International Journal of Research in English

Influence of vocabulary knowledge on reading comprehension of esl learner's

Sonia Abdul Karim[1], Sumiya Abdul Karim[2]
[1-2] MA English, Shaheed Benazir Bhutto University, SBA, Sindh, Pakistan

Abstract
Knowledge of the words is the major component among any language content i.e. Sound and grammar. It would be impossible to speak or perceive language if recognition of meaning of words is not there. This experimental research is an attempt to investigate the effect of vocabulary knowledge among ESL Learners reading comprehension at the undergraduate level students. Answers of all research questions are responded through descriptive statistical analysis, the quantitative measures. The data plan based on two type of tests, vocabulary level test for size of vocabulary whereas the second one test TOEFL two paragraphs for reading test. In the analysis of the data regression and person's correlation statistics were used. The finding demonstrated that vocabulary information was significantly correlated with reading performance and deep vocabulary information has more impact on reading performance.

Keywords: vocabulary level, vocabulary size/ breadth, reading comprehension.

1. Introduction

A very prominent part played by vocabulary knowledge in the lives of peoples and in their future possibilities by Beck, McKeown & Kucan (2002). In the last twenty years vocabulary Knowledge and its role in reading performance has been one of the most focused areas in second language research. Knowledge of the words is the major component among three language content. That is sound and grammar. It would be difficult to speak or perceive language if recognition of meaning of words is not done properly. So, this study attempts to investigate the relation between vocabulary knowledge and reading comprehension in the part of language learning, vocabulary knowledge linked with success in second language and foreign language learning with regards to different language skills in a wide range of studies by Laufer & Goldstein (2004) and Saville-Troike, & Nation (2002).Appropriately, the noteworthy significance of vocabulary knowledge has been underlined and vocabulary deliberate one of the most basic component of learning a language.

1.1 Objectives
- To investigate the influence of vocabulary knowledge on reading comprehension.
- To study the relation between reading comprehension and vocabulary knowledge.
- To observe the possible difference among genders based on vocabulary knowledge and their reading performance.

1.2. Hypothesis
H1: There will be a powerful relation among Paul Nation's vocabulary level tests and reading performance.
H0: There will be no powerful relation among Paul Nation's vocabulary level tests and reading performance.

2. Literature review
2.1 Vocabulary knowledge
In latest studies, L2 vocabulary investigators have presented distinctive but complementary framework to go to arrange inclusive description of vocabulary information Richards (1976) and Chappelle (1998).

Richards, (1976) He recognized seven features of vocabulary information. (E.g. "association, syntactic, semantics values, fundamental forms, actions, deviations and distinctive meaning".Nation (1990) documents the difference among eight kind of vocabulary information ("e.g. function, meaning, form, grammatical form, and relation to each other)". Chappelle (998) argues that every description about vocabulary have unfolded in four aspects. a) Characteristics of words b) mass of words c) contact process of lexical d) lexicon composition.

2.2 Vocabulary's vital role in second language reading
In number of research studies, researchers consider reading as a most important skill in second language learning, particularly in educational setting by Huckin & Haynes (1993, 1991). Investigators interest in second language reading is to investigate those factors which might be associated to assure an effective reading Grendel (1993). Make description about it as "knowing the meaning of a word". (p.114). Vygotsky (1986) argues that "a word without meaning is an empty sound, no longer a part of human speech" (p.6). In the research study of Nation (2001) [7] the frame work on the information of vocabulary was mentioned and recommended that the information of an individuals about words could be in both forms i.e. productive and receptive," To cover all aspect of what is involved in knowing a word" Nation (2001,) [7]. Nation presents more than eight aspects about the information of words which contain form, meaning and usage etc. Nation links this receptive and productive information of words with these features. The receptive information considered as essential for the meaning of the word deprived the requirement of producing the word another time, whereas the requirement of the information in productive knowledge is to "produce language forms by the speaking and writing to convey a massage to others Nation (2001) [7].

2.3 Size of vocabulary knowledge and L2 learners reading comprehension

In 1993 a study by Coady, Moggoto and Hubbard had directed between participant of 79 getting English education in "university of academic preparation program" exposed two investigational groups, that had acknowledged distinctive drill with high frequency vocabulary, realized improved ESL reading comprehension stand-up at the end of the investigation, then had a control set that had not acquired such type of training treatment. The study used to be carried out to identify the intention that there is an encouraging relationship between high frequency vocabulary knowledge and reading proficiency. According to the finding of this study, Coady et (al, 1993), claims that extraordinary learning of 2000 high frequent English vocabulary words might progress learners reading performance.

More recently Zhang L. J (2008) [10] investigated the important part of vocabulary information in reading comprehension using 37 participant understudies in Singapore. The investigator utilized vocabulary level test to examine the learners' vocabulary information in reading comprehension and their performances. Finding showed that learners, vocabulary information and their reading comprehension were related at 2000 words level and 3000 words level. Essential association made only for small answer questions, not for instant proficiencies. The investigators assume that numerous tasks may have prominence reading comprehension achievements.

2.4 Models of reading

In reading comprehension, a number of complex practices and capabilities are involved. In the improvement of reading comprehension, it is imperative to accept reading cognitive procedures specifically, words reading. In reading acquisition, five processes are involved stated by Siegel (1993). The last process which is to take up as an important in process of reading, connected with the understanding of principles in writing or orthography and also related with knowledge of word spelling.so that, these capabilities like knowledge of phonetic sounds, identification of words, fluency of reading, comprehension of reading and capabilities of particular vocabulary is important for reading Adams (1990) and chill (1967).

2.4.1 Bottom- up model of reading

In 1960s bottom up theory of reading overcame, later it was reviewed by Gough (1972). The bottom up model was mostly defined as a linear model. On the point of view of Dole, Roehler, and Pearson (1991) that in conventional opinion of reading; a firm classified sub skill has been acquired by a reader in beginning to move to comprehension, If the readers were dominant in these skills, than the text was easily comprehended by the readers when they read it. Bottom up models usually based on secondary level in the process of reading. Students take start from lower level that is identifications of sound and letters, then they turn towards morphemes identification then recognitions of words, then they move towards the recognition of grammatical sentences, structures and lengthier passages. The comprehension succeeding order in reading is alphabets, alphabet cluster, words then phrases then sentences then lengthen text and at the end there is meaning. There is a phonics approach to teaching reading that is in favour of bottom up models. In numerous reading series this approach is adopted.

2.4.2 Top down model of reading

On the other hand, the top down model stands in opposite to the bottom up models. The lower level language process is required in bottom up models while top down model is in the favors of higher-level process of cognitive development. In the top down model, the background information is used by the readers. Firstly, make prediction and then investigate this prediction in text to know that weather these predictions are right or wrong. A text can certainly comprehend even though the entire signal words are not figured out. Here, "reading is a selective process. It involves partial use of available minimal language cues selected from perceptual input on the basis of the reader's expectation" Goodman (1970) [4]. Goodman's, (1976) [4] a stable supporter of top down model in reading, the bottom up model was criticized by him as the person who reads become "word caller" who read the word in the text but not fully understand what he reads. Goodman's, 1976 [4] relies on that teacher made learning to read hard" by breaking whole natural language into bite-sized, abstract little pieces" (p.7).

2.4.3 The interactive model of reading

The interactive models are those which are measured as the supreme inclusive depiction of reading procedure. The third kind carries the components of both bottom up and top down models estimating that" a pattern is synthesized based on information provided simultaneously from several knowledge sources" stanovic (1980). Murtagh (1989) argue that those readers are perfect in second language who can "efficiently integrate" in both of the processes the bottom up and top down. In an interactive method to reading, the students utilize the components of both the bottom up and top down models of reading to acquire ample comprehension. In this process l2 readers utilize several bottoms up things while reading that language or universal information and they take numerous things from top down approach that is schema information. Both extensive and intensive reading would contain in this interactive method. For particular reading skill and strategies for short passages are needed for learners while long passage is needed to encourage learners reading. It was observed from earlier discussion of these major models that vocabulary is the most essential element for these models.

3. Methodology

The nature of this study was purely quantitative. The applicants (1st year English department learners) were between the ages of 18 to 23. The participants of the study were taken randomly. The participants of recent study contain both male and female learners. The applicants of this study were 30 in numbers, with 17 (57%) females and 13 (43%) males.

3.1 Tools of the Study

The study used two types of tool to investigate the size of vocabulary and learners understanding on reading comprehension.

3.1.1 Vocabulary level test (VLT)

The tool for investigating vocabulary breadth was made and revised by Paul Nations in 1989. The recent study used new version of Paul Nation "vocabulary level test", that version is 14000 level tests by (Nation, I.S.P. & Beglar, D, 2007) [8]. This

test contains 140 multiple choice items with 10 items from each 1000-word family level.

3.1.2 Reading comprehension test (RCT)

The standardized multiple reading comprehension tests from one version of TOEFL was preferred to investigate the association among the reading comprehension and vocabulary size of ESL learners. Test is the collection of two passages with distinctive topics, each passage contain 5 items of multiple-choice questions. These multiple-choice questions have been done by the participants after reading these two passages. This test was taken to the same participants who had taken VLT.

3.2 Variables

This study has both types of variables independent and dependent. The vocabulary information scores independent and reading comprehension score dependent variable.

Independent variables: The volume of vocabulary information among ESL learners was independent variable.

Dependent variable: The score of reading comprehension was dependent variable.

4. Data Analyses

The statistical analyses were used for the analysis of dependent variables and independent variables distinctly. For mean and standard deviation descriptive analysis was used to know the total score of dependent and independent variable. For statistical analyses of the data linear regression techniques was used. Two-tailed Pearson product-movement correlations were practiced in order to identify the score of reading comprehension (RC), vocabulary level tests (VLT). Two-tailed Pearson product-movement correlations were also used to identify that whether the differences between the vocabulary size and the comprehension of reading of the male and female were statistically significant or not.

4.1 Descriptive Statistics of the Participants Performances

The data was collected by using two instruments previously described, after collection; the calculated data were analyzed here.

Table 1: Descriptive Statistics of the Participants Performances

	N	Minimum	Maximum	Mean	Std. Deviation
vocab	30	3.50	7.75	5.8417	1.07776
Reading Score	30	3.00	8.00	5.4333	1.38174
Valid N (list wise)	30				

As the table shows the mean of both instruments, the mean of

vocabulary was 1.07776 and the mean of independent variable i.e. reading score was 1.38174, respectively.

4.2 Predictions by all four levels vocabulary test on the performance of reading comprehension

Table 2: Predictions by all four levels vocabulary test on the performance of reading comprehension

Model Summary			
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.847^a	.717	.706	.74858
Predictors: (Constant), vocab			

As the sample size of this study is not very large and whole population was not used as a sample so adjusted R square has been used for interpretation. Table shows that the value of adjusted R square is 0.706, which shows that independent variables have 70.6% effect on dependent variable.

4.3 Determination of correlation among independent variable and reading comprehension

In order to find the correlation among one dependent variable and one independent variable The relation among the size of vocabulary and reading comprehension ware calculated 0.05 level of significant. The obtained result showed in following table.

Table 3: Pearson correlation test among vocabulary knowledge and reading comprehension

Correlations			
		Reading Score	vocab
Reading Score	Pearson Correlation	1	.847**
	Sig. (2-tailed)		.000
	N	30	30
Vocab	Pearson Correlation	.847**	1
	Sig. (2-tailed)	.000	
	N	30	30

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

The following table presented that there was a strong, positive correlation among vocabulary and Reading Comprehension, which was statistically significant (r =.847, n = 30, p =.000).

4.4 Determining the possible differences among gender on dependent variable and independent variable

In order to identify whether the gender variable can have any possible difference on the study of independent variable, vocabulary knowledge and on dependent variable namely reading comprehension. The achieved result of these analyses is represented in 4.7 matrixes.

Table 4: Pearson correlation test on gender variable

Correlations				
Gender			Reading Score	vocab
Female	Reading Score	Pearson Correlation	1	.726**
		Sig. (2-tailed)		.001
		N	17	17
	Vocab	Pearson Correlation	.726**	1
		Sig. (2-tailed)	.001	

		N	17	17
Male	Reading Score	Pearson Correlation	1	.951**
		Sig. (2-tailed)		.000
		N	13	13
	Vocab	Pearson Correlation	.951**	1
		Sig. (2-tailed)	.000	
		N	13	13

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

Finding displayed a strong, positive association among knowledge of vocabulary and Comprehension of reading in the case of females, which was statistically significant (r =.726, n = 30, p =.001). It showed a strong, positive association in between knowledge of vocab and Comprehension of reading in case of male, which was statistically significant (r =.951, n = 30, p =.000).
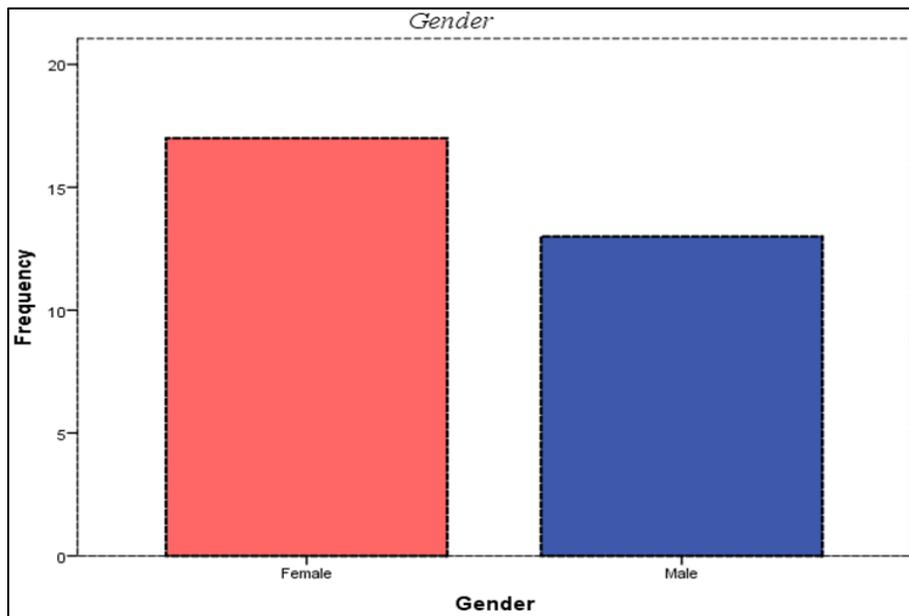
4. 5 Graphical Representation of Gender

Fig 1

The Bar graph shows that 13(43%) respondents are male and 17(57%) respondents are female from total sample of 30.

5. Discussion
The obtained results from the data analysis presents that there is a strong association between the vocabulary knowledge and reading comprehension, and these variables predict strong impact on the second language learners reading comprehension performance. These results also depict positive correlation among dependent and independent variable with respect to the gender variables, the originated results present strong, positive correlation. The independent variable 5.8417 and independent variable 5.4333 describe participant's size of vocabulary knowledge and their understanding of reading.in the next part the achieved results symbolize strong impact of vocabulary knowledge on reading comprehension. Results depict that learner's performance on reading strongly be influenced by learner's knowledge of vocabulary. Pearson correlation coefficients was practiced in order to find out the relation among variable pairs reading comprehension and vocabulary

information, the obtained results were higher than.60(p<.05). More simply the results were all significant and displayed high and positive association in between two variables.
As for as the gender difference is concerned on the learner's vocabulary level test and reading performance, the obtained results display a slight significant difference with the value 0.00<0.5, although both male and female vocabulary have solid significant impact on reading comprehension.

6. Conclusion
This research explores the association among vocabulary knowledge and reading comprehension of second language learners. More specifically, it attempts to examine the vocabulary size of L2 learners and their understanding of reading comprehension. Comparing mean of vocabulary scores and reading comprehension, the obtained result displayed that the subject, who have 80% word coverage or more in both passages its score 7 out of 10 point in reading test. It also assumed that having more knowledge of words means having an adequate comprehension of reading.

7. References

1. Adams MJ. Modelling Connections between Word Recognition and Reading. In R. Ruddell and N. Urnau (eds.), Theoretical Models and Processes of Reading (p. 5th edn): 121943.). (Newark, 2004.

2. Adherson N. individual differences in strategy use in ssecond language reading and testing. modren language journals, 1991, 460-472.

3. Golkar M, Yamini M. Vocabulary and reading comprehension. The Reading Matrix. 2007, 7(3):88-112.

4. Goodman K Smith. Reading: A psycholinguistic guessing game. Journal of the Reading Specialist. 1967,1971; 6:126-135.

5. Laufer B. The Lexical Threshold of Second Language Reading Comprehension: What It Is and How It Relates to L1 Reading Ability. In a. C. Kari Sajavaara. In Approaches to Second Language Acquisition, 1996, 55-62. Jyvaskyla: University.

6. Laufer B. How Much Lexis Is Necessary for Reading Comprehension? In a. P. Henri Bejoint, In Vocabulary and Applied Linguistics, 1992a, 126-132. London: MacMillan.

7. Nation IP. Learning Vocabulary in Another Language. (Cambridge: Cambridge University Press), 2001.

8. Nation ISP, Beglar D. the 14,000 level test. A vocabulary size test. The Language Teacher. 2007; 31(7):9-13.

9. Qian D. Investigating the relationship between vocabularyknowledge and academic reading performance. An assessment perspective. Language Learning. 2002; 52:513-536.

10. Zhang LJ. The role of vocabulary in reading comprehesnion: The case of secondary school students learning English in Singapore. RELC Journal. 2008; 39:51-76.