The Relationship between Vocabulary Knowledge and EFL Learners' Reading Comprehension Performance Targeting Higher Levels of Bloom's Cognitive Domain

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Abstract

The intention of the current study was to investigate the relationship between vocabulary knowledge and EFL learners' reading comprehension performance demanding the higher levels of Bloom's cognitive domain. To achieve its ultimate objective, 3o undergraduate students majoring in English literature at Lorestan University, Khorramabad, Iran participated in this study in 2017. Along with Vocabulary Level Test, they were given a researcher-made reading comprehension test, included three passages, compiled and constructed based on the three higher levels of Bloom's cognitive domain, namely, analysis, synthesis, and evaluation levels. The result of Pearson correlation revealed that there is no relationship between vocabulary knowledge and EFL learners' reading comprehension performance in texts gauging the analysis, synthesis, evaluation behaviors of Bloom's cognitive taxonomy.
Keywords: Vocabulary knowledge, Reading, Bloom's Cognitive Domain

INTRODUCTION

The role of reading skill in EFL contexts has recently achieved considerable attention. It's necessary for EFL learners to interact with texts and properly grasp their writers' intended meanings. Mckee (2011) regards reading as "a receptive, dynamic process in which the reader is endeavoring to make a connection between ideas in the text". In another definition, Rumptz (2003) considers reading as "a complex process involving connection of visual information with existing schemata of knowledge by means of readers' psycholinguistic strategies (making inferences and prediction) and metacognitive strategies (selective attention, skimming, gist previewing, sequencing , and attending to details)". From these definitions, it can be inferred that reading process goes beyond reading and memorizing texts without understanding their contents. The reading

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activity must target the higher level of cognitive processes. Unfortunately, most of reading comprehension tests gauge only the lower levels of thinking and fail to evaluate the higher ones. To assess these cognitive processes, Bloom et al (1956) designed a cognitive taxonomy for evaluating the readers' mental processes involved in reading process. The cognitive domain of Bloom's taxonomy has six levels, namely, knowledge, comprehension, application, analysis, synthesis, and evaluation arranged in a pyramid from the simplest to the most complex ability. It is very crucial for EFL readers to analyze, synthesize, and evaluate their scientific and academic course books. The Bloom's cognitive taxonomy is the most appropriate assessment device due to taking in to account the third higher levels of thinking process as analysis, synthesis, and evaluation. Ziyeomehr (2016) elucidates the Bloom's cognitive taxonomy as follow:

- At the lowest level of this taxonomy, knowledge, learners must be able to recall, repeat, and memorize information.
- At the second level, comprehension level, they must be able to explain, interpret, and paraphrase the information.
- At the third level, application, they must be able to utilize their information in a real situation to solve the problems.
- At fourth level, analysis, they are expected to compare, classify, contrast, and categorize their acquired information with other information or experiences.
- At fifth level, synthesis, they are expected to create, invent, predict, construct, design based on their experience and situation.
- At last level, evaluation, they are expected to judge, justify, and make decision about the real situation and experience.

Although these levels of reading comprehension are very important, EFL learners almost fail to answer the questions targeting these higher levels. Literature review has revealed that numerous factors influence the best reading comprehension, but vocabulary knowledge is the most fundamental factor contributes to reading comprehension. For example, Laufer (2014) assert that although syntactic complexity and back ground knowledge affect level of reading comprehension, the insufficient vocabulary will hinder the successful comprehension of the text. Similarly, Liu (2016) states that to fully grasp a certain text, learner must know most of its words. Anjomshoa and Zamanian(2014) point out without understanding the texts vocabulary ,it is almost impossible to comprehend the text, either in one's native or foreign language. We select an anthology of Current studies conducted on the relationship between vocabulary knowledge and reading comprehension. For example, Aidinlou and Vaskehmahalleh (2017) explore the relationship between EFL learners' vocabulary size, lexical text coverage, and their reading comprehension. The findings indicated a strong relationship between reading comprehension, vocabulary size and lexical coverage of the text. Kezhen (2015) investigated the correlation ship between vocabulary depth, breadth, and reading comprehension .the results showed that there is a moderated ,positive correlation between reading comprehension , vocabulary breadth and vocabulary depth. Farvardin and Koosha (2011) not only explored the relationship between vocabulary knowledge and reading comprehension but also found out which aspect of vocabulary knowledge ,

namely, depth or breadth has greater influence on reading comprehension. The results expressed by two-tailed Pearson correlations and multiple regression analyses indicated that there was a positive correlation between reading comprehension and vocabulary depth and breadth knowledge and vocabulary breadth had greater impact on reading comprehension. In another study, Anjomshoa and Zamanian (2014) investigated the correlation ship between vocabulary knowledge and reading comprehension. The findings revealed that there is a significant, positive relationship among vocabulary knowledge and reading comprehension. Abedi (2017) conducted an experimental study to explore the relationship between depth of vocabulary knowledge and reading comprehension, after analyzing the data, he concluded that there is a strong positive relationship between depth of vocabulary knowledge and reading comprehension. Although the relationship between vocabulary knowledge and reading comprehension has been a focus of many studies, few of them have aimed to examine the relationship between vocabulary knowledge and higher cognitive levels of reading comprehension. In current study, we attempt to explore the relationship between vocabulary knowledge and reading comprehension targeting higher levels of thinking process.

METHOD

The participants include 30 undergraduate students majoring English literature at Lorestan University, Iran. To collect the data, two instruments were utilized. 1) Vocabulary Level Test (VLT) 2) a researcher –made reading comprehension test. The VLT has five levels; 2000 word, 3000 word, 5000 word, 10000 word, and academic vocabulary levels. In this study, we chose the VLT as Nation (2001) asserts this test can be conducted, marked, and interpreted both quickly and easily. We administered the version 2 of this vocabulary test, revised by Schmitt et al (2001). Its each level has 30 items in which each correct answer receives one point, and wrong answer receives zero point. The reading comprehension test consisted of three short texts each followed by 4 multiple- choice options. The texts were successively organized based on Bloom's the third higher levels of cognitive domain, namely, analysis, synthesis, evaluation. The internal indexes of reliability, determined by Cronbach's Alpha, for VLT and RC are respectively as 0.71 and 0.75. The tests were distributed among participants in a forty- minute session. A two-tailed Pearson correlation was run to analyze the data.

RESULTS AND CONCLUSION

After collecting the data and running Pearson correlation, it was found that there is no correlation between vocabulary knowledge and reading comprehension (r=.114, p<0.0).

Table 1. Correlations

		RC	Vocabulary level test
RC	Pearson Correlation	1	.114
	Sig. (2-tailed)		.550
	N	30	30
Vocabulary level test	Pearson Correlation	.114	1
	Sig. (2-tailed)	.550	
	N	30	30

The purpose of current research was to investigate the relationship between vocabulary knowledge and reading comprehension demanding the higher order of cognitive processes; the research finding was incongruent with the previous research on the relationship between the concerned variables. It revealed no relationship between vocabulary and reading comprehension. Interpreting its finding, it can be concluded that there may be other more powerful factors than vocabulary, playing crucial roles in better comprehension of text targeting higher levels of thinking. For example, Sanford (2015) classifies the integral factors affecting reading comprehension in to six factors as follows:

1. Prior knowledge
2. Word recognition
3. Working memory
4. Vocabulary
5. Reading strategies
6. Motivation –to-read

In the same vein, Davoudi and Yousefi (2015) identified the most important sources of reading comprehension failure as below:

1. The learner variables
    a. Poor back ground knowledge
    b. Inadequate vocabulary knowledge
    c. Grammar knowledge deficiency
    d. Slow reading
    e. Deficient language ability
    f. Poor metacognitive awareness
    g. Lack of motivation and interest
    h. Reading anxiety
2. The teacher variables
    a. Expecting too much comprehension from learners
    b. Hardly teaching comprehension strategies to them
3. The textual variable
    a. Type of text
    b. Structure of text

In this experimental study, we only explored the role of vocabulary knowledge in better performance in reading comprehension, so further research on the role of other crucial variables in reading comprehension of texts gauging higher levels of reading process is strongly recommended.

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