corpus (BNC). This lexical profiler (IBM program) is available at Paul Nation's website (http://www.victoria.ac.nz/lals/staff/paul_nation/nation.aspx) and at Tom Cobb's site (<http://lextutor.ca>).

Two reading comprehension texts with different genres entered into the computer, the program produced a list for each reading text, and it showed what percentage of the text is covered by each word frequency list. Words that were not included in the 20,000 most frequent vocabulary appears in a list as “off list” words. Recently, a special function is added by Tom Cobb (<http://lextutor.ca>) which allows the user to analyze a text in a way that all proper nouns included in the texts which are personal and geographical names (e.g., Smith, Paris) are reclassified and appeared in the first thousand most frequent words. It is based on the assumption that these proper nouns do not belong to the lexicon of a particular language, and if the reader is not familiar with them, the comprehension problems cannot be considered as the lack of lexical knowledge or lexical unfamiliarity. However, proper nouns which are as regular words, (e.g., Eiffel Tower, Syntactic Argumentation) appear in their related frequency lists. Therefore, the researchers analyzed each text twice: once with the new function that most of the proper names appear in the first most frequent word list (K1); and once without it, in this case most proper names appear in the “off list” words. Then the researcher calculated the difference in the number of the tokens of proper names between the two “off list” lists and converts it into percentage out of the total number of tokens. In this way, the percentage of proper names in the text obtained.

Various Reading Comprehension Text Types. Two different English reading comprehension text types namely narrative and informative selected from original English texts were used to measure the students' reading comprehension ability.

The narrative reading comprehension test first being revised by the researcher and two qualified English professors, the test was first piloted among 30 students for the purpose of calculating the reliability of the test. The results

represented that the mean was 29.66 and the SD was 4.97. The reliability of the test then was calculated as 0.81 based on KR-21 method which is an acceptable reliability.

The argumentative reading comprehension test was consisted of 30 items. This test was also first piloted among 30 students for the purpose of calculating the reliability of the test. The results represented that the mean was 28.43 and the SD was 4.81. The reliability of the test then was calculated as 0.79 based on KR-21 method which is an acceptable reliability.

Procedure

The entire study took two weeks (four sessions). The first session was devoted to Nelson proficiency test. Then Vocabulary Level Test was administered to the selected participants based on Nelson proficiency test (pre-intermediate level learners) for session two. In the third session, a Nelson reading comprehension test was administered to observe the students' reading comprehension ability.

As the last measurement (session four) to observe the students' abilities in reading comprehension of different text types, each reading comprehension text type (narrative, informative) which contains reading passages followed reading comprehension questions. Some of the questions measures the learner's comprehension of general English knowledge, some questions focus on the understanding of words, and some on the understanding of global textual information(explicit and implicit information) were given to the participants, the obtained scores on reading comprehension tests with narrative genre and reading comprehension test with argumentative genre the were compared by the vocabulary profiler compared with the same data received to show when we used different text types at the same level concerning the learners' vocabulary knowledge by focusing on the most frequency general words, whether the same results were obtained, that is; the scores of the participants in each reading comprehension text types were higher, lower, or equal.

Design

The aim of this study was to assess the relationship between the learners' lexical knowledge and the other crucial factor such as text coverage, lexical size, and their reading comprehension scores at two different genres (narrative & argumentative). All in all, as it is clear, the design of this study is a descriptive one. Descriptive studies are conducted to demonstrate relationships

between things in the world around you and also referred to as “correlational” or “observational” studies (Bickman & Rog, 1998).

Results

The present study aimed to investigate the relationship between vocabulary size, lexical coverage of the text and reading comprehension at narrative and argumentative genres.

In order to address the research questions, the researcher conducted a series of pertinent calculations and statistical routines and came up with certain results. All the data analysis procedures and results are presented and discussed in a chronological order in this section.

Nelson Proficiency Test

Prior to the main study the researcher conducted a pilot study in which 30 learners who bore almost the same characteristics of the participants in the main study participated. The Nelson test was administered to a group of 30 EFL learners bearing almost the same characteristics as the target sample. All items went through an item analysis procedure, including item discrimination, item facility, and choice distribution. Fortunately, no defective item was found. Table 1 reports the descriptive statistics of the Nelson in the piloting phase.

Table 1
Descriptive Statistics for Piloting the Nelson

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
NELSON Pilot	30	10.00	42.00	27.6000	9.56142	-.436	.427
Valid N (listwise)	30						

Also, Figure 1 shows the histogram of the participants' scores on the piloting of the Nelson.

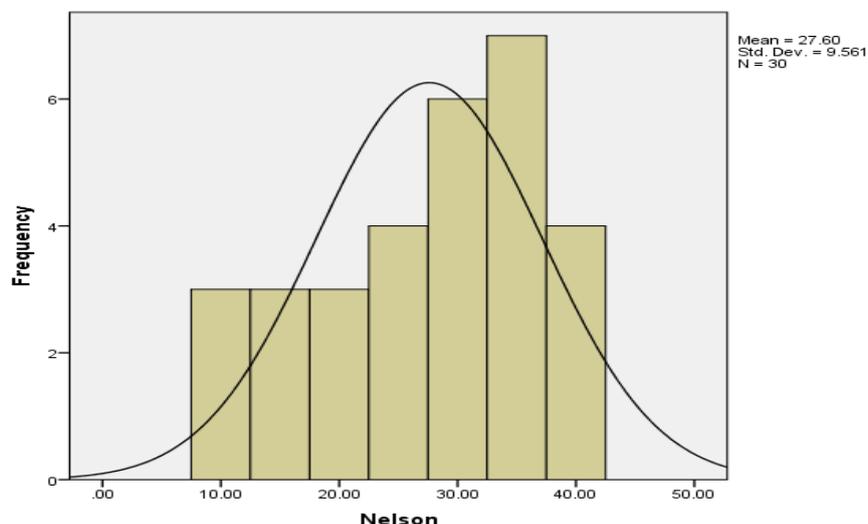


Figure 1. Histogram of the distribution for piloting the Nelson

The internal consistency of the Nelson scores gained from the participants in the piloting phase was estimated through using Cronbach's alpha coefficient. Table 4.2 reports the internal consistency of the piloted test.

Table 2

The Internal Consistency of the Nelson Proficiency Test

Cronbach's Alpha	Standardized Items	N of Items
.879	.879	50

Selecting the Participants

In order to select the participants who were homogenous in terms of their language ability, the researcher used a Nelson proficiency test. Then, using the homogenous participants' scores in writing section of Nelson, the initial homogeneity of the participants in terms of writing was also ensured.

Using the Nelson Test for Selecting Homogenous Participants

Initially, the piloted Nelson test was administered among 180 individuals in order to enable the researcher to choose the homogenous participants of the study. The descriptive statistics pertinent to the 180 test takers is presented in Table 3.

Table 3
Descriptive Statistics of Nelson Scores for the Initial Group

	N	Minimum	Maximum	Mean	SD	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Nelson	180	3.00	47.00	25.0148	8.13963	.068	.209	-.004	.414
Valid N (listwise)	180								

Also, Figure 2 presents the actual shape of the distribution of the scores.

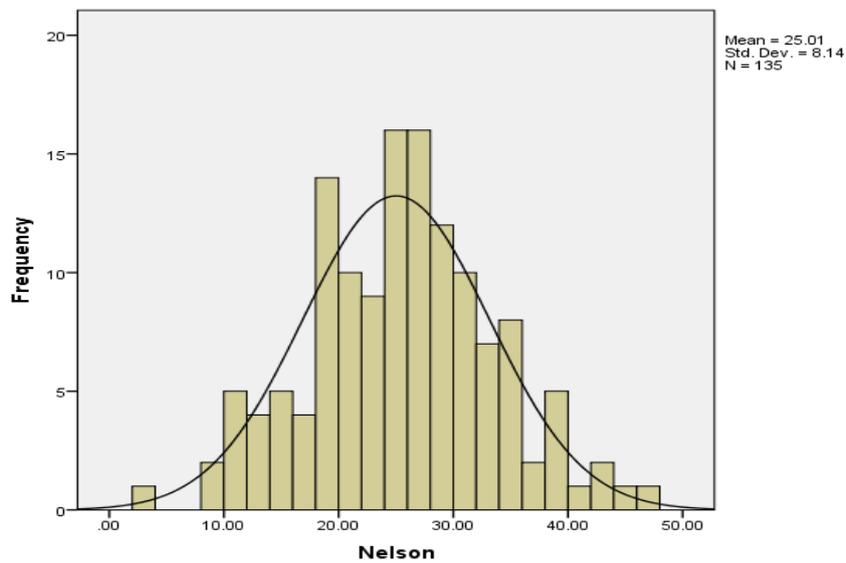


Figure 2. Histogram of the distribution of Nelson scores for the initial group

Based on the values reported in Table 4, the skewness ratio value $.068/.209 = .325$ fell within the range of -1.96 and +1.96. This point provides support for the normality of distribution for the scores (Tabachnick & Fidell, 2007). Moreover, the minimum score was 3 and the maximum score was 41 (Mean = 25.01, SD = 8.14). Following this, in order to select the participants of the study, the researcher selected those individuals whose Nelson scores fell within the range of -1 SD and +1 SD (16.87 to 33.15). Following this procedure

resulted in keeping 120 individuals as the homogenous participants of the study. Table 4 presents the descriptive statistics pertinent to the remaining 120 test takers.

Table 4
Descriptive Statistics for the Homogenous Participants

	N	Minimum	Maximum	Mean	SD	Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Nelson	120	18.00	33.00	25.0444	4.17298	-.068	.254
							Std. Error
Valid N (listwise)	120						.503

Also, Figure 3 presents the actual shape of the distribution of the remaining scores.

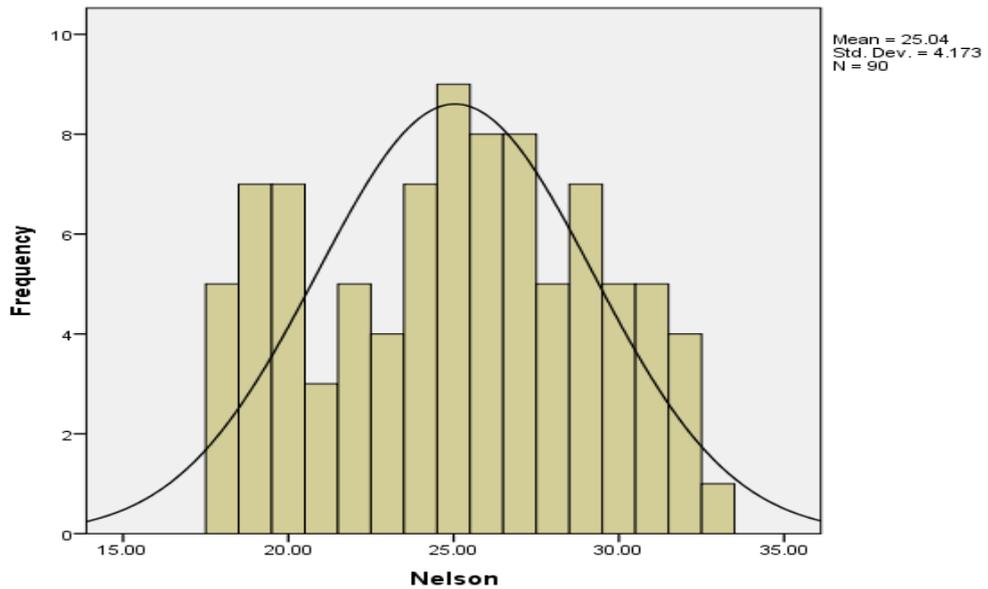


Figure 3. Histogram of the distribution for the homogenous participants

Nelson Reading Test

As mentioned in the previous chapter, in order to ensure homogeneity of the groups in terms of their reading comprehension, was administered to students. Table 5 indicates the descriptive statistics of this test.

Table 5

Descriptive Statistics for the Scores on Nelson Reading Test

Group	N	M	SD
	120	13.321	4.105

The normality check of the scores of Nelson reading test is presented at Table 6. All the obtained data from the samples were put into SPSS and Kolmogorov-Smirnov test was run. The sig. value is .165, which is bigger than 0.05. Therefore, the distribution of the scores on Nelson proficiency test was normal.

Table 6

Normality Check for the Scores on Nelson Reading Test

Variables	N	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
Nelson Proficiency Scores	120	0.104	0.165

In order to ensure the homogeneity of the learners in terms of reading proficiency, one-way ANOVA was run. The results indicated that there was no significant difference across the groups of participants on their level reading proficiency ($F= 0.46$, $P=0.83$). Table 7 represented the results.

Table 7

One-Way ANOVA for Scores across the Groups in the Nelson Reading Proficiency Test

Source	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8.033	2	4.017	0.778	0.838
Within Groups	294.150	57	5.161		
Total	302.183	59			

Analyzing Different Reading Texts

The English reading texts with different genres were analyzed in terms of the percentage of coverage of each BNC (British National Corpus) frequency list. Table 8 shows the coverage of 10 lists. The proper nouns have not been categorized by the special function to be included in the K1 list, but are distributed among all lists. Thus, the proper nouns which are personal and geographical names are included in the “off list” words.

Table 8

Coverage of the Narrative (Test1) and Argumentative (Test 2) Texts by BNC Frequency Lists

Frequency level	Coverage % Test 1	Coverage % Test 2	Average cumulative Coverage
K1	80.15	79.55	78.58
K2	9.39	.92	86.66
K3	2.49	3.11	90.56
K4	2.21	2.58	92.81
K5	0.74	1.09	94
K6	0.80	1.13	94.7
K7	0.39	0.69	96.1
K8	0.48	1.11	96.47
K9	0.17	0.21	96.59
K10-K20	1.12	0.98	95.63OFF
LIST	2.19	2.63	~100

Table 8 presents the percentage of proper names calculated following their categorization as the first 1,000 words. If it is considered that the proper names are familiar to the learner, then the 95% coverage can be achieved with knowledge of 4,000 words, which cover almost 93% and the proper nouns which cover an additional 2.1%. 98% coverage can be reached by knowledge of 7,000–8,000 and the proper nouns.

Since the aim of the paper was to find out the relationship between vocabulary size, coverage and reading scores, the researcher presented the combined data on the coverage data with the data on learners' vocabulary size and the reading score. As mentioned earlier, in the section three on measuring vocabulary size, it divided the learners by intervals of 1,000 words. In Tables 9 and 10, the BNC list is replaced with learners' vocabulary size. If, for example, 5,000 words cover 94 % of a text, then learners with knowledge of 5,000 words can understand a similar percentage of this text (Mezynski, 1983). As

mentioned in the section on measuring reading comprehension, the raw scores of reading are out of 20.

Table 9
Vocabulary Size, Lexical Coverage and Narrative Reading Comprehension Test

Approximate Vocabulary size	Lexical coverage	Narrative test Mean (SD)	No. of student
1,000	78,50	13.23 (3.65)	33
2,000	83.60	12.68 (.027)	23
3,000	89,88	12.83 (2.399)	18
4,000	91.00	14 (4.48)	28
5,000	92	15.90 (3.86)	10
6,000	91		
7,000	94.63		
8,000	93	14.97 (2.75)	8

Table 10
Vocabulary Size, lexical Coverage and Argumentative Reading Comprehension Test

Approximate Vocabulary size	Lexical coverage	Argumentative test Mean (SD)	No. of student
1,000	78,50	12.86 (3.32)	30
2,000	83.60	11.32 (4.10)	26
3,000	89,88	12.53 (2.68)	16
4,000	91.00	14.41 (4.74)	30
5,000	92	15.40 (4.48)	12
6,000	91		
7,000	94.63		
8,000	93	14.07 (2.11)	6

Testing Research Hypotheses

RQ1: Is there any relationship between EFL learners' reading comprehension, vocabulary size, and lexical coverage of the text?

In order to answer the research questions, inferential statistics was run (Table 11).

Table 11
Pearson Correlation; Reading Comprehension, Vocabulary Size, and Lexical Coverage of the Text

		Reading Comprehension	
Vocabulary Size	Pearson Correlation	.537**	
	Sig.(2-tailed)	.000	
	N	120	
Lexical Coverage	Pearson Correlation	.473*	.493**
	Sig. (2-tailed)	.015	.010
	N	120	120

** . Correlation is significant at the 0.01 level (1-tailed).

As indicated in Table 11, there was significant relationship between reading comprehension, vocabulary size, and lexical coverage of the texts. Thus, the first null hypothesis, that is, "There is not any relationship between EFL learners' reading comprehension, vocabulary size and lexical coverage of the text," was rejected.

RQ2: Is there any relationship between different reading comprehension genres (narrative & argumentative) and vocabulary size?

The Pearson correlation was run to probe any significant relationship between vocabulary size, and reading comprehension genres. The results are represented in Table 12.

Table 12
Pearson Correlation; Reading Comprehension Genres, and Vocabulary Size

		Reading Comprehension	
		Narrative	Argumentative
Vocabulary Size	Pearson Correlation	.605**	.609**
	Sig. (2-tailed)	.000	.000
	N	120	120

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

As Table 12 indicates, there was a significant relationship between EFL learners vocabulary size and narrative reading test, $R(39) = .50, P < .05$, which represents a large effect size, and argumentative reading test, $R(39) = .60, P < .05$, which represents a large effect size. Thus, the second null hypothesis, that is, "There is not any relationship between different reading comprehension genres (narrative & argumentative) and vocabulary size", was rejected.

RQ3: Is there any relationship between EFL different reading comprehension genres (narrative & argumentative) and lexical coverage of text?

The results of the analysis related to the third research question are related to Table 13.

Table 13
Pearson Correlation between Reading Comprehension Texts and Lexical Coverage

		Reading Comprehension	
		Narrative	Argumentative
Lexical Coverage	Pearson Correlation	.439*	.582*
	Sig. (1-tailed)	.015	.000
	N	120	120

** . Correlation is significant at the 0.01 level (1-tailed).

As Table 13 indicates, there was a significant relationship between different reading comprehension text types and learners' lexical Coverage of text. Thus the third alternative hypothesis as there is relationship between cognitive awareness and EFL learners' lexical knowledge was rejected.

Discussion

The aim of the study was to explore the relationship between text coverage, vocabulary size of the learners, and two different reading comprehension text types, namely narrative and argumentative. Considering the proposed questions of this study, the answers to each of them will be presented and discussed below.

RQ1: Is there any relationship among EFL learners' reading comprehension, vocabulary size, and lexical coverage of the text?

Pearson correlation was run to test the first null hypothesis; the reading tests' scores were correlated with learners' vocabulary size. As it is evident from the results, there was significant relationship in the scores of the participants in the reading comprehension test with their vocabulary size and lexical coverage of the text.

RQ2: Is there any relationship among different reading comprehension texts (narrative & argumentative genres) and vocabulary size?

Pearson correlation also was run to test the second null hypothesis; the reading tests' scores were separately correlated with learners' vocabulary size. As the results showed, there were significant relationships in the scores of the participants in the different reading comprehension test with their vocabulary size.

RQ3: Is there any relationship among EFL different reading comprehension texts (narrative & argumentative genres) and lexical coverage of text?

Another Pearson correlation analysis was run to test the third null hypothesis; the reading tests' scores were separately correlated with learners' lexical coverage of the text. As the results showed, there were significant relationships in the scores of the participants in the different reading comprehension tests with their lexical coverage of the text.

The results found in this study are in accordance with corpus-based studies (e.g. Nation, 2006), which show that the less frequent the vocabulary, the smaller the portion of text coverage.

However, as the result of the study indicated, the relationship between vocabulary size and reading implies that even a small increase in lexical coverage may be just as beneficial to reading as a larger increase in coverage.

The results are in accordance with Laufer and Nation's (2001) study which, explored the relationship between vocabulary size and speed of decoding word meaning and found that speed on a particular word frequency level increased only when learners' vocabulary size progressed far beyond that level. This means that the participants with a large vocabulary read more fluently the frequent words in the text, which may have given them an overall advantage over the learners with a smaller vocabulary, who had not yet attained a similar level of fluency

Hu and Nation (2000) also investigated the relationship between lexical coverage and reading comprehension. The conclusion of their study showed that 98% is the lexical coverage for adequate comprehension.

The results are also in line with the results of the study conducted by Laufer (1992). His concludes have practical implications for syllabus designers to set vocabulary goals on the basis of the comprehension level expected of learners. Thus, here again, we can see how the notion of vocabulary threshold is contingent upon what is considered “reasonable” or “adequate” comprehension .

In the present study, the researchers combined data on the lexical coverage of two different kinds of texts with learners’ vocabulary level. Since the texts that were analyzed for coverage were of similar nature and practically identical difficulty to the texts learners were examined on, it could find out how the reading scores on the tests were associated with coverage and with learners’ vocabulary knowledge. Hence, the study contains elements from Laufer (1989, 1992), Hu and Nation (2000) and Nation (2006).

The aim of the study was to explore the relationship between text coverage, vocabulary size of the learners, and two different reading comprehension text types, namely narrative and argumentative. The results found here are in accordance with corpus-based studies (e.g., Nation, 2006), which show that the less frequent the vocabulary, the smaller the portion of text coverage.

However, as the result of the study reveals, the relationship between coverage, vocabulary size and reading implies that even a small increase in lexical coverage may be just as beneficial to reading as a larger increase in coverage.

The results are in accordance with Laufer and Nation's (2001) study which, explored the relationship between vocabulary size and speed of decoding word meaning and found that speed on a particular word frequency level increased only when learners’ vocabulary size progressed far beyond that level. This means that the participants with a large vocabulary read more fluently the frequent words in the text, which may have given them an overall advantage over the learners with a smaller vocabulary, who had not yet attained a similar level of fluency

It cannot be claimed that reasonable reading comprehension cannot occur if learners have not reached the lexical coverage, or that the coverage will

automatically yield good reading comprehension. In our data there were learners who did not fit the general pattern of “better vocabulary leading to better reading.” The general reading skills of these students may have affected the reading score more than their vocabulary knowledge. As for the relationship between vocabulary size and coverage, there are texts, can be reached with a smaller vocabulary than suggested here. Conversely, in some texts with a large proportion of technical and jargon vocabulary, the above coverage may require the knowledge of more low frequency words than suggested in the paper. However, when people read in the area of their expertise, they are usually more familiar with the jargon than with general vocabulary (Cohen et al., 1979). Therefore, when researching reading for general and academic purposes, it is useful to look at academic argumentative prose of general nature .

Regarding the findings of the study, some pedagogical recommendations, mostly for language teachers can be suggested. First and foremost, selecting texts for different levels of instruction should not simply be a matter of examining text difficulty aspects that are based on features such as readability or interest; rather, other factors such as the type of the text should also be considered. Furthermore, language teachers are responsible for the integration of different types of texts when teaching and testing reading comprehension.

The findings of the present study may also contribute both theoretically and practically to language teaching. The role of the learners' vocabulary size and coverage of the text can be taken into account. The good news about the present study is that there has been little study so far on this aspect of reading ability in Iranian context. Of course, there is an ocean of research on reading from different angles but the focus of the present study is something fresh. The results of this study showed that learners' high vocabulary size and lexical coverage can be helpful and effective in preparing EFL learners for reading tasks and caused a general improvement in reading performance following the classroom interventions.

It also seems essential for EFL teachers to improve and update their methodological knowledge and attempt to distinguish and employ the methods/strategies which are more functional in their classrooms in order to enhance learners' lexical knowledge.

Acknowledgments

This work is supported by the Young Researchers and Elite Club, Ahar Branch, Islamic Azad University, Ahar, Iran.

References

- Amirian, M. R., Salari, S., and Heshmatifar, Z. (2015). A validation study of the newly-developed version of vocabulary size test for Persian learners. *International Journal of Education and Research*, 3 (8),
- Beglar, H., and Pazhak, K. (2009). Choosing words to teach. In E. H. Hiebert & M. L. Kamil (Eds.), *Teaching and learning vocabulary: Bringing research into practice*, (pp. 209–222). Mahwah, NJ: Lawrence Erlbaum Associates.
- Best, R. M., Rowe, M. P., Ozuru, Y., and McNamara, D. S. (2005). Deep-level comprehension of science texts: The role of the reader and the text. *Topics in Language Disorders*, 25, 65–83.
- Bickman, A., and Rog, I. (1998). Size and sequence in vocabulary development. In E. H. Hiebert & M. L. Kamil (Eds.), *Teaching and Learning Vocabulary: Bringing research into practice* (pp. 223–242). Mahwah, NJ: Lawrence Erlbaum Associates.
- Coxhead, A. (2000). A new academic word list. *TESOL Quarterly*, 34, 213–238.
- Farvardin, M.T., and Koosha, M. (2013). The role of vocabulary knowledge in Iranian EFL students' reading comprehension performance: Breadth or depth? *Theory and Practice in Language Studies Journal*, 1(11), 1575–1580.
- Fitzgerald, J. (2003). Multilingual reading theory. *Reading Research Quarterly*, 38, 118–122.
- Goulden, R., Nation, P., & Read, J. (1990). *How large can a receptive vocabulary be?* New York, New Burry: Funk and Wagnall.
- Hedin, L. R., and Conderman, G. (2010). Teaching students to comprehend informational text through rereading. *The Reading Teacher*, 63(7), 556–565.
- Hu, M., & Nation, I. S. P. (2000). Unknown vocabulary density and reading comprehension. *Reading in a Foreign Language*, 13, 403–430.
- Laufer, B. & Ravenhorst-Kalvoski, G. (2010). Lexical threshold revisited: Lexical text coverage, learners' vocabulary size and reading comprehension. *Reading in a Foreign Language Journal*, 22(1), 15–30.

- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge.
- Nation, I. S. P. (2013). How large a vocabulary is needed for reading and listening? *The Canadian Modern Language Review*, 63, 59–82.
- Nation, I. S. P. (2011). *Teaching and learning vocabulary*. Boston: Heinle Learning.
- Nation, P., & Beglar, D. (2006). A vocabulary size test. *The Language Teacher*, 31(7), 9–13.
- Nation, P., Coxhead, A. & Sim. D. (2015). *Measuring the vocabulary size of native speakers of English in New Zealand secondary schools*. New Zealand Association for Research in Education.
- Rouhi, M., & Mousapour, G. (2013). EFL learners' vocabulary knowledge and its role in their reading comprehension performance. *Second and Multiple Language Acquisition Journal*, 1(2), 39-48.
- Schmitt, N., Jiang, X., & Grabe, W. (2011). The percentage of words known in a text and reading comprehension. *The Modern Language Journal*, 95(1), 26–43.
- Shaywitz, S. (2003). *Overcoming dyslexia*. New York: Alfred A. Knopf.
- Spearritt, D. (1972). *Identification of sub-skills of reading comprehension by maximum likelihood factor analysis*. New Jersey: Educational Testing Service Princeton.
- Stanley, Zh, (1984). The roles of depth and breadth of vocabulary knowledge in EFL reading performance. *Asian Social Science Journal*, 4(12), 138-142.

Biodata

Nader Assadi Aidinlou is a lecturer at Islamic Azad University, Ahar Branch in Iran. He has received his B.A. and M.A. in Teaching English as a Foreign Language (TEFL) in Iran and his PhD from Universiti Sains Malaysia. He has been the vice-chancellor for Research and Technology at Islamic Azad University, Ahar Branch for three years and is presently presiding at that university. His areas of interest are Applied Linguistics, Systemic Functional Linguistics, Discourse Analysis and Interactive Reading. He has published over fifty papers in reputed journals at home and abroad and made presentations in many local and international conferences.

Mitra Tghinezhad Vaskehmahalleh is a Ph.D candidate at Islamic Azad University, Ahar Branch in Iran. She has received his B.A and M.A. in Teaching English as a Foreign Language (TEFL) at Islamic Azad Universities of Ardabil and Ahar, respectively. She is a member of Young researchers and elite club. She is the president of Vaskeh Research and Training Centers in Iran. Her areas of interest are linguistics, psycholinguistics, cooperative learning and language learning strategies. She has published over twenty papers in reputed journals abroad and made presentations in five national and international conferences.