The Effect of Vocabulary Knowledge on Reading Comprehension of Iranian EFL Learners in Kerman Azad University

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Abstract: *Reading is a language-based skill and involves cognitive process. It is the most important skill to master in order to ensure success in learning. Reading is a process that requires effort on the readers' parts if they want to understand what they are reading. A considerable amount of research has been devoted to understanding the process that contribute to reading comprehension.Vocabulary knowledge and its role in reading comprehension has been one of the main areas of focus in second language research for the last twenty years. So, the present study tends to investigate the effect of vocabulary knowledge on EFL learners' reading comprehension performance. Data were collected by questionnaire from 81 Iranian EFL undergraduate students of English.The results of Pearson Correlation analyses showed a significant positive relationship between vocabulary knowledge and reading comprehension. The findings suggest that giving awareness of vocabulary knowledge to the students along with making them conscious of their ability gives them a broader sense of the depth of reading comprehension texts and improves their reading ability.*

1. INTRODUCTION

Vocabulary knowledge and its role in reading comprehension has been one of the main areas of focus in second language research for the last twenty years. Both vocabulary knowledge and reading comprehension are closely related, and this relationship is not one-directional, since vocabulary knowledge can help the learner to comprehend written texts and reading can contribute to vocabulary growth (Maher Salah, 2008; Nation, 2001; Stahl, 1990).

From among the three major components of language, namely, sounds, grammar, and vocabulary, knowledge of the words, as the building blocks of language has a very crucial role. In fact, without the recognition of the meaning of the words, it would be impossible to either produce or perceive the language. Although students may successfully decode and read fluently, knowing the meanings of words contained in a text is critical to reading comprehension (Mehrpour, et al., 2011).

Second language (L2) research has highlighted the importance of vocabulary knowledge. Carlisle, Beeman, Davis, and Spharim (1999) recommended that L2 vocabulary knowledge made a unique contribution to L2 reading comprehension for primary-level struggling Latina/o readers.

Some researchers advocate that vocabulary is the most crucial factor in reading comprehension. Cooper (1984) described vocabulary as being the key ingredient to successful reading while other researchers argue that "no text comprehension is possible, either in one's native language or in a foreign language, without understanding the text's vocabulary" (Laufer 1997, p. 20; As sited in Maher Salah, 2008). They maintain that when the percentage of unknown vocabulary in a given text increases, the possibility of comprehending the text decreases (Laufer, 1989; Maher Salah,

2008; Nation, 2001). Laufer (1989), claim that a reader whose vocabulary is insufficient to cover at least 95% of the words in a passage will not be guaranteed comprehension. Readers themselves consider vocabulary knowledge to be the main obstacle to second language reading comprehension. Yorio (1971) surveyed second language students, who stated that vocabulary was their most important problem in reading comprehension.

A lot of researchers emphasize on the crucial effects of vocabulary knowledge on reading comprehension. Over the last ten to fifteen years, vocabulary has been considered as a component of language proficiency, both in L1 and L2 language acquisition. Knowledge of words is now considered the most important factor in language proficiency and school success, partly because of its close relation with text comprehension (Bernhardt, 2005; Wang, 2009). Without knowledge of words, understanding sentences or texts is not possible.

There is agreement among second language researchers that vocabulary knowledge is an important component in reading comprehension. As noted, many studies of English as a foreign language have suggested that L2 readers must understand 95% of the words in any text to ensure reasonable reading comprehension of the text (Laufer, 1989; Maher Salah, 2008). Other researchers have suggested that L2 learners need 98% of word coverage to read un-simplified texts for pleasure (Maher Salah, 2008; Nation, 2001).

So, the present study attempts to examine the relationship between vocabulary knowledge and reading comprehension of Iranian EFL learners Students in English Undergraduate Studies of Islamic Azad University of Kerman.

2. LITERATURE REVIEW

Vocabulary knowledge plays an important role in reading comprehension. Reading a language and comprehending it require that one possess sufficient vocabulary. Researchers tend to agree that vocabulary knowledge is a major prerequisite and causal factor in comprehension and that there is a relationship between vocabulary knowledge and reading comprehension. Some studies have investigated this relationship and used vocabulary knowledge as a predictor variable for reading comprehension (Hu & Nation, 2000; Laufer, 1989; Maher Salah, 2008).

In another study, Snow (2002) recognized the strength of the relationship between a vocabulary knowledge and reading comprehension increased substantially as the children advanced in grade level.

Also, Gelderen*et al*. (2004) examined the relationship between vocabulary knowledge and reading comprehension among 397 Dutch students from Grade 8 to Grade 10 in secondary education. As results, found a significant relationship between vocabulary knowledge and reading comprehension with the correlation of .63.

Guo (2008) investigated the relationship between vocabulary knowledge, syntactic awareness and reading comprehension of 155 English speaking undergraduate and graduate students. As results, he showed a strong positive correlation between vocabulary knowledge and reading comprehension. He emphasized that vocabulary knowledge directly affects reading comprehension.

According to Tannenbaum, Torgesen, & Wagner (2006) who examined the relationship between vocabulary knowledge and reading comprehension, found that there is relationship between these two variables. Two hundred and three 3rd-grade students took part in a study that examined the relationships between 3 dimensions of word knowledge and reading comprehension. Confirmatory factor analyses, structural equation modeling, and hierarchical regression analyses show that a 2-factor model of breadth and depth/fluency provides the best fit to the data. Breadth has a stronger relationship to reading comprehension; however, the 2 dimensions of word knowledge have significant overlapping variance that contributes to the prediction of reading comprehension.

In another study has been done by Shiotsu and Weir (2007), examined the relationship between vocabulary knowledge and reading comprehension on L2 learners in Japan. Based on the results, there was a strong relationship between these two variables and vocabulary knowledge in predicting performance on a reading comprehension test.

In addition, Golkar and Yamini's study (2007) studied the relationships between vocabulary knowledge and reading comprehension ability among 76 Iranian undergraduate students .–Three tests of the Vocabulary Levels Test, the Productive Version of the Vocabulary Levels Test, and a TOEFL test were administered to students to find out the relationship between the two vocabulary tests and their relationship to reading comprehension. As results, there was a high correlation between the learners' vocabulary knowledge and reading comprehension ability.

Maher (2008) investigated the relationship between vocabulary knowledge and reading comprehension of authentic Arabic texts. Data was collected from twenty-three learners at Brigham Young University, who ranged from Intermediate Low to Intermediate Mid in both productive and receptive skills. Two reading comprehension tests, circling the unknown words in texts and a lexical coverage test for each passage texts were given to the subjects. A linear regression analysis of the data shows that there is a correlation coefficient of 0.7 and 0.6 between the percentage of known words and students' comprehension of the two reading texts. The results indicate that the subjects needed to know approximately 90% of running words to adequately comprehend the first passage and around 86% to comprehend the second passage.

Kaivanpanah and Zandi (2009) investigated the role of depth of vocabulary knowledge in reading comprehension. A TOEFL test and a measure of depth of vocabulary knowledge were administered to 57 EFL learners (17 males and 40 females). The analysis of the results showed that vocabulary knowledge is significantly related to reading comprehension.

Furthermore, Mehrpour et al, (2011) examined the relationship between vocabulary knowledge and reading comprehension on ELF learner from among five language teaching institutes in Shiraz. The participants of the study were sixty (30 male and 30 female). The results obtained from the analysis of the data indicated that while both depth and breadth 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 discovered that depth and breadth of vocabulary knowledge are positively correlated, that is, those learners who had large vocabulary size had a deeper knowledge of the words, too.

In conclusion, the literature reviews indicate that there is a relationship between vocabulary knowledge and reading comprehension. Vocabulary knowledge has a great impact on reading comprehension. No text comprehension is possible, either in one's native language or in a foreign language, without understanding the text's vocabulary. When the percentage of unknown vocabulary increases, the possibility of comprehending the text decreases.

The previous studies indicate that there is a need for further research to look closely at the relationship between vocabulary knowledge and reading comprehension. Also, few studies have been conducted on vocabulary knowledge and their relationship with reading comprehension among Iranian students. Therefore, there is a need for further research in this area. So, this research measures the correlation between vocabulary knowledge and the reading comprehension of the text among students in English Undergraduate Studies of Islamic Azad University of Kerman.

3. METHODOLOGY

This correlational study investigates the pattern of relationship between vocabulary knowledge and reading comprehension. The method of data collection was questionnaire. The total number of EFL students from the English department in undergraduate level at Azad university of Kerman was 450 students. A sample of 81 students in undergraduate level between the ages 19 and 21 years from the English Department that was determined based on the G-power, were participated in the study. These samples were randomly selected

3.1. Instruments

3.1.1. Vocabulary Knowledge Levels Test

The Vocabulary Levels Test used in this study was the second version of the vocabulary levels test revised by Schmitt et al. (2001). It was originally produced by Nation in (1983) and was later revised by him in 1990. It is a paper-and-pencil test that provides an estimate of vocabulary size at 2000, 3000, 5000, and 10000 frequency levels and also provides an estimate of the size of the examinee's academic vocabulary. The 2000 and 3000 word-family levels test include only high

frequency words in English; the 5000 word-family level is a boundary level between the high frequency and low frequency levels; and the 10000 word –family level includes low frequency words. The university word list level contains specialized vocabulary needed for academic studies.

In this version, there are 10 clusters at each level and each cluster has six words and three definitions. So the test has 150 items. The testes are supposed to match the definitions on the right in each cluster with the corresponding words on the left. The internal consistency reliability of this measure was .90 in this sample.

3.1.2. Reading Comprehension Measures

TOEFL Reading Comprehension Subtest (TOEFL-RBC) is a standardized multiple-choice reading comprehension test (Schedl, Thomas & Way, 1995). Participants attending the test must read five passages that express general academic subjects and answer 30 multiple-choice questions for each passage. Qian and Mary (2004) reported that internal reliability of the test was .90 for adults with various native language backgrounds Developers of the instrument do not mention any thing about the nationality of their participants. The internal consistency reliability of this measure was .85 for the sample of this study.

3.2. Data Analysis

The SPSS program version 16 was used to conduct the analysis of the data. Two statistical procedures of descriptive and inferential statistics were used. The inferential statistics utilized in this study was Pearson Correlation analyses. Two-tailed product-moment correlations were computed for scores from the reading comprehension and vocabulary knowledge to find any possible relationship between the two variables.

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics results of Participants' performance on the Instruments

Table 1 presents the descriptive statistics results of the participants' performance on the instruments, including the summary of mean, standard deviations, and variance value of each variable examined in the study.

Table 1. *Descriptive Statistics of Key Variables*

	N	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Vocabulary knowledge	81	32.197	1.1663	10.4969	110.185	-.257	.267	-.914	.529
Reading Comprehension	81	27.234	1.1835	10.6516	113.457	.058	.267	-1.030	.529
Valid N (listwise)	81								

As the table shows, the mean score of vocabulary knowledge and reading comprehension are 32.19, and 27.23, respectively.

4.2. Relationships Between Vocabulary Knowledge and Reading Comprehension

In order to determine the relationship between vocabulary knowledge and reading comprehension, the Pearson Correlations analyses, were performed. The results obtained from these computations are presented in the following matrix of correlations.

Table 2: Results *of Pearson Correlation Test between Vocabulary Knowledge and Reading Comprehension*

		Vocabulary Knowledge
Reading comprehension	Pearson Correlation	.599**
	Sig.(2-tailed)	.000
	N	81

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

As depicted in Table 2, there was a significant positive relationship between vocabulary knowledge and reading comprehension $(r=.599, p<0.01)$, implying that a larger vocabulary enabled students to recall more information from the text they read and also deeper knowledge of words help learners comprehend the text better. These findings support the results of studies carried out by Gou (2008), Golkar (2007), Maher Salah (2008), Kaivanpanah (2009), Mehrpoor (2011) and Abbutt (2006) who found that there is a significant correlations between vocabulary knowledge and reading comprehension among EFL and ESL readers.

As seen above, findings from the Pearson's Correlations seem to indicate that there are significant relationships between vocabulary knowledgeand reading comprehension. The Pearson's correlation tests indicate positive and significant relationships $(r=0.599\ P<0.01)$ for vocabulary knowledge. According to the Cohen and Holliday (1982), the strength of the correlations is modest.

Moreover, in connection to the relationship between vocabulary knowledge and reading comprehension, the results of the present study indicated that there is a positive and moderate interrelation between these two variables. So, based on the results, hypotheses two can also be accepted. These findings support the results of studies carried out by Grabe and Stroller (2002), Laufer (1996), Gou (2008), Golkar (2007), Hu et al., (2000), Maher Salah (2008), Kaivanpanah (2009), Mehrpour, et al., (2011) and Abbutt (2006).

Vocabulary knowledge and its role in reading comprehension has been one of the main areas of focus in second language research for the last twenty years(Mehrpoor, 2011). Both vocabulary knowledge and reading comprehension are closely related, and this relationship is not one-directional, since vocabulary knowledge can help the learner to comprehend written texts and reading can contribute to vocabulary growth (Maher Salah, 2008; Nation, 2001; Stahl, 1990).The results of the present study may provide EFL teachers with some invaluable information. Understanding students' average vocabulary knowledge and reading ability enables test developers to develop more appropriate English tests that can actually assess students' reading comprehension (Mehrpour, et al., 2011).

5. CONCLUSION

The purpose of this study was to determine the relationship between vocabulary knowledge and reading comprehension among students studying English at Azad University of Kerman. As the result of this study, there was a significant moderate positive relationship between vocabulary knowledge and reading comprehension. This study recognized that vocabulary knowledge as predicting factors to reading comprehension in students studying English. The present finding supports earlier studies done by Gou (2008), Golkar (2007), Hu et al., (2000), Maher Salah (2008), Kaivanpanah (2009), Mehrpoor (2011) and Abbutt (2006) that found significant relationships between vocabulary knowledge and reading comprehension.

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