

## Measuring the Vocabulary Size of Muslim Pre-University Students

*Engku Haliza Engku Ibrahim, Khairiah Othman,  
Isarji Sarudin and Ainon Jariah Muhamad*

Centre for Languages and Pre-university Academic Development,  
International Islamic University Malaysia

---

**Abstract:** The last decade has seen an increased interest in the field of second language vocabulary acquisition (SLVA). The findings in SLVA research point to a need to identify learners' existing vocabulary size to ensure that they achieved the threshold level of vocabulary. The present study aims to measure the vocabulary size of pre-university students at a public university in Malaysia. The receptive and productive vocabulary size tests were administered to 190 students. The results indicate that these pre-university students have yet to achieve the recommended threshold level of vocabulary that is needed to enable them to successfully acquire vocabulary independently. It was also found that there was a strong relationship ( $r=0.737$ ) between English language proficiency and vocabulary size, statistically significant at  $p<0.01$  level. Students' performance in receptive and productive vocabulary was also found to be strongly related ( $r=0.862$ ), statistically significant at  $p<0.01$  level. This study provides the empirical evidence of the importance of guiding students to acquire the threshold level of vocabulary, thus facilitating them with the skills to further develop their vocabulary repertoire independently.

**Key words:** Second language vocabulary acquisition • Vocabulary size • Receptive and productive vocabulary • Muslim students • English Language Proficiency

---

### INTRODUCTION

Studies have shown that many EFL learners do not have an adequate vocabulary size to function effectively in an English language environment [1, 2]. This limited vocabulary size may impede learning as shown by numerous research on SLVA. [3] shows that vocabulary size is strongly correlated with speaking and listening, followed by grammar, reading and writing. In contrast, in a study conducted by [4] it was also found that a learners' vocabulary size is strongly associated with their reading and writing abilities and moderately associated with their listening ability. Findings from [5], [6] and [7] indicate that there is a strong, positive and reciprocal relationship between knowledge of words and general reading comprehension.

The increase in research in the field of SLVA has highlighted many learning issues that need to be addressed in the EFL classroom. One such study was conducted by [8] who pointed out that learners do not acquire vocabulary according to the order of English

word frequency drawn up in the General Service List (GSL) developed by [9] and the Academic Word List (AWL) [10]. This may seem logical as words are acquired haphazardly based on the exposure to the language. According to Cameron [11] students are exposed to the language in a non-randomised manner in a classroom context. Thus there is a need for teachers to be aware of the gaps in their students' knowledge of vocabulary. It is incumbent upon teachers to expose students to vocabulary learning strategies that would enable them to effectively fill the gap in their vocabulary repertoire. This is especially essential if their reason for learning the target language is to pursue education at the tertiary level.

In his study, [12] indicated that a mastery of the first 2,000 most frequent word families on the GSL is mandatory for beginner learners. This set of words, taken from a 5,000,000 written corpus, has had a wide influence throughout the years and has served as the basis for graded readers and other materials targeted for language learners. In addition to the GSL is the AWL, compiled by

[10] consisting of 570 word families that are not in the most frequent 2,000 words of English. These words occur reasonably frequently over a very wide range of academic texts and are not specific to any particular academic discipline.

According to [13], the first 1,000 word families cover an approximate 77% and the second 1,000 cover another 5% of the running words in most academic texts. Studies have also indicated that learners need to achieve a minimum level of 2,000 word threshold in order to successfully acquire additional vocabulary using the strategies often taught in the skill of reading-guessing from context, using word parts and mnemonic techniques and using vocabulary cards to remember foreign language - first language word pairs [14]. Knowledge of 2,000 word families would enable learners to understand an estimate of 80% of a written text [15]. After acquiring the threshold level of vocabulary, [13] recommends that learners who need to acquire English for academic purposes proceed to AWL [10]. Successful acquisition of these words (AWL) would increase learners' coverage of words by at least another 10% which is a considerable increase, especially when it has been generally agreed that learners need to understand at least 95% of the content to ensure comprehension of authentic texts.

Some learners undertake English courses with a vocabulary level lower than 2,000 word families and yet they are not assisted with a systematic vocabulary acquisition strategy in many EFL curriculum across the world. [13] suggests that both teachers and learners need to know whether the high frequency words have been learnt so that the students can function effectively in the target language. He also highlights the need for teachers to give a different emphasis on high frequency and low frequency words. In fact [12] contends that the high frequency words are so important that they should be explicitly taught. Teachers also need to ensure that learners are able to expand and refine their vocabulary repertoire and coping strategies so that they would be able to continuously learn new words independently. An adult non-native speaker should target to acquire 1,000 new words per year.

In addition, [13] asserts that it is important to make the distinction between receptive and productive vocabulary. Receptive vocabulary means learners are able to recognise a word and recall its meaning when they encounter the word. Productive vocabulary, on the other hand, involves using the vocabulary in the spoken or written form when the need arises. Consequently, receptive vocabulary is easier to acquire as learners need

only to know a few distinctive features of a word. In contrast, learners may need to know a more precise information to acquire productive vocabulary. [6, 17] carried out experiments to test learners' size of productive and receptive vocabulary. Both their studies concur that receptive vocabulary learning took less time than productive vocabulary learning. Their studies also show that students generally scored higher in receptive vocabulary tests when compared to productive vocabulary tests. [17] and [13]'s study concluded that receptive learning method is suitable for the acquisition of receptive vocabulary, while productive learning approach is to be applied to acquire productive vocabulary. This is an important point for teachers to address in a language classroom.

Taking into consideration all the issues highlighted in the field of vocabulary acquisition, the purpose of this study is to investigate the vocabulary size of learners at the elementary to the intermediate level of English language proficiency in a pre-university intensive English language programme at a Malaysian public university. The results may be used to guide teachers in applying suitable strategies and activities to fill the gap in students' knowledge of vocabulary.

#### **The Research Questions Guiding this Study Are as Follows:**

- What are the vocabulary size of the pre-university students?
- Is there a relationship between students' English language proficiency and their vocabulary size?
- Is there a relationship between students' receptive and productive vocabulary size?

#### **MATERIALS AND METHOD**

**Instrument:** This study employed a quantitative research design. In order to investigate students' vocabulary size, three types of vocabulary tests were employed. A version of [13] Vocabulary Test for the 1,000 word level was used. The receptive vocabulary tests for the 2,000-10,000 word and the University Word List (UWL) were adopted from [20] and [14]. These tests were originally designed by [20] and [14]. The productive levels test was designed by [18], [19] and [21]. These tests were chosen for this study as [22] (p. 38) considers them as "the nearest thing we have to a standard test in vocabulary". They were designed to estimate a learner's basic knowledge of receptive and productive vocabulary at the 1,000, 2,000, 3,000, 5,000, UWL and 10,000 levels.

The receptive test consists of 18 samples of vocabulary at the respective levels. Test takers were required to match a word with its definition presented as a multiple choice. The productive test requires the test takers to complete words where the initial spellings of the words have been provided. These tests have been classified as sensitive and reliable [23]. They are also considered compact and easy to be administered in the classroom. This study reports the results of vocabulary tests in percentages. A score of 14/18 is equivalent to 75% of the total score, indicating that at the 2,000 word level a learner would know 1,500 words of the 2,000 word level [24]. A score of 87% would indicate that the student has the mastery of the vocabulary at the specified vocabulary level [21]. The vocabulary level's test was administered to 5 levels of the pre-university intensive English classes; levels 2-6. The students were a mixture of nationalities, gender and ages. Approximately 50 minutes was allocated for the students to complete the vocabulary tests.

**Setting:** The International Islamic University Malaysia is an English medium university and students would be required to sit for an institutionalized English Proficiency Test (EPT) upon entry. These students are required to meet 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 according to their score in the EPT/IELTS/TOEFL, in one of the six levels of the pre-university intensive English language programme.

**Participants:** The participants in this study were 190 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. Of the 190 students, 65 (34.21%) were females and 125 (65.79%) were males. Based on the scores in the institutionalised English Proficiency Test (EPT), the students' were placed in six different levels (Levels 1 - 6). There were 26 (13.68%) students in Level 2 (Elementary), 33 (17.37%) students in Level 3 (Upper Elementary), 53 (27.90%) students in Level 4 (Lower Intermediate), 52 (27.37%) students in Level 5 (intermediate) and 26 (13.68) students in Level 6 (Upper Intermediate). Students in Level 1 were not included in this study because their English language

Table 1: Profile of the respondents

	LEVEL OF PROFICIENCY	NUMBER OF STUDENTS (%)
English Language Proficiency	Level 2	26 (13.68%)
	Level 3	33 (17.37%)
	Level 4	53 (27.90%)
	Level 5	52 (27.37%)
	Level 6	26 (13.68%)
Gender	Female	65 (34.21%)
	Male	125 (65.79%)
Total		190

proficiency were too low (true or false beginners) to even comprehend the instructions. The demographics of the participants are presented in Table 1.

## RESULTS

A total of 190 pre-sessional students from different levels of English language proficiency undertook the [18] productive and receptive vocabulary tests in order to determine their vocabulary size. A correlational analysis was also conducted to find out the relationship between students' vocabulary size and English language proficiency.

**The Vocabulary Size of Pre-university Students:** Table 2 below summarises the students' receptive vocabulary size according to their level of study. It shows the percentage of students' achievement based on the 87% mastery level [19].

The findings of the study indicate that in the receptive vocabulary test, the majority of level 5 (57%) and level 6 (69%) students have achieved mastery at the 1,000 word level. Likewise, 33% of students at level 5 and 73% of students at level 6 have achieved mastery at the 2,000 word level. However, at level 2 of the intensive English programme, only 11% of the students managed to achieve a minimum of 87% mastery at the 1,000 word level.

The findings in table 2 suggest that 27% of the students at level 6 and 67% of students at level 5 have yet to achieve the recommended threshold level of receptive vocabulary that is needed to enable them to successfully acquire vocabulary independently. The percentage of students who achieved the mastery level of 87% decreases as the level of the intensive English language programme increases.

Table 2: Receptive vocabulary size of learners

Students' level of study (N=190)	Above 87%				
Pre-university level	1,000 word level	2,000 word level	3,000 word level	5,000 word level	Academic vocabulary
Level 2 (26)	11%	0%	0%	0%	0%
Level 3 (33)	15%	3%	0%	0%	0%
Level 4 (53)	28%	13%	0%	0%	0%
Level 5 (52)	57%	33%	23%	4%	0%
Level 6 (26)	69%	73%	46%	4%	0%

Table 3: Productive vocabulary size of learners

Learners' level of study (N=190)	Above 87%				
Pre-university level	2,000 word level	3,000 word level	5,000 word level	Academic Vocabulary	10,000 word level
2 (n=26)	0%	0%	0%	0%	0%
3 (n=33)	0%	0%	0%	0%	0%
4 (n=53)	0%	0%	0%	0%	0%
5 (n= 52)	0%	0%	0%	0%	0%
6 (n= 26)	3.8 %	0%	0%	0%	0%

		Proficiency	
		Level	Vocab Size
Proficiency	Pearson Correlation	1	.737**
Level	Sig. (2-tailed)		.000
	N	190	190
Vocab	Pearson Correlation	.737**	1
Size	Sig. (2-tailed)	.000	
	N	190	190

\*\* . P<0.01 level (2-tailed).

Table 4: Correlation between students' receptive and productive scores

		Total receptive	Total productive
Total receptive	Pearson Correlation	1	.862**
	Sig. (2-tailed)		.000
	N	190	190
Total productive	Pearson Correlation	1	.862**
	Sig. (2-tailed)	.000	
	N	190	190

\*\* . P<0.01 level (2-tailed).

The productive vocabulary size of the pre-university students, based on the productive vocabulary test is presented in Table 3. The findings indicate that only 3.8% of students at level 6 of the intensive English language programme achieved the mastery level of 87% at the 2,000 word level. The findings of the analyses reveal that these students had much lower mastery of productive vocabulary when compared to receptive vocabulary.

**The Relationship Between Learners' Receptive and Productive Vocabulary Size:** In order to investigate the relationship between learners' receptive and productive vocabulary size, a correlation analysis was conducted (Table 4). The findings indicate that there is a statistically significant relationship ( $p < 0.01$ ) between productive and receptive vocabulary test scores ( $r = .862$ ). The findings imply that the higher the learners' productive scores, the higher are their receptive scores.

## DISCUSSION AND CONCLUSION

This study highlights the need for explicit vocabulary instruction in the pre-university programme of level 2-5 where a majority of the learners did not manage to achieve mastery of the recommended 2,000 word frequency band. Only 73% of the level 6 students of the intensive English programme managed to achieve mastery at the 2,000 word level. [12] argues that it is essential that the first

2,000 word families from the GSL be explicitly taught in the early stages of language learning as it forms the foundation for their vocabulary acquisition [12]. On this account, teachers and curriculum developers may benefit from frequency word lists and concordancers when creating materials for classroom instruction. Learners would then be able to benefit and acquire vocabulary useful for their academic study in a structured and principled manner.

The results of this study also suggest that a majority of the students reach the threshold level of vocabulary acquisition when they are at level 6 of the intensive English programme. This implies that only at this stage can they comprehend texts with ease. The findings also provide the empirical evidence to support the decision of the management to offer at least 6 levels of English language courses for students to reach the threshold level of vocabulary acquisition in this particular context. Likewise, the findings suggest that the students in this study have been appropriately placed at the respective levels of the intensive English language programme.

At this juncture it is essential to follow [13] advice that in order to accelerate students' rate of vocabulary acquisition teachers need to guide learners in acquiring the vocabulary listed in the AWL. This is to address their needs to learn English for academic purposes. [13] further asserts that when learners have mastered the 2,000 word level, it would not be beneficial for them to proceed to the 3,000 word level in the GSL as they would need exposure to more technical vocabulary as listed in the AWL. [24] has also made available a website that contains word lists based on the GSL and AWL which are linked to computer softwares with concordances. The words provided are given in contexts derived from a large sample of texts. With the availability of such websites, an adult learner can guide himself through a systematic acquisition of vocabulary in the English language.

The findings also indicate that there is a statistically significant relationship between learners' receptive and productive vocabulary scores. The general trend shows that learners who have higher receptive vocabulary scores also have correspondingly high productive vocabulary scores. This is consistent with the findings of [16 and 17]. On this account, more emphasis should be placed on teaching vocabulary for productive use, especially taking into consideration that these learners need to acquire the language for academic purposes. [14] advocates that it would be more effective to teach vocabulary for productive use if the aim is for learners to be able to apply the vocabulary in context.

The findings of this study and other studies in SLVA reveal that language practitioners need to be cognisant of the fact that vocabulary acquisition strategy is an important life-long strategy. In the same way, learners have to be alerted of the need to continue developing their vocabulary even though they no longer undergo any English courses. Opportunities to enroll in English language courses or training programmes ought to be made available on a continuous basis to second language learners who are learning in a non-native environment.

This study does not claim that learners can successfully acquire a language only by increasing the number of words they know, though [25] associates language progress with the vocabulary size of learners. It is undeniable that there are many other components that contribute to the successful acquisition of a language such as grammatical competence, background knowledge of the subject matter and other contributing factors. [22] also expresses concern regarding students' ability to access L2 lexicon in a communicative situation. This study points to need to acquire an adequate vocabulary repertoire to enable the students to use the language effectively. A language learner needs to reach the threshold level of vocabulary in order to ensure a smooth progression in his language acquisition.

**Note:** The authors would like to thank the International Islamic University Malaysia for funding this research.

## REFERENCES

1. Barrow, J., Y. Nakanishi and H. Ishino, 1999. Assessing Japanese college students' vocabulary knowledge with a self-checking familiarity survey. *System*, 27: 223-47.
2. Nurweni, A. and J. Read, 1999. The English language knowledge of Indonesian university students. *English for Specific Purposes*, 18(2): 161-175.
3. Zimmerman, K.J., 2004. The Role of Vocabulary Size in Assessing Second Language Proficiency. Brigham Young University Department of Linguistics Brigham Young University.
4. Staehr, L.S., 2008. Vocabulary size and the skills of listening, reading and writing. *Language Learning Journal*, 36(2): 139-152.
5. Baumann, J.F., E.J. Kame'enui and G.E. Ash, 2003. Research on vocabulary instruction: Voltaire Redux. In: *Handbook of research on teaching the English language arts*, Eds., Flood, D. L. J, J. R. Squire and J. M. Jensen. Mahwah. Erlbaum, pp: 752-785.

6. National Institute of Child Health and Human Development, 2000. Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. Washington, DC: U.S. Government Printing Office.
7. RAND Reading Study Group, 2002. Reading for Understanding: Toward a research and development program in reading comprehension. Washington, DC: U.S. Department of Education.
8. Tadamitsu, K., 1990. An Examination of Nations's (1990) Vocabulary Levels Test. <http://www.robwaring.org/vocab/colloquium/tad2001.htm>. Retrieved 6 April 2009.
9. West, M., 1953. A general service list of English words: Longman.
10. Coxhead, A., 2000. A New Academic Word List. *TESOL Quarterly*, 34(2): 213-238.
11. Cameron, L., 2002. Measuring Vocabulary size in English as an Additional Language. *Language Teaching Research*, 6: 145.
12. Schmitt, N., 2000. *Vocabulary in Language Teaching*. Cambridge University Press.
13. Nation, I.S.P., 2001. *Learning Vocabulary in Another Language*. Cambridge University Press.
14. Nation, I.S.P., 1990. *Teaching and Learning Vocabulary*. Newbury House.
15. Nation, P. and R. Waring, 1997. Vocabulary size, text coverage and word lists. In: *Vocabulary, Description, Acquisition and Pedagogy*. Eds, Schmitt, N. and M. McCarthy. Cambridge University Press.
16. Waring, R., 1997. A Comparison of the receptive and productive vocabulary sizes of some Second language learners. *Immaculata (Notre Dame Seishin University, Okayama)*, 1: 53-68.
17. Stoddard, G., 1929. An experiment in verbal learning. *Journal of Educational Psychology*, 20: 452-457.
18. Nation, I.S.P., 1993. Vocabulary size, growth and use. In *The Bilingual Lexicon*. Eds., Schreuder R. and B. Weltens. John Benjamins, pp: 115-134.
19. Schmitts, N., D. Schmitts and C. Clapham, 2001. Developing and the behaviour of two versions of the Vocabulary Levels Test. *Language Testing*, 18: 55-88.
20. Nation, I.S.P., 1983. Learning vocabulary. *New Zealand Language Teacher*, 9(1): 10-11.
21. Laufer, B. and I.S.P. Nation, 1999. A vocabulary sized test of controlled productive ability. *Language Testing*, 16(1): 33-51.
22. Maera, P., 1996. The classical research in vocabulary acquisition. In *Words, Words, Words*, Eds. anderman, G. and M. Rogers. *Multilingual Matters*, pp: 27-40.
23. Beglar, D. and A. Hunt, 1999. Revising and validating the 2000 Word Level and University Word Level vocabulary tests. *Language Testing*, 16: 131-162.
24. Beglar, D., 2000. Estimating vocabulary size. *JALT Testing & Evaluation Newsletter*, 4(1): 2-4.
25. Cobb, T., 2007. *The Compleat Lexical Tutor*. <http://www.lexutor.ca>. Retrieved 12 June 2011.