THE BREADTH OF RECEPTIVE VOCABULARY KNOWLEDGE AMONG ENGLISH MAJOR UNIVERSITY STUDENTS

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ABSTRACT
Vocabulary knowledge is a key component for literacy skills as well as the development of communication deemed important for students to succeed in university. Gaining adequate receptive vocabulary knowledge would enhance a university student’s comprehension of academic texts. This descriptive study aims to investigate the receptive vocabulary knowledge among English major university students in Malaysia and Thailand. The sample comprises 80 English major students from Universiti Sultan Zainal Abidin (UniSZA), Malaysia and 86 English major students from Prince Songkla University (PSU), Thailand. A Vocabulary Size Test (VST) adopted from Nation and Beglar was employed to gather the primary data from the respondents about their receptive vocabulary knowledge. The Statistical Package for Social Sciences (SPSS) version 21.0 was used for data analysis. Results showed that, on average, UniSZA students had a higher VST score (44.64%) compared to that of PSU students (20.92%). The higher average score gained by UniSZA students was mainly due to early exposure to formal English education in schools. This study recommends preparing students with explicit academic vocabulary instruction, particularly in the beginning semester of an English programme, to meet the academic and professional needs of English major students in future.

Keywords: Receptive vocabulary, productive vocabulary, Vocabulary Size Test (VST), breadth of vocabulary knowledge, depth of vocabulary knowledge.

1.0 INTRODUCTION
In this globalised era, possessing a strong English vocabulary is very essential for successful communication worldwide. Modern English communication requires both the receptive and productive vocabulary to be acquired by non-native speakers because these two types of vocabulary will enable them to write and communicate efficiently.

Vocabulary knowledge is fundamental to effective communication (Nation, 2001), especially among university students. This is especially true when English as Second Language Learners (ESL) are often required to read academic books written in English, and to express themselves verbally in the language (e.g., giving presentation) or when writing (e.g., assignments). It is therefore important pedagogically to know the receptive and productive
knowledge of the students as a means of gauging the vocabulary threshold level needed for academic survival in university.

2.0 LITERATURE REVIEW

Vocabulary knowledge involves knowing the many aspects of words. It involves knowing the tokens (number of words, e.g., five in The man entertained the elephant.), types (number of different words, e.g., four different words (underlined) in The man entertained the elephant. by excluding one the), lemma (a headword and its most frequent inflection, e.g., entertains, entertained, and entertaining are the lemma of the verb but not entertainment as it is a noun), and word family (different words with various parts of speech, for example, entertain, entertaining, and entertainers). Nation (2001) itemised nine different types of knowledge that are required to know a word including; knowledge of the spoken form of a word, knowledge of the written form of a word, knowledge of the parts in a word which has meaning, knowledge of the link between a particular form and a meaning, knowledge of the concepts a word may possess and the items it can refer to, knowledge of the vocabulary that is associated with a word, knowledge of a word's grammatical functions, knowledge of a word's collocations, and lastly, knowledge of a word's register and frequency. In other words, vocabulary knowledge is not a chaotic system but rather an organised system “in which various types of knowledge are learned until all aspects of knowledge are known for an item” (Moghadam, Zainal, & Ghaderpour, 2012, p. 557).

Nation (2001) also broke down each aspect of the word knowledge into receptive and productive knowledge. Receptive (passive) vocabulary knowledge is defined as the knowledge of the ‘form’ (the ability to understand a word while listening or reading), while productive (active) vocabulary knowledge is the ‘use’ (the ability to use a word in speaking or writing). Passive vocabulary knowledge involves perceiving the form of a word while listening or reading and retrieving its meaning (language input). Productive vocabulary knowledge, on the other hand, expresses a meaning through speaking or writing, retrieving and producing the appropriate spoken or written word form (language output). Thus, passive vocabulary knowledge involves a process from form to meaning while productive vocabulary knowledge involves a process from meaning to form. Receptive vocabulary is known as the breadth of vocabulary size while productive vocabulary is the depth of vocabulary knowledge (Nation, 2001; Qian, 2002). Basically, receptive vocabulary is twice the size of productive vocabulary (Cobb, 1997; Schmitt, 2008). The breadth of vocabulary knowledge is basically the number of words for which a learner has at least the minimum knowledge of meaning (Qian, 1999; 2000). The minimum knowledge of a word’s meaning is defined as a student’s ability to recognise its most frequent meaning.

Receptive vocabulary plays a main role in increasing a learner’s vocabulary knowledge. Receptive vocabulary is stored in our mental lexicon to be used when needed productively. It is very essential since a learner who has larger receptive vocabulary is likely to know more words productively than does a learner who has a smaller receptive vocabulary (Webb, 2008). Besides, when vocabulary is taught in the classroom, learning is also likely to be receptive (Webb, 2005). In other words, vocabulary learning tasks are more likely to be receptive than productive.

Students who major in English must have extensive vocabulary knowledge for the development of literacy skills and communication in the academic world. Researchers have estimated that ESL learners need to know about 2,000 of the most frequently-used words to successfully communicate in basic everyday life conversations and to prepare for “more
advanced study” (Schmitt, 2000, p. 142). Schmitt and Schmitt (2014) proposed to raise this threshold to the 3,000 most frequent words in English in order to include additional words that provide a significant coverage of the English lexicon. Meanwhile, Laufer (1997, p.114) mentions that “a text coverage of 95% can be reached with a 5,000-word English vocabulary or 3,000 word families”. However, Nation (2006) contends that in order for a university student to understand a written text, he or she will need to acquire approximately 8,000 word families. This constitutes reaching the threshold of 2,000-3,000 high-frequency words plus 570 word families listed in the Coxhead’s (2002) Academic Word List (AWL).

Francis and Kucera (1982) claimed that having a large vocabulary size is very important for university students since there is a strong relationship between the effect of vocabulary size and text coverage. This indicates that the number of words stored in university students’ mental lexicon may affect their comprehension of academic texts. The two researchers listed the vocabulary size and equivalent written text coverage for easy reference in Table 1. The table shows that if a student is familiar with the words at the highest frequency level (the first 1,000), they will have 72 percent of text coverage. In addition, if a learner has a vocabulary size of 2,000 word families, the learner will have 80 percent of text coverage, which means that one word in every five words (approximately two words in every line) are unknown (Nation & Waring, 1997).

Table 1: Vocabulary size and text coverage in the Brown Corpus

<table>
<thead>
<tr>
<th>Vocabulary Size</th>
<th>Written Text Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000</td>
<td>72.0%</td>
</tr>
<tr>
<td>2,000</td>
<td>79.7%</td>
</tr>
<tr>
<td>3,000</td>
<td>84.0%</td>
</tr>
<tr>
<td>4,000</td>
<td>86.8%</td>
</tr>
<tr>
<td>5,000</td>
<td>88.7%</td>
</tr>
<tr>
<td>6,000</td>
<td>89.9%</td>
</tr>
<tr>
<td>8,000 and above</td>
<td>97.8%</td>
</tr>
</tbody>
</table>

Goulden, Nation, and Read (1990) have estimated the receptive vocabulary size of university-educated native speakers of English. This figure must be achievable by university-educated non-native speakers of English for successful academic textbook comprehension and fulfilling all of academic tasks. The researchers claim that the receptive vocabulary size range of university-educated native English speakers is between 13,200 to 20,700 base words with an average of 17,200 base words. Based on this statistics, it is evident that university-educated non-native English speakers should reach approximately 17,000 word families, and this is equivalent to the range between 13,500 and 20,000 base words. Besides, if ‘independent comprehension’ is based on knowing 98% of the running words in a text, then L2 learners need a range of 8000 to 9000 word-family vocabulary for comprehension of written text, such as those in newspapers and novels, and a vocabulary range of 6,000 to 7,000 for spoken texts such as lectures and movies (Nation 2006).

Table 2: Vocabulary sizes needed to get 98% coverage or independent comprehension (adapted from Nation, 2006)

<table>
<thead>
<tr>
<th>Texts</th>
<th>98% coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,000 to 9,000</td>
<td>98%</td>
</tr>
<tr>
<td>6,000 to 7,000</td>
<td>98%</td>
</tr>
</tbody>
</table>
However, achieving adequate receptive vocabulary size has still become one of the biggest obstacles faced by many ESL learners (Nation, 2006). Even though ESL or English as a foreign language (EFL) learners were found to have spent years studying English, their vocabulary size is much less than 5,000 word-families (Nation, 2006; Mokhtar, 2010; Alkhofi, 2015; Hajiyeva, 2015). This is considered far from reaching the threshold of vocabulary size expected of a university student; that is, the 98% threshold of 8,000 word families as claimed by Laufer and RavenhorstKalovski (2010) for text comprehension. The same phenomenon was also observed in the ESL students who major in English in the Faculty of Languages and Communication (FBK), UniSZA, Malaysia and the English major EFL learners in the Faculty of Humanities and Social Sciences (HUSO), Prince Songkla University (PSU), Pattani, Thailand. Many were observed to have insufficient receptive and productive vocabulary sizes expected of them as evident in their average grades achieved in the reading comprehension and writing tests.

Acquiring vocabulary and gaining sufficient vocabulary size has often become a stumbling block to some students due to several discerning factors including learning disability, lack of exposure to English, lack of self-confidence, and lack of knowledge about the right vocabulary strategies. Even though many studies focused on investigating the receptive vocabulary size of university students in all majors and academic degrees in many countries including Malaysia and Thailand (see Sripetpun, 2000; Mokhtar, 2010; Zhang & Lu, 2013; Nirattisai & Chiramanee, 2014), and comparing receptive vocabulary knowledge between native and non-native speakers (Hajiyeva, 2015), or measuring the receptive vocabulary knowledge of EFL learners from two different universities (Zhiying, Teo, & Laohawiriyanon, 2007), very little work has focused on comparing receptive vocabulary knowledge between ESL freshmen and EFL freshmen in two different universities. It is the aim of this paper therefore to compare the receptive vocabulary knowledge of the first year and first semester English major students from the two English language faculties – the freshmen (ESL learners) from the Faculty of Languages and Communication (FBK) UniSZA, Malaysia and the freshmen (EFL learners) from the Faculty of Humanities and Social Sciences (HUSO), Prince Songkla University (PSU), Pattani, Thailand.

### 3.0 RESEARCH METHODOLOGY

This section explains the methods and data analysis used in the study.

#### 3.1 Research Design and Sample

This study is designed as a descriptive study. The study population was the English major students from the Faculty of Languages and Communication (FBK), Universiti Sultan Zainal Abidin (UniSZA), Malaysia and the Faculty of Humanities and Social Science (HUSO), Prince Songkla University (PSU), Pattani, Thailand. The sample was purposively selected from 80 freshmen (first year and first semester students from FBK) and 89 freshmen (first year and first semester students from HUSO). The age range of FBK students was from 20 to 21 and HUSO from 19 to 20. In terms of gender, 15 male students from FBK and 19 male freshmen from
HUSO participated in this study, in contrast to 65 and 70 female freshmen from the faculties consecutively. Meanwhile, in terms of schooling, FBK students had longer formal English education (M=14.1) compared to the freshmen from HUSO (M=11.1). Table 3 below presents demographic information of the participants.

<table>
<thead>
<tr>
<th>Age</th>
<th>Gender</th>
<th>*Years Studying English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (year)</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>FBK students (n=80)</td>
<td>20.1</td>
<td>15</td>
</tr>
<tr>
<td>HUSO students (n=89)</td>
<td>19.6</td>
<td>19</td>
</tr>
</tbody>
</table>

*All students had been taught by English teachers from their own countries.

### 3.2 Research Instrument and Procedures

Nation (2001) and Webb (2009) argue that vocabulary size can be measured based on three important criteria - tokens, types, and word family. Tokens are each running word, literally all the words in a given text or sentence. On the other hand, types are all the different words in a text. Unlike types, word family comprises the headword (e.g., *care*) and all its derived forms (e.g., *careful, cared, carefully*) which seems more rational as compared to counting types or tokens in assessing a learner vocabulary size (Nation & Webb, 2011). Nation and Webb (2011) also maintain that counting all words in the same word family as one single word in order to give an estimate of one’s vocabulary size seems to be the most accurate method for this purpose. There have been many vocabulary size tests designed to date to measure students’ receptive and productive vocabulary sizes (see Meara, 1992; Laufer & Nation, 1999; Nation & Beglar, 2007; Cobb, 2010). Different researchers recommend different vocabulary tests depending on their view of vocabulary knowledge, their preference for a particular dimension or modality of vocabulary knowledge, and their interest in either size, depth or strength (Laufer & Goldstein, 2004).

This study aims to investigate students’ receptive vocabulary knowledge. Nation and Beglar’s (2007) Receptive Vocabulary Size Test (14,000 version) was employed to measure the freshmen’s level of receptive vocabulary. The original test comprises 140 multiple choice items. However, only 100 items were included in this study, in which the items from 10,000 to 14,000 word level were not accounted for. The test was designed to measure the participants’ written receptive vocabulary size in English. There are 10 items from each 1,000 word family level. The VLT provides a vocabulary learning profile by utilizing knowledge at five levels - the 2,000, 3,000, 5,000 and 10,000 frequency levels, as well as a section on academic vocabulary, based on the Academic Word List (Schmitt, Schmitt, & Clapham, 2001). The vocabulary knowledge is tested by a selection of representative words (nouns, verbs and adjectives) from each of the five levels, where the test-takers are asked to match words to the correct descriptions.

In terms of procedure, the same test was carried out in two different locations (FBK, UniSZA, Malaysia and HUSO, PSU, Thailand), at a different time, and by different authorities. The test was administered to 80 FBK freshmen a month after they registered as students at
UniSZA, Malaysia (in October, 2015). The students took the test during a class taught by one of the study’s researchers. They were given one and a half hours to complete the test. The researcher from HUSO conducted the test separately with the 89 participants in mid-September, 2015 in Thailand. The duration of the test, however, was held constant. A brief introduction of the research was given to the participants before the test was started. In order to maintain the validity and reliability of the test, the participants were not allowed to share information with one another. After the test items were collected, data were run separately by the two sets of researchers using the Statistical Package of Social Sciences version 21.0. Data were analysed in percentages and mean. In order to find the participants’ total vocabulary size, the total score was multiplied by 100.

4.0 RESULTS AND DISCUSSION

This study aims to compare the receptive vocabulary knowledge of the first year and first semester English major students from two English language faculties – the Faculty of Languages and Communication (FBK) UniSZA, Malaysia and the Faculty of Humanities and Social Science (HUSO), Prince Songkla University (PSU), Pattani, Thailand. Table 4 presents the Vocabulary Size Range (VST) scores of the freshmen from the two faculties. The results indicate that out of 100 items, the lowest VST range obtained by the FBK freshmen was 26, in contrast to seven VST range obtained by the freshmen of HUSO, PSU. The table also showed that the highest VST score (68) was obtained by the FBK freshmen compared to 52 VST score achieved by their HUSO counterparts. On average, the FBK freshmen achieved raw VST score of 44.6 compared to 20.9 by the HUSO freshmen.

Table 4: VST range (raw score per 100)

<table>
<thead>
<tr>
<th>Score</th>
<th>FBK, UniSZA</th>
<th>HUSO, PSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>26</td>
<td>7</td>
</tr>
<tr>
<td>Highest</td>
<td>68</td>
<td>52</td>
</tr>
<tr>
<td>Average</td>
<td>44.6</td>
<td>20.9</td>
</tr>
</tbody>
</table>

The fact that the FBK freshmen performed better than the HUSO freshmen in the VST can be explained in terms of the emphasis given by the Malaysian government to improve the level of English language proficiency among Malaysians, and the status given to English as a second language in Malaysia. English is regarded as the second important language to be acquired by Malaysian students after Bahasa Melayu (the national language). It is a language frequently spoken by many Malaysians working in employment sectors such as the courts, higher learning institutions, and business. Even though its status is secondary to Bahasa Melayu, the role that English plays as a globalised and commercial language is immense. The need to improve English language competence among Malaysian university students is therefore urgent. The Ministry of Education of Malaysia (KPM) has placed a greater emphasis on English listening and speaking components in the English language syllabus of the primary and secondary schools in Malaysia.

Another explanation to the higher VST score gained by the FBK freshmen is the daily exposure to English conversations in the Malaysian environment. English is a language spoken in almost every Malaysian household, especially those on the west coast of the country. It is language that many Malaysians use every day to communicate with their spouse, relatives, neighbours as well as with colleagues at the workplace.
In terms of education, the FBK freshmen had spent more than 12 years learning English in school. This formal English schooling and also a high English entry qualification for admission into FBK (a Malaysian University English Test (MUET) Band Four) are the reasons for the higher VST score achieved by the FBK freshmen. For many decades, KPM has made it compulsory for all Malaysian citizens at pre, primary, and secondary school levels to be given formal English language education. The long exposure is adequate for providing opportunities for Malaysian freshmen students to practice English, and this has resulted in an increased size of receptive vocabulary knowledge (Mokhtar, 2010; Mokhtar, Rawian, Yahaya, Abdullah, & Mohamed, 2008).

In contrary to the heavy emphasis given by the Malaysian government to increase the use of English in Malaysia, the language is, unfortunately, viewed as ‘foreign’ in Thailand. English is not a language spoken frequently by the Thai people at the workplace or households. In Thailand, limited knowledge of English vocabulary is one of the major problems for students learning English at the tertiary level, and this inhibits their success in the academic programmes (Rattanavich, 2013). Historically, Thailand was never colonialized by any foreign power, and this is the reason why the country is predominantly monolingual. English is not a lingua franca used in any activity in the country especially in schools and higher learning institutions (Rattanavich, 2013). At the same time, a lower English entry qualification requirement into the Bachelor of Arts (English) programme at HUSO is also a factor for the lower VST score.

Table 5 present the VST scores of both sets of freshmen based on the VST level (1,000 to 10,000 word families). It can be observed that FBK freshmen outperformed HUSO freshmen in terms of vocabulary size. The VS of FBK freshmen ranged from 3,000 (lowest) to 8,000 (highest), in contrast to a range of 1,000 (lowest) to 7,000 (highest) scored by PSU freshmen.

Table 5: A comparison of VST scores of the FBK and PSU freshmen

<table>
<thead>
<tr>
<th>Score</th>
<th>FBK, UniSZA Number of Students (%)</th>
<th>HUSO, PSU Number of Students (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 to 2000</td>
<td>0</td>
<td>8 (8.9%)</td>
</tr>
<tr>
<td>2000 to 3000</td>
<td>0</td>
<td>38 (42.7%)</td>
</tr>
<tr>
<td>3000 to 4000</td>
<td>1 (1.25%)</td>
<td>32 (35.9%)</td>
</tr>
<tr>
<td>4000 to 5000</td>
<td>29 (36.3%)</td>
<td>4 (4.5%)</td>
</tr>
<tr>
<td>5000 to 6000</td>
<td>31 (38.8%)</td>
<td>5 (5.6%)</td>
</tr>
<tr>
<td>6000 to 7000</td>
<td>16 (20%)</td>
<td>2 (2.24%)</td>
</tr>
<tr>
<td>7000 to 8000</td>
<td>3 (3.75%)</td>
<td>0</td>
</tr>
<tr>
<td>8000 to 10000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10000 to 14000</td>
<td>not tested</td>
<td>not tested</td>
</tr>
</tbody>
</table>

Table 5 shows that FBK freshmen possessed more receptive word knowledge than HUSO freshmen. Many had a lexical threshold level of 5,000 to 6,000 word level (31 or 38.8%). A lexical threshold level of 5,000 to 6,000 indicates the text coverage of 95% (Nation & Beglar, 2007), which potentially means that the FBK freshmen had acquired more than adequate lexical threshold for text comprehension. On the other hand, the results showed that a majority of the HUSO freshmen had a lexical threshold level ranging from 2,000 to 3,000 (38 or 42.7 %). Only 2 (2.24%) of the HUSO freshmen had the receptive vocabulary knowledge of
6,000 to 7,000 word families. The 2,000 to 3,000 word level and 3,000 to 4,000 word level are considered as barely adequate for academic text comprehension because they only indicate a text coverage of 80% (Hu & Nation, 2000; Nation, 2006; Saigh & Schmitt, 2012; Laufer, 2013; Schmitt & Schmitt, 2014). This threshold level only indicates text comprehension of simplified texts but not the unabridged ones (Hirsh & Nation, 1992; Schmitt, 2011). A freshman must be equipped with a 5,000 word level in order to comprehend unsimplified texts for reading for pleasure (e.g. novels). This threshold level is far from the optimal level necessary for meeting the academic needs of the freshmen in HUSO, i.e., 8,000 to 20,000 word level, including the level which has included the 570 academic word list (Coxhead, 2002), and for comprehending academic texts without assistance. This study, therefore, concludes that the HUSO freshmen possessed insufficient receptive vocabulary knowledge crucial for survival in an academic world, particularly in undertaking English for Academic Purposes (EAP) courses in the beginning semesters.

Even though the results showed that FBK freshmen were superior to the HUSO freshmen in the VST scores, it was also evident that they had also not yet achieved the optimal threshold level (8,000 to 10,000 words), which is the threshold essential for successful comprehension in English for Academic Purposes (EAP) courses (Laufer, 2013). Even though possessing a 5,000 word level has been claimed as being sufficient for adequate comprehension of all types of texts as it provides the reader with 95% text coverage (see Nation, 2006), the level is still considered far from reaching full comprehension of academic and technical texts (Laufer & Ravenhorst-Kalovski, 2010) used by college and university students. The optimal threshold for EAP is set at 8,000 word families, which can be defined as “can read academic material independently” and “functional independence in reading” (p. 25). Only three out of the 80 FBK freshmen were in the 8,000 word level, with none from HUSO reaching that mark.

Several conclusions can be made to the reasons why freshmen from both FBK and HUSO have not yet reached the optimal threshold level. One explanation is that both sets of freshmen were first year first year and first semester students, thus were very new at their respective faculties. The courses that they were taking when this study was conducted were mainly elementary English courses, and this explains their lack of exposure to academic and technical vocabulary.

The second reason is due to an absence of explicit academic or specialised vocabulary instruction set up for actively teaching the words in the beginning semester of the Bachelor of English with Communication programme offered by FBK, UniSZA, Malaysia and Bachelor of Arts (English) programme offered by HUSO, PSU, Thailand. Even though some of the English-related courses were included in both English programmes, the focus was mainly on teaching advanced English skills (reading and writing) and subject-related courses with little attention given to improving students’ receptive academic vocabulary knowledge, particularly on exercising the 8,000 to 14,000 word level vocabulary.

5.0 CONCLUSION

In conclusion, reaching the optimal threshold level is deemed important and urgent for university students as this receptive vocabulary knowledge may determine their success in the academic world. Reading for university students involves comprehending specialised terminologies and contents of subject-related books and research articles, whereby they must perform these tasks unassisted at all time (Baumann, Kame’enui, & Ash, 2003). Academic success is closely related to the ability to read, and this relationship is logical because, in order to understand what they have read, the students must have also a huge vocabulary. Students
who do not have large vocabularies often struggle to achieve comprehension. If this happens, they will become frustrated and this feeling can continue throughout their studies. The ability to comprehend academic texts proficiently and critically is a skill that all university students must master in order to graduate, pursue post-graduate learning opportunities, and secure future employment (Huddle, 2014). This study recommends the inclusion of an academic or specialised vocabulary course in the English programmes in the two faculties as well as equipping English lecturers with advanced vocabulary instructional methods for future advancement of the programme and their learners’ academic progress.

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