

## *The Role of Vocabulary in Reading Comprehension*

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### **Abstract**

It is generally agreed that many factors contribute to one's reading comprehension, and there is consensus that vocabulary size is one of the main factors. This study explores the relationship between second language learners' vocabulary size and their reading comprehension scores. A total of 129 Malay pre-university students of a public university in Malaysia participated in this study. They were students of an intensive English language programme doing preparatory English courses to pursue bachelor's degree in English. The findings of the study indicate that the students were able to achieve the vocabulary mastery level at the 2000 and 3000 Word Levels. A correlational analysis was employed to ascertain the relationship between scores in the reading comprehension of the in-house English Proficiency Test (EPT) and Vocabulary Levels tests (Nation, 1990). Based on Pearson product moment correlation coefficient, there was a moderate correlation ( $r=0.641$ ) between scores in the EPT's reading comprehension and Vocabulary Levels tests. The relationship was statistically significant at  $p<0.01$  level. The findings provide beneficial implications for the prediction of reading comprehension performance. It also has implications for the teaching of vocabulary in the ESL context. A better understanding of the relationship between vocabulary size and reading comprehension scores will enhance teachers' and students' awareness of the importance of vocabulary acquisition in the L2 classroom.

Keywords: Vocabulary size, vocabulary learning, reading comprehension, ESL

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## Introduction

The relationship between reading comprehension ability and vocabulary size has been well established. Curtis (1987) asserts that a low vocabulary knowledge can affect comprehension thus affecting students in their ability to acquire new knowledge. Thus it is essential that we understand what it takes for a learner to be able to comprehend what he/she is reading. There are two aspects that have to be considered here.

One aspect is the number of vocabulary that a learner needs. Schmitt (2000) in his study indicated that for learner to be able to read fluently and with complete understanding, a mastery of the 2,000 words is essential. The first 2,000 words taken from a corpus of 5,000,000 written corpus is the foundation upon which learners need in order to acquire more vocabulary; without which, the acquisition of higher level vocabulary would be difficult.

The other aspect that has to be taken into consideration is the number of unknown words that a reader can tolerate. Hu and Nation (2000) claim that for comprehension to take place a learner needs to understand 86% of the running words. Without this learners would also find it difficult to make sense of the text read.

## Research questions

This study was undertaken to investigate the relationship between reading comprehension and vocabulary size of pre-sessional students of the International Islamic University Malaysia (IIUM). Specifically, this study was carried out to address the following research questions:

1. What is the reading score of the IIUM pre-sessional students?
2. What is the vocabulary size of IIUM pre-sessional students?
3. Is there a relationship between vocabulary size and reading comprehension performance of IIUM pre-sessional students?

## Methodology

### i. Participants

The participants in this study were 129 students studying English in the pre-university intensive English language programme at the Centre for Languages and Pre-University Academic Programme, International Islamic University Malaysia (IIUM).

Gender		No. of Students	Percentage	Cumulative Percent
Valid	Male	54	41.9	41.9
	Female	75	58.1	100.0
Total		129	100.0	

Table 1: Profile of students according to gender

Of the 129 students, 75 (58.1%) were females and 54 (41.9%) were males (Table 1). The statistics reflect the female-male ratio of students at the IIUM.

## ii. Setting

The International Islamic University Malaysia is an English medium university which requires all new intake students to fulfil a minimum English language proficiency of EPT band 6, IELTS band 6 or TOEFL 550 before they can be admitted to their respective faculties to pursue their tertiary education. If they fail to meet the minimum language requirement, they would be placed in one of the six levels (for direct intake students) or four levels (for post-secondary students) of the pre-university intensive English language programme based on their scores in the EPT, TOEFL or IELTS.

## iii. Instrument

The Vocabulary Levels Tests (VLT) Version 2 (Schmitt, Schmitt and Clapham 2001) were used in this study to assess students' vocabulary levels. The Vocabulary Levels Tests (VLT) Version 2 were initially developed by Paul Nation, and later revised by Norbert Schmitt and associates. The Vocabulary Levels Tests have been widely used as measures of L2 students' vocabulary sizes and have been tested for reliability for the 2,000 Word Level Test (Cronbach Alpha of 0.922), 3,000 Word Level Test (Cronbach Alpha 0.927), and 0.927 for the 5,000 Word Level Test (0.927) (Schmitt, Schmitt and Clapham 2001). The second instrument used was the Reading Comprehension Test of the IIUM's English Proficiency Test (EPT). It consists of 40 multiple choice questions based on four passages. The scores are distributed according to Bands. The lowest is Band 1, while the highest is Band 9.

The Vocabulary Levels Tests were administered to 129 pre-sessional students. The students were informed that the purpose of the vocabulary test was to find out the extent of their vocabulary knowledge. They were told to complete every item, and not to leave any blanks. All 129 students were present to complete the VLT tests. A week later, all 129 students sat for the EPT's reading comprehension test. Consent was earlier sought and tokens of appreciation were given to them after the completion of the VLT, as well as the reading comprehension test.

## Findings and discussion

A total of 129 post-secondary students from four levels of the intensive English language programme participated in the study. The distribution of 129 post-secondary students is presented in Table 2. A total of 28 students were from Level 1 (LEM 0320), 28 from Level 2 (LEM0420), 40 from Level 3 (LEM0520), and 33 from Level 4 (LEM 0620).

Course Code	No. of Students	Percentage
LEM 0320	28	21.7
LEM 0420	28	21.7
LEM 0520	40	31.0
LEM 0620	33	25.6
Total	129	100.0

Table 2: Profile of students according to levels of proficiency

Three research questions were formulated for the purpose of the study.

**Research question 1:**

What is the reading score of the IIUM pre-sessional students?

Table 3 shows the students' scores in the reading comprehension test of the EPT. Of the 129 students who sat for the reading comprehension test, 2 (1.6%) achieved Band 5.5, while 7 (5.4%) of the students managed to get Band 9 (the highest Band).

Band	No. of Students	Percentage
5.5	2	1.6
6.0	20	15.5
7.0	36	27.9
8.0	64	49.6
9.0	7	5.4
Total	129	100.0

Table 3: Reading comprehension test scores of pre-sessional IIUM students

Band 5.5 is the minimum English language admission requirement for reading. Thus, all 129 students were able to fulfil the minimum admission requirements of Band 5.5 in reading comprehension. It is interesting to note that almost half of the students (49.6%) were able to achieve Band 8.

**Research question 2:**

What is the vocabulary size of IIUM pre-sessional students?

The results of the Vocabulary Levels Test scores of the pre-sessional students are presented in Table 4. The highest mean score for the vocabulary test was for 2,000 word level (M=26.82; SD=3.886), while the lowest mean score was for 10,000 word level (M=6.90; SD=5.55).

Word Level	No. of Students	Mean (%)	Std. Deviation	Std. Error Mean
2000 Word Level	129	26.82 (89.17%)	3.886	.342
3000 Word Level	129	24.03 (79.87%)	4.484	.395
5000 Word Level	129	16.46 (54.30%)	6.512	.573
10000 Word Level	129	6.97 (23.0%)	5.615	.494

Table 4: Vocabulary Levels Test scores of pre-sessional IIUM students

The mean scores for the 3000 word level and 5,000 word level were M=24.03 (SD=4.484) and M=16.46 (SD=6.512), respectively. Laufer and Nation (1999)

recommend a mastery level of 75% or 22.5 correct items of the 30 total items. Based on the mastery level of 75%, the students in this study managed to achieve vocabulary mastery level of 89.17% for 2000 word level and 79.87% for 3000 word level. In contrast, students' achievement for 5,000 and 10,000 word levels were 54.30% and 23% respectively, which did not meet the mastery level performance. The findings of the study suggest that these students managed to achieve vocabulary mastery at 2,000 and 3,000 word levels, but there is a need to enhance their vocabulary knowledge at the 5,000 and 10,000 word levels.

**Research question 3:**

Is there a relationship between students' vocabulary size and their reading comprehension performance?

A correlational analysis was conducted to investigate the relationship between students' scores in reading comprehension and vocabulary levels tests. Table 5 reports the findings of the relationships among students' scores of reading comprehension and vocabulary levels tests for 2000, 3000, 5000, and 10000 word levels.

		Reading score	2000 word level	3000 word level	5000 word level	10000 word level
Reading score	Pearson Correlation	1	.637(**)	.496(**)	.414(**)	.291(**)
	Sig. (2-tailed)		.000	.000	.000	.001
	N	129	129	129	129	129
2000 word level	Pearson Correlation	.637(**)	1	.744(**)	.571(**)	.367(**)
	Sig. (2-tailed)	.000		.000	.000	.000
	N	129	129	129	129	129
3000 word level	Pearson Correlation	.496(**)	.744(**)	1	.678(**)	.486(**)
	Sig. (2-tailed)	.000	.000		.000	.000
	N	129	129	129	129	129
5000 word level	Pearson Correlation	.414(**)	.571(**)	.678(**)	1	.641(**)
	Sig. (2-tailed)	.000	.000	.000		.000
	N	129	129	129	129	129
10000 word level	Pearson Correlation	.291(**)	.367(**)	.486(**)	.641(**)	1
	Sig. (2-tailed)	.001	.000	.000	.000	
	N	129	129	129	129	129

Table 5: Correlations among reading comprehension, 2000, 3000, 5000, and 10000 vocabulary word levels

The findings indicate positive relationships between reading test scores and all vocabulary word levels. There was a moderate correlation between reading comprehension scores and 2000 vocabulary word level with a correlation coefficient of 0.637. Reading comprehension scores had also a moderate relationship with the

3000 word level ( $r=0.496$ ) and 5000 word level ( $r=0.414$ ). The 10,000 word level, however, had a weak relationship with the reading test performance. The correlation coefficient was 0.291. The Pearson product moment correlation coefficient reveals that all vocabulary word levels (2000, 3000, 5000, and 10000) had statistically significant relationship ( $P<0.01$ ) with the reading comprehension scores. The findings suggest that vocabulary 2000 word level has the highest predictor value ( $r=0.619$ ) for the reading comprehension scores.

## **Conclusion**

The purpose of the study was to investigate the relationship between vocabulary size and reading comprehension of ESL students in an intensive English language programme. In general, the findings of the present study revealed that there is a positive and moderate relationship between the students' reading comprehension scores and their vocabulary size. In addition, the majority of the students managed to achieve the mastery level at the 2000 word level (89.17%) and 3000 word level (79.87%).

Although the nature of the research sample and the use of correlation statistics restrict the generalizability of the findings in terms of cause and effect analysis, some pedagogical implications could be drawn tentatively for colleges that share similar demographic features. Specifically, it is essential to highlight the role of teachers to make available words at the 5,000 level and 10,000 to students so that students can be exposed to these words in their daily reading or entertainment literacy encounters. Given these students' low vocabulary size, it is recommended that they continue to develop their knowledge of high-frequency words and at the same time expand their knowledge of low-frequency words.

Teachers should also encourage students to engage in extracurricular extensive reading activities (e.g. Zhang 2001b, 2003), as there is some cumulative evidence indicating the benefit of extensive reading in helping learners to enhance vocabulary size and reading abilities at the same time (see, e.g., Day and Bamford 1998; Krashen 2004; Nation 2001). Hunt and Beglar (2005) propose a systematic framework for lexical development in order to speed up lexical development; an aspect that is particularly true for the context of this research as learners have very limited time. Needless to mention, learners also need to realise that vocabulary acquisition is an important life-long skill as they need to be able to acquire more vocabulary independently throughout their academic life and beyond.

## References

- Curtis, M. E. (1987). 'Vocabulary Testing and Instruction', in M.G. McKeown and M.E. Curtis (eds.), *The Nature of Vocabulary Acquisition* (Hillsdale, NJ: Lawrence Erlbaum): 37-51.
- Gu, Y. & Johnson, R. K. (1996). Vocabulary learning strategies and language learning outcomes. *Language Learning*, 46, 643-679.
- Hunt, A. & Beglar, D. (2005). A framework for developing EFL vocabulary. *Reading in a Foreign Language*, 17(1), 23-59.
- Hirsh, D. & Nation, P. (1992). What vocabulary size is needed to read unsimplified texts for pleasure? *Reading in a Foreign Language*, 8, 689-696.
- Nagy, W. E., Herman, P. & Anderson, R. C. (1985). Learning words from context. *Reading Research Quarterly*, 20, 233-253.
- Nagy, W. E. & Herman, P. (1987). Breadth and depth of vocabulary knowledge: Implications for acquisition and instruction. In M. McKeown & M. Curtis (Eds.), *The nature of vocabulary acquisition* (pp. 19-35). Mahwah, NJ: Lawrence Erlbaum.
- Nation, I. S. P. (1990). *Teaching and learning vocabulary*. New York: Newbury House.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Qian, D. D. (1999). Assessing the roles of depth and breadth of vocabulary knowledge in reading comprehension. *The Canadian Modern Language Review*, 56, 282-307.
- Schmitt, N. (1998). Tracking the incremental acquisition of second language vocabulary: A longitudinal study. *Language Learning*, 48(2), 281-317.
- Schmitt, N. (2000). *Vocabulary in Language Teaching*. Cambridge: Cambridge University Press.
- Schmitt, N. & McCarthy, M. (2000). The lexical advantages of narrow reading for second language learners. *TESOL Journal*, 9(1), 4-9.