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Assessing In-Depth Vocabulary Ability of Adult ESL Learners

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Abstract

This study examines the in depth vocabulary ability of L2 learners in a foreign language and immersion setting. Using an in-depth vocabulary knowledge test, the researcher examined L2 learners' ability to recognize the various word meanings of 40 words and their collocations. Using L1 speakers word performance data for the same test, the study indicates that it is possible for advanced L2 learners in immersion settings to attain near native fluency in terms of word collocation skills for specific word ranges. The study also revealed that most L2 learners do not know the different meanings of words and this often affected the way they used a word. The study has implications for teaching and learning of academic vocabulary in the language classroom.

Keywords: *second language, vocabulary knowledge, word collocation, in depth vocabulary knowledge*

Introduction

This study investigates second language learners' in-depth vocabulary knowledge by measuring their ability to recognize word meanings and word collocations. It is a follow up from Qian & Schedl's (2004) study that assessed 'in-depth vocabulary knowledge' among Second Language (L2) learners in the context of developing a prototype for depth of vocabulary knowledge for the new TOEFL test. This study differs in terms of investigating the incremental levels of vocabulary knowledge of L2 learners within immersion and non immersion academic settings. The assessment framework is based on Chappelle's (1998) construct that language ability includes "both knowledge of language and the ability to put language to use in context" (In Read, 2005, p.28). In other words, vocabulary ability includes: a) the context of vocabulary use; b) vocabulary knowledge and fundamental processes; and c) metacognitive strategies for vocabulary use. The findings can be extended to examining how different L2 learners use their vocabulary knowledge to access in-depth vocabulary knowledge. In addition, the study has broad implications for understanding how L2 adult learners process their lexical knowledge and provides useful insight for learners' vocabulary ability.

Breadth and Depth of Vocabulary Ability

Vocabulary knowledge had long been recognized as central to language acquisition and use (Alderson, 2000; Schmitt, 2000; Nation, 1997). Within reading comprehension, (both in L1 and L2) vocabulary has been found to be more strongly related than all other components of reading (Laufer, 1997; Anderson & Freebody, 1981; Beck, Perfetti, & Mckeown, 1982, Laufer, 1991; Koda, 1989). As for grammar acquisition, knowing the words in a text or conversation is said to enable learners to understand the meaning of the discourse, which in turn allows the grammatical patterning to become more transparent (Ellis,1994). The multiple benefits of vocabulary knowledge have in turn contributed to various interpretations as to what it means to know a word. Amongst them, Read (1989), Wesche et. al (1996) and Qian (1999) contend that vocabulary knowledge should comprise at least two dimensions, which are vocabulary breadth or size, and depth or quality of vocabulary knowledge. Vocabu-

lary breadth refers to the number of words a person knows or the meanings of words which the learner has some superficial understanding of. Depth of vocabulary knowledge refers to additional information about a particular word in terms of its various interpretations and word use. In terms of measuring vocabulary size and depth, vocabulary tests have been widely used as research tools rather than as assessment instruments and this study is designed along the same lines. In addition, the study takes into account the psycholinguistic perspective that a number of vocabulary learning processes do help learners operate faster and more automatically and such processes differ between proficient and less proficient learners.

In terms of vocabulary size for L2 learners, there is a consensus among researchers on the appropriate size according to the various levels. For L2 learners who wish to express themselves in their target language, a viable size of 2,000 words is said to be a realistic goal, (Schmitt, 2000; Meara, 1995). For those intending to read authentic texts, a vocabulary threshold of 3,000 – 5,000 word families is considered ideal (Nation & Waring, 1997). For more challenging materials such as university textbooks that attend to specialized vocabulary, learners would require knowledge of 10,000 word families (Hazenberg & Hulstijn, 1996). Incidentally, knowing a lot of words is useful because the learner will be able to recognize most of the words used in a text. However, it must be noted that being able to recognize a large number of words in context, does not necessarily ensure the development of the complex knowledge of these words which underlie the ability to use them correctly in a productive mode (Paribakht & Wesche, 1997). Sanaoui (1995) in her study on adult learners' approaches to learning vocabulary, discovered that L2 learners taking the TOEFL test often kept extensive records of word lists as well as tried to memorize important words. The ability to recall such words seem to decline after a period of time when the word no longer becomes part of the learners productive vocabulary.

Implicit Learning

Learning a new word involves an ongoing elaboration of knowledge about the word and the ability to use it. Relationships must be established between the word form and its semantic concepts and linguistic functions, with other words that share some of these features as well as form lexical networks (Henriksen, 1999). Learning also involves automatization of word access, time, and the capability to produce the word in appropriate context (de Bot, Paribakht & Wesche, 1997). In language learning, some words tend to be mastered earlier while others are learned with time. In this matter, assessing the word size of native speakers might be an exercise in futility but language studies have proven that it is possible to estimate the vocabulary size of L2 learners which are considered modest in comparison. Then again, any attempt to assess L1 speakers vocabulary ability alongside L2 learners, as baseline data for further understanding of L2 vocabulary ability should be accepted since the goal of most L2 learners happen to be the acquisition of near native fluency. As Nation states, "learners will surely know a word's basic meaning sense before acquiring full collocational competence" (1995). Currently, L2 studies have indicated that within L2 vocabulary acquisition, learners often acquire the core meaning sense of a word before more figurative senses and that much L1 meaning information is often transferred over to the L2. In addition, L2 learners have been found to have difficulty setting the meaning boundary between two or more related words that are less common, because there is not always a one to one correspondence between words in different languages and these issues of strategic competence cannot be dismissed when attempting to understand L2 learners in depth vocabulary knowledge. So, currently, it is worthwhile to look at learners' ability to recognize the various meanings of a word together with their collocational competence.

In terms of the learning environment, language teachers would agree that learning through incidental exposure is most effective when students know how to take advantage of it such as by being aware of the various meanings and by knowing when and how to use contextual cues. However, some L2 vocabulary researchers who acknowledge incidental vocabulary learning have highlighted its shortcomings especially during assessment. Unknown words are simply ignored by readers (Paribakht & Wesche, 1999) and this results in poor comprehension and misinterpretation. As for learners with lower learning proficiency, inferring from contexts can often result in wrong guesses. Looking for contextual clues for the unknown word will not help as well if the clues are not there to be exploited. As Laufer (1997) stresses, one cannot as a rule rely on contextual redundancy since 'there is no guarantee that a given context is redundant enough to provide clues to the precise words that are unknown to the learner'. Hulstijn's (1992) research, which encourages inferencing of word meanings, while limiting guessing through the presentation of multiple choices has been found to help eliminate wrong

guesses among L2 learners. This increase in retention has been seen as evidence for the importance of 'deeper processing' (greater mental effort) during initial word learning. Hulstijn's (1992) finding is important for testing measures, because it was found that when learners were given a brief period of time to study the words for a test, they performed much better than under any of the incidental learning conditions; meaning that their intention to learn the vocabulary overrode the influence of the other conditions (Qian & Schedl, 2004).

Framework for Measuring Vocabulary Knowledge

Qian's (2002) framework, based on earlier models of vocabulary knowledge (Chappelle, 1998, Qian, 1999; Henriksen, 1999, Nation, 2001) proposes that vocabulary knowledge comprise four connected dimensions namely a) vocabulary size which is the number of words known by the learner, b) depth of vocabulary knowledge which include semantic, collocational and phraseological properties, c)lexical organization which include storage and connection of words in the mental lexicon and d) automaticity of receptive-productive knowledge. The framework is important because it connects the various factors of the dimensions within the process of vocabulary use and development. While the importance of each factor might vary according to language use, the framework goes to show that depth of vocabulary knowledge is central to the multidimensional domain of vocabulary knowledge. The framework also works well with the requirements of the TOEFL 2000 Reading Framework (Enright et. al, 2000) where both meaning and collocation have been stated as vocabulary variables contributing to reading performance. This led to Qian's & Schedl's(2004) study which is based on a 40 items depth of Vocabulary Knowledge questionnaire (hereafter DVK) which was designed to empirically evaluate in–depth vocabulary knowledge measure in the context of developing the new TOEFL test (Refer Appendix). The stimulus word adjectives were selected from the Barnard Second and Third Thousand word lists and from a pool of discrete TOEFL vocabulary items used in the pre- 1995 TOEFL reading comprehension test and tested among international students in Canada. The main findings of Qian & Schedl's (2004) study that were directly related to this study being:

a) The DVK format had considerably reduced the 'potential for successful guessing'

b) The difficultly level of DVK format and the traditional TOEFL –Voc test remained about the same.

c) The DVK based on the concept of depth and vocabulary knowledge, could produce a more positive washback effect on ESL learning than traditional TOEFL Vocabulary measures.

With all these issues in mind, the present study set out to look further on the alternative potential of the questionnaire as research instrument for the purpose of assessing L2 performance by answering the following research questions:

1. Does knowing a word lead to the ability to recognize the word in context.
2. Do L2/FL learners need to know the various meanings in order to use the word?
3. Can ESL learners recognize the word collocations without knowing the meaning of the word?

Method

In total, 43 non native speakers and 11 native speakers participated in this study. These were students attending undergraduate programs at the University of Malaysia Sarawak and the Graduate level programs at the University of Arizona. The students from the University of Malaysia Sarawak comprised (ESL 1) first year students undergoing a Teaching in English as a Second Language (TESL) Program while (ESL 4) comprised fourth year students undergoing their final semester training in the Teaching in English as a Second Language (TESL) Program at the same university. In Malaysia, students who entered the TESL program would take the 1119 English national examination, (similar to the Cambridge Certificate Ordinary level) and the Malaysian University Entrance Test (MUET) which requires some satisfactory knowledge of academic vocabulary. The third group comprised international graduate students (IGS) from the Second Language Acquisition and Teaching (SLAT) program and Language Reading and Culture (LRC) program from the University of Arizona.

These students would have taken the TOEFL examination. The L2 speakers will therefore comprise of a) beginner level, and b) advance level in a foreign language setting and c) advance level in an immersion setting. The native speakers (NS) were nine American graduate students undergoing the Second Language Acquisition and Teaching program and two family members of the students at the University of Arizona. The native speakers' results were used for the purpose of generating baseline data since the general aim of language learning is to attain near native fluency. The L2 participants were from 4 different first language (L1) backgrounds with the major groups being Chinese, Korean, Spanish and Malay. The age range for were between 20 to 35 years (Refer Table 1 & 2).

Table 1: Major L1 Groups (n=54)

Language	ESL1	ESL4	IGS	NS	Total	(%)
Chinese	6	8	7	0	21	38
Korean	0	0	3	0	3	6
Spanish	0	0	3	0	3	6
Malay	8	5	0	0	13	24
Others	1	2	0	0	3	6
English				11	11	20

Table 2: Education Levels of Participants (N=54)

Education level	ESL1	ESL4	IGS	NS	Total
Undergraduate (1st.	15	0	0	0	15
year)	0	15	0	0	15
Undergraduate(seniors)	0	0	13	9	22
Masters degrees	0	0	0	2	2
Professionals					

Instrument

The in- depth vocabulary measure (DVK) used in the study was the same 40 item test used in Qian & Schedl's (2002) study. Each item consists of one stimulus word, which is an adjective. The options for the items were placed in two boxes each containing four words. The box on the left contained the meaning component and the right box contained the collocation component. The box on the left comprises 1 – 3 synonyms to one aspect or the whole of the stimulus word. The box on the right comprised 1-3 words that collocate with the stimulus word. Each item had four correct choices but the choices were not evenly spread. See example below.

Brief

A)short (B)fleeting (C) quick (D)clear	(E)help (F)summer (G)tool (H) approach

As for scoring, each word correctly chosen was awarded one point. The maximum score was 160 for the 40 items and participants were given 35 minutes to complete the test.

Procedure

The data collection sessions were carried out in three different conditions. For the non immersion setting (ESL 1 & ESL 4), the sessions were carried out in two quiet classrooms by an instructor under examination conditions and requirement of time. As for the IGS students and native speakers, they were given the option of completing the papers in class or finishing it at home (assessment involving family members). However, all participants were required to record the time taken and only the test results of participants who took 35 minutes or less were recorded.

Results

The results for all four groups are summarized in Table 3 and 4.

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Table 3- Frequency Distribution of Overall Scores (n=54)

	ESL1	ESL4	IGS	NS
20-39	3	0	0	1
40-59	5	3	0	0
60-79	4	5	1	0
80-99	2	4	2	0
100-119	1	2	0	1
120-139	0	1	5	2
140-160	0	0	5	7

The scores for ESL1 ranged from 32 to 101 while ESL 4 ranged from 46 to 130. As for the IGS their scores were from 73 to 152. The ranges of scores for the native speakers were from 32 to 157. The frequency distribution is outlined in Table 4.

Table 4: Summary of Frequency Distribution (n=54)

	ESL1	ESL4	IGS	NS
Mean	58	78	124	132
Median	59	73	135	145
Mode	32	46	135	32
Std. Deviation	23.5	22.4	26.4	35.5

The mean (x**)** for ESL1 and ESL 4 were 58 and 78 respectively while IGS had 124 and NS was at 132. Incidentally the total score was 160. The median scores were relatively close for both ESL1 and ESL 4 at 58 and 73 (the undergraduate program) while IGS and NS (the graduate program) had 135 and 145. The Standard deviations (***S***) were 23.5, 22.4, 26.4 and 35.5 respectively. The standard deviation for NS was 35.5 though it was a fairly homogenous group. It was evident that the lowest score of 32 was affecting the balance point of distribution (Table 4). The low score of 32 was due to one participant identifying more than 4 options in each item which led to many of the items being discarded. Since the next lowest score for the native speaker was 115, it was decided that the outlier would be removed for the rest of the study. The new results for NS is shown in table 5 where X = 142 and S= 13.3.

Table 5: Frequency Distribution without Outlier Removed (N=54)

	ESL1	ESL4	IGS	NS
Mean	58	78	124	142
Median	59	73	135	145
Mode	32	46	135	115
Std. Deviation	23.5	22.4	26.4	13.3

1. Does knowing a word lead to the ability to recognize the word in context?

All non native speakers knew more words than collocations (Table 6). The native speakers who were used as part of the baseline study had an equal knowledge of both meaning and collocation (x = 65.4). The results can be used to imply that non native speakers increase in their word knowledge with time and exposure but the ability to know a word does not automatically lead to word recognition. This is in line with Nation's (1995) statement that L2 learners tend to know more word meanings than collocations. The learners in non immersion setting do not seem to be able to recognize the word in context as the difference between their meaning and collocation scores were between 15.6 and 10.3. The differences for graduate students (ESL 3= 3.2) seem to be closer showing that they were gaining in terms of incremental vocabulary and were closer towards recognizing the words in context.

Table 6: Scores for Word Meaning and Collocation (N=54)

	meaning *a*	**collocation** ***b***	**Difference (a-b)**
ESL1	36.9	21.3	15.6
ESL4	44.3	34	10.3
IGS	63.3	60.1	3.2
NS	**65.4**	**65.4**	0

2. Do L2/FL learners need to know the meanings in order to recognize the word that follows?

While it was established that L2 learners definitely knew more words than collocation, a scrutiny of the individual scores of the first ten respondents of each ESL leaner group revealed that with ESL 1, there was little relationship between the learners ability to know the meanings of words with their ability to recognize the words that follow. Table 7 indicates in ESL 1, there were learners who scored 30 and above for word meaning but only obtained 2 -5 word collocations correct. Many of the respondents ignored the section on collocations. One respondent, who obtained 63 for meaning, managed only 38 for collocation. It is possible that learners either overlooked the difficult words or arrived at the wrong options while trying to guess from context. As for ESL 4, the differences appear to get narrower, showing that four years of exposure to academic instruction, can have an effect in terms of increasing learners in depth vocabulary knowledge and word use. The learners vocabulary size did not seem to increase significantly since the range was between 24 – 50 , which was in some ways similar to ESL 1, but the range of scores in collocation were much higher which was from 16- 44. Similarly, IGS ranged from 35 -78 indicating that individuals increased their word meaning knowledge at different levels at different points in time. However, it was evident that IGS had a higher depth of vocabulary knowledge compared to the other two groups. In terms of IGS, there is relationship between knowing a word and being able to recognize the word collocation, because the differences between their breadth (a) and depth (b) of vocabulary appear to be narrower.

As individual groups, Figure 1 indicates that both ESL 1 and ESL 4 despite knowing the word meanings, were less able to recognize the words that followed. It might be possible that the learners were not aware of the contextual clues and were less exposed to native discourse. However, as the learner learnt more words, they were more skilled at recognizing word collocations. It is also possible that knowing how to use a word in context is a slower mental process. The ESL1 learners have almost twice as much knowledge of word meaning in relation to their knowledge of word collation while IGS which comprised of graduate level ESL learners, had word meaning knowledge which was only slightly higher than ESL 4. In addition, they appeared to have an almost equal proportion of meaning and collocation knowledge. In addition, their awareness of breadth and depth of vocabulary knowledge appear closer towards that of the native speakers. However, it was evident from Figure 1 that within a non immersion setting, an increase in breadth of vocabulary does not necessarily indicate an equal and proportionate increase in knowledge of word collocation.

Table 7: The Distribution of L2 Learners' Scores (n=10)

ESL1		ESL4		IGS	
Meaning	collocation	meaning	collocation	Meaning	collocation
38	2	39	34	35	38
33	5	36	27	64	71
33	26	32	27	78	65
30	2	35	37	72	63
27	30	24	22	74	68
30	2	44	16	48	49
33	21	45	39	68	60
27	19	42	44	47	47
63	38	51	30	75	77
42	43	50	33	65	62

Maximum Possible Score = 80

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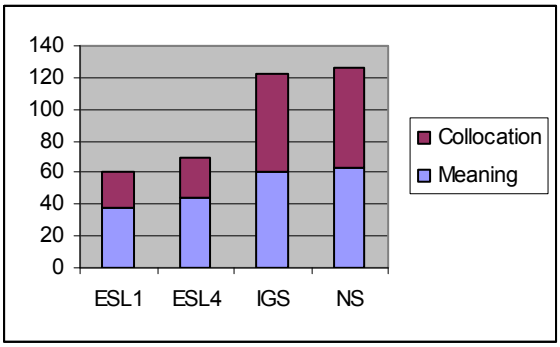

Figure 1: Breadth of Vocabulary Knowledge

3. Can ESL learners recognize the word collocation without knowing the meaning of the word?

To answer this question, the top scores for each ESL group was tabulated and the individual scores for word meaning and word collocation were compared. There were three participants in ESl 1 with higher scores for word collocation (b) in contrast to their word meaning scores (a) with the difference ranging from 8 to 1. In ESL 4 there were two participants who scored higher for their word collocations. The differences were 2 points. As for IGS only 1 participant had a higher score which was 2 points (refer table 8). This indicates that some ESL learners can recognize the word collocation without knowing the meanings of the word, but the majority had to rely on the meaning in order to arrive at the word collocation.

Table 8: Individual Performance on Word Meaning and Word Collocation

ESL1		ESL4		IGS	
Meaning	**colloca-tion**	**meaning**	**colloca-tion**	**meaning**	**colloca-tion**
33	26	39	34	72	71
27	**30***	36	27	78	65
33	21	**35**	**37***	72	63
27	19	45	39	74	68
63	38	**42**	**44***	48	49
42	**43***	51	30	68	60
52	17	50	33	**75**	**77***
48	27	62	41	65	62
36	**44***	69	61	68	64
39	29	60	51	74	72

*Higher Scores

Discussion of Findings

Non native speakers regardless of immersion and non immersion settings evidently know more meanings that word collocations. In- depth vocabulary knowledge evidently is necessary for word use. This finding is in line with Nation's (1995) view that L2 'learners will surely know the words basic meaning sense before acquiring full collocational competence'. However, having a large vocabulary size does not necessarily lead to it being used well. This was made evident by the higher scores in word meanings and lower scores for word collocations among ESL 1 and ESL 4 learners who came from a foreign language setting. It must be remembered that these learners were learning in a non immersion setting, where access to the language were often limited and through non native instructors who themselves would be working from a narrow range of words. This finding is related to Kellerman's (1978) study where L2 learners were said to have difficulty setting the meaning boundary between related words due to the lack of one to one correspondence between words in their L1 and lack of en-

vironmental input. As for recognizing word collocation without knowing its meaning, both ESL1 and ESL 4 evidently work from a narrow vocabulary range and this indicates the lack of near native intuition. The fact that three participants in ESL 1 scored higher in word collocation compared to ESL 4 which had 2 participants who did well and the IGS group which had 1 probably accounts for a greater willingness among less proficient ESL learners to guess. A higher vocabulary score in terms of word meaning did not lead to a high score in collocation. It is possible to assume that the multiple choice feature of the test could have resulted in learners guessing at some stage. Since, the majority of the students did not score highly in word collocation, and as the number of samples were small, it is difficult to generalize that the learners were able to use the words well without knowing the meaning. It is also possible to view this finding in relation to Dubin & Olshtain's (1993) study, which states that it is possible that some of the L2 students were aware of the various meanings and knew when and how to use contextual cues to arrive at the correct collocation. As Fraser, 1999, Paribakht & Wesche, 1999 state, many of the less proficient students may have ignored the unknown words resulting in their failing to attempt the collocation section as well. It is also possible that as learners become more proficient (ESL2 and ESL4), they rely on their word knowledge and become less willing to guess. Also, the format of the instrument also created a testing environment which made certain L2 student more anxious and less willing to guess or take chances.

In terms of the feasibility of the using the questionnaire as a prototype for the TOEFL paper, the researcher must admit that the DVK has met the standards of quality control. Some of the respondents from ESL 4 and native speakers commented that they liked the format where they were able to 'use' the stimulus words in context to arrive at the collocation. This was a fresh change from the usual vocabulary tests that assessed knowledge. The native speakers mentioned that there were instances when they did not know the meaning of the word, but upon looking at the collocation, were able to arrive at the meaning. No L2 learner used this strategy. From a pedagogical perspective, it was evident that L2 learners were able to benefit from this format, because it developed a better awareness of different strategies which can be used to learn vocabulary and this is in line with Nation (1995) suggestion that at certain levels, learners need to learn the strategies to acquire vocabulary knowledge but learners must first have a sufficient command of word knowledge in order to use them well. There are instances when learners benefit from focusing on the context to arrive at the item. In terms of item difficulty and power of predicting reading performance, there is a need for further evaluation, because in- depth vocabulary knowledge can also include other aspect of vocabulary knowledge such as metaphorical selection and register which are continuously expanding across the various academic disciplines. It must also be mentioned that the top scorer in the Native Speaker category was from the Engineering discipline (the spouse of one the student). He found the paper to be a challenge and insisted on looking at the collocations before attempting the meanings. It might be worthwhile to see if this format might be biased towards certain disciplines. There is a need for some practical concerns such as how the format can be best utilized in terms of assessing other forms such as nouns, verbs and adverbs. It terms of creating an item bank, it would be difficult to develop uncontroversial keys especially for the collocations. However, there is a definite advantage to this format in terms of consequential validity. The concept of depth of vocabulary knowledge will helps potential learners to actually practice using the words in order to deal with the collocation part. A test of this kind will help learners realize that words can have multiple meanings and knowing a single meaning would be insufficient for performance. A format of this nature might reduce the need for extensive word lists and rote memorization and encourage vocabulary learning for real language use. The test was definitely a challenge but there is a need to simplify the rubrics to make it more accessible to learners. However, like all examination formats, it is possible that learners will familiarize themselves with the format when necessary. Also, there is the issue of the selection of distracters in terms of using semantically related or semantically unrelated words as distracters (Greidanus and Nienhuis, 2001).

Implications of the Study

On a general note, we have to admit that it does not take a stretch of imagine to discover that learners seem to learn second languages more successfully when they become immersed in the cultures of the communities that speak them than they do through input structured according to stages (Danesi, 2000). However, when it is not always possible to place learners in an immersion setting, there may be a need to focus on specific aspects of vocabulary for learners to understand the function of words and appropriate use. While it is not possible to teach all the words, it is definitely possible to look at word learning in terms of word levels. Then again, as Schimdt (2000) insists that there is no

'right' or 'best' way to learn vocabulary but by looking at vocabulary, it is possible to gain some understanding of learners' vocabulary ability. The best practices often depend on the type of student, the words that are targeted, the system and many other factors. Most of all it must be realized that a small vocabulary size can be limiting in terms of decoding and thinking skills and as such it is important for instructors and learners to constantly look for opportunities to understand learners word performance.

In terms of learning context, as Beck (1995) stresses, all native speakers regardless of educational preparation, possess uniform and implicit abstract structural knowledge about the language to which they are exposed in their local surroundings. However, L2 learners seem to need both breadth and depth of vocabulary knowledge in order to express their understanding of this implicit abstract structural knowledge in line with what they know about the second language. While academic settings might be a convenient ground for breeding an in depth understanding of vocabulary knowledge, its development varies with individuals, their levels of motivation and exposure. As Swain and Carol (1987) pointed out, lexical learning is 'incremental, potentially limitless and heavily constrained by individual experiences.' For countries like Malaysia where a part of the study was conducted, English despite its Second Language status is really a foreign language in many parts of the country. There are in reality a large number of constraints and the textbooks and teacher are probably the only source for vocabulary learning in many parts of the nation. In term of teacher development where the participants were being groomed to become teachers, it is evident that ESL teachers (ESL 4) who graduate with 'realistic vocabulary sizes' will find themselves equipped with only rudimentary tools for addressing everyday English discourse. These teachers need to work towards increasing their vocabulary ability in order to help their learners' think and perform in the language. In addition, this study might be a clarion call for Malaysian higher learning institutions to admit that most of their graduates lack an in-depth knowledge of academic vocabulary cum discourse and these have implications for the way they and their 'students' think and work. Proficient learners require some understanding of associated meanings and word use prior to recognizing words in context and when teachers who are close to graduating lack the vocabulary size that would help them recognize words in context, there is the need to look at the theories and strategies that foster vocabulary learning. In sum, teacher training institutions must address the issue of breadth and in- depth vocabulary knowledge and vocabulary strategies in order to help teachers understand the importance of words in language. Most of all, it may be necessary to look at the vocabulary learning process of L1 and L2 learners, expose learners to explicit learning of vocabulary strategies, more reading programs, authentic text and teaching of culture in the language classroom.

References

Alderson, J.C. (2000). *Assessing reading.* Cambridge University press.

Anderson, R. C. & Freebody, P. (1981). Vocabulary knowledge. In J.T. Guthrie (Ed.), *Comprehension and teaching: research reviews*. Newark, DE: International Reading Association, 77-117.

Beck, I.L., Perfetti, C.A. & McKeown, M.G. (1982). Effects of text construction and instructional procedures for teaching word meanings on comprehension and recall. *Journal of Educational Psychology*, 74, 506-521.

Beck, M.L. (1995). Beyond Methods: Components of SLA Education. In B. Harlig & B. Hartford (Eds.)

Clarke, D.F. & Nation, I.S.P. (1980) Guessing the meanings of words from context: Strategy and techniques. *System*. 8, 211-220.

Chapelle, C. (1998). Construct definition and validity inquiry in SLA research. In L.F. Bachman, L.F. and A.D. Cohen (Eds) *Interfaces between second language acquisition and language testing research*, Cambridge: Cambridge University Press, 32-70.

Danesi, M. (2000). The network structure of human discourse and meaning systems. *Morphe*, 21, 103-130.

Ellis, R. (1994). Factors in the incidental acquisition of second language vocabulary for oral input: A review essay. Applied Language Learning, 5, 1-32.

Enright, M.K. et.al. (2000). T*OEFL 2000 reading framework: a working paper*. TOEFL Monograph series MS-17. Princeton, NJ: Educational Testing Service.

Greinhaus, T. and Nienhaus, L. (2001). Testing the quality of word knowledge in a second language by means of word association: types of distractors and types of association. *Modern Language Journal* 85, 567-77.

Hazenberg, S. & J. J. Hulstijn. (1996). Defining a minimal receptive second language vocabulary for non native university students: an empirical investigation. *Applied Linguistics* 17, 145-163.

Henriksen, B. (1999).Three dimensions of vocabulary development. *Studies in Second Language Acquisition* 21, 303-317.

Hulstijn,J.H. (1992). Retention of inferred and given word meanings: Experiments in incidental vocabulary learning. In P.J. Arnaud and H. Bejoint (eds). *Vocabulary and Applied Linguistic*s. London. Macmillan, 113-125.

Koda,K. (1989). The effects of transferred vocabulary knowledge on the development of L2 reading proficiency. *Foreign Language Annals*, 22, 529-540.

Laufer, B. (1991). How much lexis is necessary for reading comprehension. In P.J.L. Arnaud & H. Bejoint (Eds), *Vocabulary and applied linguistics*, 126-132.

Laufer, B. (1997). The lexical plight in second language reading: Words you don't know, words you think you know, and words you can't guess. In J. Coady & T. Huckin (eds.) *Second Language Vocabulary Acquisition*. Cambridge Applied Linguistics.

Meara, P. (1996). The vocabulary knowledge framework. http://www.swan.ac.uk/clas/vlibrary/pm96d .

Nation, I.S.P. (1990).*Teaching and Learning Vocabulary.* Boston.MA: Heinle & Heinle.

Nation, I.S.P. (2001). *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.

Nation, I.S.P. & Newton, J. (1997). Teaching Vocabulary. In J. Coady & T. Huckin (eds.) *Second Language Vocabulary Acquisition*. Cambridge Applied Linguistics.

Nation, I.S. P. & J. Waring. (1997). *Vocabulary size, text coverage and word lists*. In Schmitt and McCarthy (eds.). (1997), pp. 6- 19.

Paribakht, S. & Wesche, M. (1997) Vocabulary enhancement activities and reading for meaning in second language vocabulary acquisition. In J. Coady & T. Huckin (eds.) *Second Language Vocabulary Acquisition*. Cambridge Applied Linguistics.

Qian, D.D. & Schedl, M. (2004). Evaluation of an in-depth vocabulary knowledge for assessing reading performance. *Language Testing*, 21, 28-52.

Qian, D.D. (1999). Assessing the roles of depth and breadth of vocabulary knowledge in reading comprehension. *Canadian Modern Language Review* 56, 282-308.

Qian, D.D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance: an assessment perspective. *Language Learning*, 52, 513-536.

Read, J. (1989). Toward a deeper assessment of vocabulary knowledge. Paper presented at the 8th. World Congress of Applied Linguistics, Sydney, NSW, Australia, Aug. 1987. ED 301048. *Eric Clearinghouse on Language and Linguistics.*

Read, J. (2005). *Assessing Vocabulary*. Alderson, C. & Bachman, L. (Eds).Cambridge University Press. UK.

Swain, M., & Caroll, S. (1987). Vocabulary instruction in immersion classes. In B. Harely, P. Allen, J. Cummins & M. Swain (Eds.) The development of bilingual proficiency: final report. Volume II: Class room treatment. 192-222. Toronto: modern Language Center, Ontario Institute for Studies in Education.

Schmitt, N. (2000). Vocabulary in Language Teaching. J.C. Richards (ed). Cambridge University Press.

Wesche, M. & Paribakht, T.S. (1996). Assessing second language vocabulary knowledge: depth versus breadth. *Canadian Modern Language Review*, 53, 13-40.

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Appendix - Depth of Vocabulary Knowledge Test

Directions: In this test, there are 40 items. Each item looks like this:

Sound

(A)logical	(B)healthy	(c) bold	(d)solid	(E)snow	(f)temperature	(g)sleep	(h)dance

Please note

Some of the words here in the left box are similar to the meaning of sound	Some of the words in the right box are nouns than can be used after sound in a phrase or a sentence

There are eight words in the two boxes, but only four of them are correct words.

In the left box, “logical”, “healthy” and “solid” all share the meaning of “sound”.	We do not normally say “sound snow”, “sound temperature” or “sound dance”, but we often say “sound sleep”, so “sleep” is the correct answer on this side.

On your *Answer Sheet*, you should mark the answers by blackening the corresponding letters with a pencil like this:

● logical	●healthy	(C) bold	●Solid	(E) snow	(F)temperature	●sleep	(H)dance

Note: In this example there are three correct answers on the left and one on the right, but in some other items there will be either one on the left and three on the right, or two on the left and two on the right.

Now practice with two more items. The correct answers to these items will be provided by the Proctor at the end of your practice.

Digital

(A)numerical	(B)valuable	(c)binary	(D)body	(E)computer	(F)liquid	(G)keyboard	(H)wind

Outstanding

(A)limited	(B)exceptional	(C)strange	(D)expectant	(E)example	(F)mistake	(G)contribution	(H)painter

Now you can turn to the next page to begin the test. Please mark your answers on the Answer Sheet.

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Program _____ First Language: _____

1. Peak

(A)initial	(B)top	(C)crooked	(D)punctual	(E)time	(F)performance	(G)beginning	(H)speed

2. Accurate

(A)exact	(B)helpful	(C)responsible	(D)reliable	(E)error	(F)event	(G)memory	(H)estimate

3. Dense

(A)transparent	(B)acceptable	(C)compact	(D)thick	(E)hair	(F)view	(G)wood	(H)material

4. Troublesome

(A)annoying	(B)irritating	(C)dangerous	(D)bothersome	(E)favor	(F)relief	(G)weeds	(H)opportunity

5. Devoted

(A)dedicated	(B)relevant	(C)loyal	(D)elected	(E)follower	(F)instance	(G)requirement	(H)patriot

6. Wild

(A)sound	(B)uncultivated	(C)uncivilized	(D)disappointed	(E)calm	(F)mob	(G)refinement	(H)berries

7. Insufficient

(A)ungrateful	(B)inexpressible	(C)discontented	(D)inadequate	(E)lack	(F)resources	(G)amount	(H)need

8. Considerable

(A)significant	(B)outright	(C) great	(D)large	(E)change	(F)condition	(G)release	(H)nature

9.Obscure

(A)unclear	(B)unknown	(C) vague	(D)old	(E)product	(F)appraisal	(G)origin	(H)demand

10.Minute

(A)tiny	(B)timely	(C)incorrect	(D)hard	(E)adjustment	(F)preconception	(G)imperfection	(H)particle

11.Consecutive

(A)successive	(B)final	(C) fateful	(D)required	(E)attempts	(F)matches	(G)aspects	(H)terms

12. Narrow minded

(A)bigoted	(B)intolerant	(C) stupid	(D)uniform	(E)remark	(F)creation	(G)people	(H)wisdom

13. Key

(A)primary	(B)fundamental	(C)hidden	(D)false	(E)issues	(F)purpose	(G)wealth	(H)duration

14. Overall

(A)general	(B)special	(C)comprehensive	(D)best	(E)component	(F)action	(G)responsibility	(H)goal

15. Surplus

(A)valuable	(B)problematic	(C)strong	(D)extra	(E)sorrow	(F)supplies	(G)food	(H)revenues

16. Appealing

(A)prevalent	(B)likeable	(C)attractive	(D)pleasing	(E)city	(F)conflict	(G)prominence	(H)objection

17. Organic

(A)living	(B)advanced	(C)inspired	(D)colorful	(E)compound	(F)farm	(G)matter	(H)requirement

18. Vivid

(A)bright	(B)intense	(C)intelligent	(D)visual	(E)description	(F)exception	(G)reception	(H)coloring

19. Leading

(A)foremost	(B)principal	(C)developed	(D)competitive	(E)scientist	(F)society	(G)work	(H)producer

20. Daring

(A)brave	(B)bold	(C) late	(D)upsetting	(E)feat	(F)escape	(G)problem	(H)sleep

21. Celebrated

(A)renowned	(B)festive	(C)well known	(D)famous	(E)persuasion	(F)recognition	(G)understanding	(H)play

22.Fine

(A)excellent	(B)average	(C)constant	(D)natural	(E)day	(F)athlete	(G)removal	(H)china

23.Powerful

(A)potent	(B)definite	(C)influential	(D)supportive	(E)position	(F)engine	(G)repetition	(H)price

24.Conventional

(A)traditional	(B)practical	(C)neat	(D)expensive	(E)clothing	(F)warfare	(G)methods	(H)awkwardness

25. Deceptive

(A)wishful	(B)misleading	(C) polite	(D)dramatic	(E)inspiration	(F)argument	(G)intent	(H)appearance

26.Crude

(A)sympathetic	(B)unprocessed	(C)unrefined	(D)rude	(E)respect	(F)value	(G)detail	(H)oil

27. Brief

(A)short	(B)fleeting	(C) quick	(D)clear	(E)help	(F)summer	(G)tool	(H)approach

28. Fake

(A)fabulous	(B)imitation	(C)splendid	(D)counterfeit	(E)fur	(F)experience	(G)attraction	(H)identity

29. Remote

(A)mental	(B)distant	(C)reasonable	(D)far	(E)location	(F)knowledge	(G)package	(H)era

30. Essential

(A)vital	(B)necessary	(C)sensible	(D)critical	(E)loss	(F)nutrients	(G)outlook	(H)luxury

31. Adjacent

(A)nearby	(B)private	(C)adjoining	(D)genuine	(E)property	(F)suburbs	(G)plans	(H)silence

32. Avid

(A)sarcastic	(B)enthusiastic	(C) eager	(D)reckless	(E)report	(F)eater	(G)reader	(H)request

33. Elaborate

(A)concealed	(B)evolved	(C)intricate	(D)generous	(E)void	(F)precautions	(G)system	(H)network

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34. Terse

(A)heated	(B)concise	(C) delicate	(D)abrupt	(E)attitude	(F)reply	(G)expectation	(H)style

35. Contaminated

(A)rejected	(B)infected	(C) unclean	(D)convenient	(E)weather	(F)news	(G)site	(H)needle

36. Prolonged

(A)lengthened	(B)extended	(C)continued	(D)boring	(E)willingness	(F)road	(G)space	(H)illness

37. Irrevocable

(A)unalterable	(B)irreversible	(C)unchangeable	(D)impossible	(E)pretense	(F)quantity	(G)nonsense	(H)step

38. Perceptible

(A)present	(B)surprising	(C) visible	(D)initial	(E)motion	(F)personality	(G)star	(H)flaw

39. Perpetual

(A)permanent	(B)unbelievable	(C)everlasting	(D)continual	(E)level	(F)cold	(G)book	(H)foresight

40. Recurring

(A)recent	(B)repeated	(C)respectable	(D)resolute	(E)dream	(F)nation	(G)complaint	(H)theme