A QUASI-EXPERIMENTAL STUDY ON THE IMPACT OF THE PICTURE WORD INDUCTIVE MODEL ON THE VOCABULARY ACQUISITION OF YEAR 1 LEARNERS IN MALAYSIA

LEE BEE CHOO

UNIVERSITI SAINS MALAYSIA

2013

A QUASI-EXPERIMENTAL STUDY ON THE IMPACT OF THE PICTURE WORD INDUCTIVE MODEL ON THE VOCABULARY ACQUISITION OF YEAR 1 LEARNERS IN MALAYSIA

by

LEE BEE CHOO

Thesis submitted in fulfilment of the requirements for the degree of Master of Arts

UNIVERSITI SAINS MALAYSIA July 2013

ACKNOWLEDGEMENT

I would like to thank my supervisor Professor Dr Ambigapathy Pandian for his excellent advice and support. Over the years, Professor Dr Ambigapathy Pandian has provided helpful feedback and his guiding influence is invaluable. I am also thankful to Dr Thomas Chow for his constructive comments and encouragement. I would also like to thank the teachers who have taught the intervention group and control group. I would like to extend my gratitude to friends and colleagues who have been a tremendous source of motivation and support, and who have been so patient with me throughout the long process.

TABLE OF CONTENTS

		Page
Ackn	nowledgement	ii
Table	e of Contents	iii
List	of Tables	ix
List	of Figures	X
List	of Abbreviations	xi
Abst	rak	xiii
Abst	ract	xv
СПА	APTER 1: BACKGROUND OF THE STUDY	
1.1	Introduction	1
		6
1.2	Vocabulary	
	1.2.1 Vocabulary Acquisition	6
	1.2.2 The Importance of Vocabulary Knowledge	7
	1.2.3 Vocabulary Acquisition among Young Learners	9
	1.2.4 Vocabulary Threshold	12
1.3	The Picture Word Inductive Model (PWIM)	13
1.4	Statement of the Research Problem	14
1.5	Objectives of the Study	20
1.6	Research Questions	20
1.7	Research Hypotheses	21
1.8	Significance of the Study	22
1.9	Research Methodology	24
1.10	Organisations of the Study	25
1.11	Definition of Terms	25

			Page
1.12	Summ	nary	28
СНА	APTER	2: LITERATURE REVIEW	
2.1	Introd	uction	29
2.2	Vocab	oulary	31
	2.2.1	Definition of Vocabulary	31
	2.2.2	Importance of Vocabulary	32
	2.2.3	Vocabulary Size	34
2.3	Vocab	oulary Acquisition	37
2.4	Vocab	oulary Knowledge and Literacy Development	43
	2.4.1	Reading Comprehension	44
	2.4.2	Writing	45
	2.4.3	Speaking	46
	2.4.4	Listening	46
	2.4.5	Overall Academic Achievement	47
	2.4.6	Summation	48
2.5	Strate	gies of Vocabulary Learning in a Second Language	49
2.6	Vocab	oulary Interventions	52
2.7	Vocab	oulary Studies in Malaysia	53
2.8	The C	ommunicative Language Teaching (CLT) Approach	58
2.9	The P	icture Word Inductive Model (PWIM)	60
	2.9.1	Structure of PWIM in the Study	64
	2.9.2	Past Studies on PWIM and Its Implementation	66

		F	Page
2.10	Theori	es of PWIM	69
	2.10.1	Theory of Cognitive Psychology	71
		2.10.1.1 The Information Processing Approach to Cognition	75
		2.10.1.2 Inductive Thinking	78
		2.10.1.3 Concept Attainment	80
	2.10.2	Acquisition Learning Hypothesis	81
	2.10.3	General Systems Theory: Developmental Priming Mechanisms	82
	2.10.4	Picture Superiority Effect (PSE)	84
		2.10.4.1 Theories of PSE	84
		2.10.4.2 Dual-Coding Theory	86
		2.10.4.3 Summation	91
2.11	Theore	etical Framework	93
2.12	Summ	ary	97
СНА	PTER	3: RESEARCH DESIGN	
3.1	Introd	uction	99
3.2	Study	Design	100
3.3	Instrui	ments	103
	3.3.1	Selection of Target Word List	103
	3.3.2	Pictures	105
	3.3.3	Test Materials	106
	3.3.4	Questionnaire	110
	3.3.5	Interviews	113

			Page
3.4	Proce	edure for Data Analysis	116
3.5	Pilot	Test	116
	3.5.1	Results of the Pilot Test	117
3.6	Main	Study	121
	3.6.1	Sampling	123
	3.6.2	Subjects	126
	3.6.3	Methodology	129
	3.6.4	Summary of the Schedule of the Study	135
	3.6.5	Assumptions of the Study	136
	3.6.6	Limitations of the Study	138
3.7	Scorin	ng Procedure and Statistical Analysis	138
3.8	Summ	nary	140
CHA	APTER	4: DATA ANALYSIS	
4.1	Introd	uction	141
4.2	Subjec	ets	141
4.3	Analy	sis of Statistical Results	142
	4.3.1	Research Question 1	143
	4.3.2	Research Question 2	146
	4.3.3	Research Question 3	150
4.4	Sumr	mary	154
	APTER NCLUS	5: DISCUSSIONS, RECOMMENDATIONS AND SIONS	
5.1	Introd	uction	156
5.2	Overv	iew	156

		Page
5.3	Discussion of the Findings	157
	5.3.1 Impact on Vocabulary Acquisition	157
	5.3.2 Impact on Vocabulary Recall	161
	5.3.3 Impact on Vocabulary Retention	164
5.4	Summary of the Study	167
5.5	Contributions for Future Research	169
	5.5.1 Recommendations for English Language Teachers	169
	5.5.2 Recommendations for Module Writers	173
	5.5.3 Recommendations for Policy Makers	174
5.6	Limitations	175
5.7	Suggestions for Future Research	176
5.8	Conclusions	177
REF	FERENCES	179
APF	PENDIX A: Inductive Thinking Model	207
APF	PENDIX B: Concept Attainment Model	208
APF	PENDIX C: Preliminary Word List Test	209
APF	PENDIX D: Word List	212
APF	PENDIX E: Schedule for PWIM Cycles	214
APF	PENDIX F: Picture A, B, C, D and E	217
APF	PENDIX G: Word List Pretest	222
APF	PENDIX H: Word List Posttest	224
APF	PENDIX I: Word List Delayed Posttest	226
APF	PENDIX J: Questionnaire (Original)	228
APF	PENDIX K: Questionnaire (Amended)	233

	Page
APPENDIX L: Interview Questions: PWIM Teacher (Before intervention)	239
APPENDIX M: Interview Questions: Control Group Teacher	241
APPENDIX N: Interview Questions: PWIM Teacher (After intervention)	243
APPENDIX O: Results of Pretest, Posttest and Delayed Posttest: Intervention Group	244
APPENDIX P: Letter of Permission from Kementerian Pelajaran Malaysia	247
List of Publications	248

LIST OF TABLES

		Page
Table 1.1	English Performance, 2010	15
Table 2.1	The Two Systems that Serve Memory	89
Table 3.1	Research Matrix	116
Table 3.2	Descriptive Statistics of Pretest, Posttest and Delayed Posttest	117
Table 3.3	Paired Samples T-test of Intervention Group	118
Table 3.4	Independent Samples T-test for Posttest	119
Table 3.5	Independent Samples T-test for Delayed Posttest	120
Table 3.6	A Summary of Study Schedule	135
Table 3.7	Schedule for the Intervention Programme	136
Table 4.1	Descriptive Statistics of Pretest and Posttest	143
Table 4.2	Score Tally of Pretest and Posttest	144
Table 4.3	Descriptive Statistics of Pretest and Posttest for Intervention Group	145
Table 4.4	Paired Samples T-test of Intervention Group	145
Table 4.5	Descriptive Statistics of Pretest and Posttest	147
Table 4.6	Independent Samples T-test for Posttest	148
Table 4.7	Group Statistics of Posttest	149
Table 4.8	Independent Samples T-test for Posttest	149
Table 4.9	Descriptive Statistics of Delayed Posttest	151
Table 4.10	Independent Samples T-test for Delayed Posttest	152
Table 4.11	Group Statistics of Delayed Posttest	152
Table 4.12	Independent Samples T-test for Delayed Posttest	153

LIST OF FIGURES

Figure 2.1	The Structure of the Study	Page 30
Figure 2.2	A Scale of Continuum of Knowledge	39
Figure 2.3	Lesson Structure of the Picture Word Inductive Model	62
Figure 2.4	Lesson Structure of the Picture Word Inductive Model as Adapted for the Study	65
Figure 2.5	Students in Piagetian Stages	73
Figure 2.6	Bloom's Taxonomy (Revised)	74
Figure 2.7	Multi Store Model	75
Figure 2.8	Developmental Priming Mechanisms	83
Figure 2.9	Information Processing.	88
Figure 2.10	Theoretical Framework	94
Figure 3.1	Lesson Structure of the Picture Word Inductive Model as Adapted for the Study	133
Figure 3.2	Lesson Structure of the English Lessons of the Control Group	134
Figure 5.1	Lesson Structure of the Picture Word Inductive Model as Adapted for the Study	172
Figure 5.2	Lesson Plan of the Picture Word Inductive Model as Adapted for the Malaysian Classroom	173

LIST OF ABBREVIATIONS

AEA Area Education Agency

CALL Computer-Assisted Language Learning

CBL Computer-Based Language Learning

CLT Communicative Language Teaching

EFL English as a Foreign Language

ESL English as a Second Language

IELTS International English Language Testing System

IRA International Reading Association

KBSR Kurikulum Baru Sekolah Rendah

KSSR Kurikulum Standard Sekolah Rendah

L1 First Language

L2 Second Language

LINUS Literacy and Numeracy Screening

LTM Long Term Memory

MoE Ministry of Education

MUET Malaysian University English Test

NICHD National Institute of Child Health and Human Development

NIFL National Institute for Literacy

OECD Organisation for Economic Cooperation and Development

PWIM Picture Word Inductive Model

SJK Sekolah Jenis Kebangsaan

SK Sekolah Kebangsaan

SL Second Language

STM Short Term Memory

TAP Transfer-Appropriate Processing

TOEFL Test of English as a Foreign Language

KAJIAN KUASI EKSPERIMEN TERHADAP KESAN PENGGUNAAN MODEL INDUKTIF GAMBAR-KATA KE ATAS PEROLEHAN PERBENDAHARAAN KATA DALAM KALANGAN PELAJAR TAHUN 1 DI MALAYSIA

ABSTRAK

Memandangkan kepentingan pengetahuan perbendaharaan kata terhadap perkembangan bahasa (Cunningham & Stanovich, 1997; Hazenberg & Hulstijn, 1996; Nation, 1990), maka kajian ini cuba meneoka kesan gambar terhadap perolehan perbendaharaan kata dalam kalangan sekumpulan pelajar Tahun 1 di Malaysia, menggunakan Model Induktif Gambar-Kata (PWIM). Kumpulan eksperimen kajian ini terdiri daripada 32 orang pelajar Tahun 1 dari sebuah sekolah rendah kerajaan. Sementara itu, kumpulan kawalan juga terdiri daripada 32 orang pelajar Tahun 1 dari sebuah sekolah rendah yang lain. Kajian ini juga turut membandingkan daya ingat kembali dan retensi daripada kedua-dua kumpulan berkenaan. Model PWIM yang dibangunkan oleh Calhoun (1999), menggunakan gambar untuk mencungkil perkataan daripada perbendaharaan kata lisan dan sebutan pelajar. Beliau berjaya menggunakan PWIM secara meluas dalam kalangan pelajar di pelbagai peringkat dan tahap kebolehan di negaranya sendiri dan juga di beberapa buah negara lain. Data yang terkumpul daripada praujian, pascaujian, dan pascaujian tertunda dianalisis dan dinilai untuk meneliti perbezaan signifikan dari segi statistik di antara kedua-dua kumpulan tersebut. Dapatan menyarankan bahawa keduaduanya mencatatkan keputusan yang positif dalam ujian perbendaharaan kata. Walau bagaimanapun, kumpulan yang didedahkan dengan intervensi PWIM didapati mencapai peningkatan yang lebih signifikan dalam daya ingat kembali dan retensi, dibandingkan dengan kumpulan kawalan, yang diajar berdasarkan pendekatan tradisional yang lazim. Hal ini menunjukkan bahawa PWIM merupakan satu alat pengajaran yang berkesan bagi memudahkan perolehan perbendaharaan kata.

A QUASI-EXPERIMENTAL STUDY ON THE IMPACT OF THE PICTURE WORD INDUCTIVE MODEL ON THE VOCABULARY ACQUISITION OF YEAR 1 LEARNERS IN MALAYSIA

ABSTRACT

Given the significance of vocabulary knowledge to language development (Cunningham & Stanovich, 1997; Hazenberg & Hulstijn, 1996; Nation, 1990), this study examined how pictures impact vocabulary acquisition of a group of Year 1 students in Malaysia through the Picture Word Inductive Model (PWIM). The experimental group of this study consisted of 32 Year 1 students from a Malaysian public primary school, while the control group also consisted of 32 Year 1 students, from another primary school in the surrounding area. The study also compared vocabulary recall and retention of the two study groups. The PWIM, designed by Calhoun (1999), employs pictures to elicit words from students' existing listening and speaking vocabularies. The developer has used the PWIM successfully and extensively with learners of various levels and ability levels in her own country and some other countries as well. Data collected from pretests, posttests, and delayed posttests were analysed and assessed for statistically significant differences between the experimental and the control group. The findings suggest that although both study groups recorded positive results in the vocabulary tests, those who experienced the PWIM intervention achieved a more significant increase in their vocabulary recall and retention as compared to those in the control group who were taught via typical classroom instruction. This indicates that the PWIM appears to be a more effective instructional tool in facilitating vocabulary acquisition.

CHAPTER 1

BACKGROUND OF THE STUDY

1.1 Introduction

Over the years, there have been many studies pertaining to the importance of vocabulary in supporting second language acquisition (Banta, 2004; Caroll, 1971; Laufer, 1997; McKeown & Curtis, 1987; Nation, 1990; Nikolova, 2002). Vocabulary teaching and learning may have received scant attention in the early days of language acquisition (Alemi & Tayebi, 2011) with very little research being conducted in the field of ESL (Folse, 2004; Hunt & Beglar, 2005), but since then, the fact that vocabulary plays a crucial role in second language learning and teaching has been acknowledged time and again in theoretical and empirical second language acquisition vocabulary research (Eyckmans, 2004). One of the most persistent and consistent findings in numerous literacy research done is that the extent of students vocabulary size relates strongly and positively, not only to learners' reading comprehension (Baker, Simmons & Kameenui, 1995; Baumann, Kameenui & Ash, 2003; Beck, McKeown, & Kucan, 2002; Becker, 1977; Beglar & Hunt, 1999; Graves, 2000; Laufer, 1992; NICHD, 2000; Snow, 2002; Stahl & Fairbanks, 1986), but also to their general reading ability (Stanovich, Cunningham, & West, 1998). So much so that children with below-threshold vocabularies are being misdiagnosed as having a reading disability (Biemiller, 2010).

Vocabulary has been viewed to possess such significance that numerous researchers have claimed that vocabulary does not only play an important role in determining learners' overall academic success (Baumann & Kameenui, 1991; Baumann, Kameenui, & Ash, 2003; Becker, 1977; Bromley, 2007; Carlisle, 2002;

Cunningham and Stanovich, 1997; Graves & Watts-Taffe, 2002; Hazenberg & Hulstijn, 1996; Laufer, 1992a; Nagy & Scott, 2000), but it also has an impact throughout one's life span (Biemiller, 2012). Moreover, the core of these difficulties occurs very early in life (Rowe, Raudenbush, & Goldin-Meadow, 2012). Vocabulary size has also been found to play a vital role in writing and has been acknowledged to have substantial influences in the quality of one's essay (Astica, 1993; Beglar & Hunt, 1999; Laufer & Nation, 1995; Linnarud, 1986; Llach & Gallego, 2009). Additionally, a research conducted by Oya, Manolo and Greenwood (2009) showed that vocabulary size correlated positively with oral competence, in tandem with findings from several past studies carried out by researchers such as Koizumi (2005), Takiguchi (2003), Koizumi and Kurizaki (2002), Ishizuka, (2000), Higgs and Clifford (1982) and Adams (1980). Besides, the role of vocabulary in listening is not to be denied. There may be limited studies on vocabulary and listening but existing empirical findings have indicated a positive relationship between vocabulary size and listening comprehension (Beglar & Hunt, 1999; Milton, Wade, & Hopkins, 2010; Staehr, 2009)

Studies carried out by Malaysian researchers such as Ghanaguru et al. (as cited in Tharulmaraj & Noreen, 2011), Radzuwan (2011), Ahmad et al. (2009, 2010, 2011), Subramaniam et al. (2009), Noorizah and Zaini (2009), Md. Deni et al. (2007), Nurul (2006), Tuluhong (2006), Chin (2005), SeeToh (2005), Pandian (2003), Lim (2003), and Fatimah (1999), have also highlighted the importance of vocabulary knowledge in the course of second language learning. They also highlighted the significance of vocabulary knowledge to achievement in the subjects of the school curriculum, as well as in formal and informal writing and speaking. Therefore, it can be concluded that a lack of vocabulary knowledge renders learners

incapable of coping with the four language skills and is therefore, a hindrance to their achieving mastery of the target language.

In the 1980s, neglect of vocabulary research has received harsh criticism (Meara, 1980, 1984), but from the late 1980s, vocabulary had caught the attention of researchers in the mainstream of L2 acquisition (Nation, 1997). In Malaysia, many studies have been conducted on vocabulary acquisition. Studies such as vocabulary learning through image sketching among primary school children, via Computer-Assisted Language Learning (CALL), or Computer-Based Language Learning (CBL) have also been done. Vocabulary learning using picture books and the whole word approach in aiding students with regard to early reading, effectiveness of vocabulary acquisition via Henrikson (1996) model of vocabulary acquisition and various vocabulary acquisition strategies of Malaysian ESL learners have been explored in the Malaysian context. These studies have examined strategies employed in the learning of vocabulary among learners of various ages, levels, and ethnicities in Malaysia (Ghanaguru et al., as cited in Tharulmaraj & Noreen, 2011; Radzuwan, 2011; Subramaniam et al., 2009; Ahmad et al., 2009, 2010, 2011; Noorizah & Zaini, 2009; Md. Deni et al., 2007; Nurul, 2006; Tuluhong, 2006; Chin, 2005; SeeToh, 2005; Lim, 2003; Fatimah, 1999).

In Malaysia, the concern for and awareness of using English have developed into a "sine qua non tool for the continuity of the development process" since 1990 (Tengku Sepora et al., 2004, p. 430). In the decades since attaining independence, the nationalisation of the education system has gone through phenomenal changes, with implementation of the national language and national educational policies at the primary and secondary levels. When the National Language Policy was implemented in 1970, it resulted in English being accorded the status of a second language and the

Malay language being used exclusively as the medium of instruction in schools. The groundwork was laid with the formation of the Education Review Committee of 1956, also known as The Razak Report of 1956, and by the end of 1982, the process of transformation from English to *Bahasa Malaysia* was completed (Asmah, 1987). By then, all former English-medium schools (National-type) schools have turned into Malay-medium (National) schools. A decline in the standard of English among learners in the country soon followed and voices of dissatisfaction have since been consistently heard among the public via media and educational channels and forums. Thus, the root of the issue – a genuine lack of proficiency in English among these people – needs to be addressed swiftly.

In all probabilities, the root cause of the problem starts at the primary school level. As lamented by Norazman et al. (2004), English language is a "killer subject" even for children who have good academic results in most schools in the rural areas (p. 424). The New Primary Schools Curriculum or *Kurikulum Baru Sekolah Rendah* (*KBSR*) was introduced in 1983, and the focus was on acquisition of the three R's – the basic skills of reading, writing, and arithmetic. It was later revamped, following findings of the National Seminar on the Evaluation and Implementation of the KBSR in 1990 that stated its weakness to facilitate students' communicative competence. The revamped version, known as the *Kurikulum Bersepadu Sekolah Rendah* (KBSR), was designed to carry out communicative activities in the classroom with the aim of enhancing students' communicative competence (Pandian, 2003). Apart from that, it was also skills based and emphasized the integration of the four skills as well as language areas. However, the gap in vocabulary knowledge has not been directly addressed even though lexical acquisition was very important for second or foreign-language acquisition (Wong & Shameem, 2004). The Communicative

Language Teaching (CLT) approach overly emphasises the single concept "communication" (Stern, 1992), providing little or minimum direction on how to handle vocabulary although supportive vocabulary is clearly needed for practical language use in CLT (Schmitt, 2000). This indicates that the CLT, with mere exposure to language exercises coupled with exercise or practise in functional communication, will have little impact on proficiency in language learning. As such, it is not surprising that vocabulary, a prerequisite for communication, is often seen as the biggest hindrance to English language acquisition by second or foreign language learners and needs to be addressed accordingly.

Thus, vocabulary acquisition should not be overlooked and should be accorded the due attention it deserves. Vocabulary learning should be placed as one of the key tasks of schooling in the yearly years as studies have demonstrated that children with better vocabulary knowledge tend to fare better in reading and learning in school as compared with their counterparts (Burns, Griffin & Snow, 1999; Carroll, 1971; Kerbow et al., 1999; McKeown & Curtis, 1987). In addition, Banta (2004), Walsh (2003), and Anstey and Bull (2000) have observed that children reacted positively to reading materials with pictures as they are more motivated to read when the target words are accompanied by pictures illustrating their meanings, lending support to Paivio's (1971) Dual-Coding Theory that advocated vocabulary acquisition via both sensory systems of logogens and imagens.

Given the manifold benefits of using pictures to aid vocabulary acquisition, teachers and researchers (Banta, 2004; Calhoun, 1999; Swartzendruber, 2007) began to consider the use of pictures and words in teaching vocabulary to language learners. In her study, Swartzendruber discovered that students' vocabulary acquisition was enhanced with the use of the picture word inductive model (PWIM).

In this vein, the researcher proposed to adapt Calhoun's (1999) model of teaching on a group of young learners, Year 1 children, from a national primary school in a rural area in Malaysia. The quasi-experimental study will focus on how the PWIM affects the vocabulary acquisition of these children.

1.2 Vocabulary

Vocabulary has often been viewed, by students and teachers alike, as an essential part of first and second language learning (Duppenthaler, 2007). Researchers such as Laufer (1997), Laufer and Sim (1985a) and Nation (1994) generally agreed that students need to acquire a fairly large set of basic vocabulary in order for language learning to take place.

1.2.1 Vocabulary Acquisition

The process of acquiring word knowledge, as described by Nagy, Anderson, and Herman (1987), appears to occur in this manner – on the first encounter with a new word, a student stores in memory some information about how the word fits into what he or she is reading. This information is reinforced each time he or she sees or hears the word. With each new encounter, the student picks up more information about the word used in various contexts. As a result, the student gradually acquires "ownership" of the word.

There are many theories on how vocabulary is acquired and one of the most commonly accepted views of vocabulary is that it occurs along a continuum of development (Waring, 2002). The primary idea is that one will progress along a continuum of knowledge as one acquires additional knowledge of a given word. This

basic notion has also been extended to the general notion of receptive and productive vocabulary, placed at either end of the continuum.

Krashen (1989) defined vocabulary acquisition as an incidental way of learning and it normally occurs largely due to the guesses made by learners based on their background knowledge and the incidence of occurrence. Therefore, according to Krashen, language acquisition happens when a learner is exposed to meaningful and comprehensible input without conscious attention given to forms and this contrasts with language learning that occurs through conscious study of forms. In tandem with this, Folse (2004), Gass (1999) and Channel (1998) are of similar opinions that acquisition and learning are considered similar since both terms start with an input that integrates new linguistic information into the existing linguistic system and eventually produces an output of newly integrated or acquired knowledge.

However, according to Coady, (1997), approaches to teaching L2 vocabulary fall on a range. On one end of the range, we have the incidental approach where learners experience natural acquisition (Krashen, 1989) while on the other end, learners will experience explicit instruction and the development approach (Oxford & Crookall, 1990; Paribakht & Wesche 1997; Qian, 1996; Raptis, 1997).

1.2.2 The Importance of Vocabulary Knowledge

As Coady (1997, p. 287) said, "Words and phrases are essential to language learning. The only real issue is the best manner in which to acquire them." Likewise, Lewis (2000) highlighted that the single most important task facing language learners is acquiring a sufficient large vocabulary. In tandem, Laufer (1998) stressed that the most striking difference between foreign learners and native speakers is in the quantity of words each group possesses. These further emphasise that vocabulary

plays a crucial role in second language learning and teaching, an issue that has been acknowledged time and again in theoretical and empirical research on second language vocabulary acquisition.

Similarly, Hunt and Beglar (2005) and Zimmerman (1997) acknowledged that vocabulary is of utmost importance to a language learner as it is the core of language comprehension and use. Schmitt and Meara (1997) have also admitted that language competence encompasses much more than just the grammatical element. Irrefutably, vocabulary knowledge is a prerequisite for the development of any form of language proficiency (Eyckmans, 2004), with vocabulary size and overall language proficiency significantly correlated (Yuksel & Kavanoz, 2010). Thus, one's proficiency level will progress in tandem with their level of vocabulary knowledge (Nation, 2001).

Nation (2001, 1993, 1990) has also highlighted the vital significance of possessing sufficient vocabulary as it has been shown that learners' language proficiency relies very much on the number of words they are acquainted with. In fact, language learners themselves deem inadequate vocabulary to be the primary cause of poor receptive and productive language use (Nation, 1990).

Basically, Nation (1990) postulated that if one's vocabulary level falls below a suggested threshold it will not only compromise the effect of any reading strategies, but it will also disable any effective reading; and reading, undeniably, is a useful and practical manner for language acquisition (Laufer, 1997). In tandem, Pandian (2003) noted that reading is a tool of learning, and that it can be used for seeking of information and for other learning. Thus, if one's vocabulary knowledge is below a suggested threshold, it will have far-reaching effects. Additionally, August and

Shanahan (2006) did a study on the literacy development among L2 learners. They reported that literacy is deemed essential, not only to achievement in all academic subjects, but also to educational and economic opportunities beyond the boundaries of school. In addition, vocabulary is identified as one of the five key aspects of literacy by the National Reading Panel (NICHD, 2000).

Apparently, while researchers have generally agreed that vocabulary knowledge is essential in the development of language proficiency, they are still divided on the best possible way to teach or learn a language. Since vocabulary is so vital to language development and competence, the researcher, therefore, proposed to carry out a study on vocabulary acquisition based on a model of teaching that has already been proven effective in the United States of America.

1.2.3 Vocabulary Acquisition among Young Learners

One of the most basic objectives of schooling in the early years, as far as language learning is concerned, is to teach vocabulary (Carroll, 1971; McKeown & Curtis, 1987). Consistent with this finding is the observation of Burns, Griffin and Snow (1999) that children with low language skills and less phonemic awareness and letter knowledge are those most at risk of facing literacy problems in their later years of schooling. Hence, rendering teaching vocabulary as one of the primary tasks of a school.

Furthermore, as claimed by Teale and Sulzby (1986), literacy development begins very early in a child's life and forms a foundation for the acquisition of conventional literacy. In line with this, Burns, Griffin and Snow (1999) noted that the more knowledge children have on language and literacy before they begin formal schooling, the better equipped they are in literacy development. For instance,

children who have a tendency familiarising themselves with rich language patterns are those who are constantly read to, who also tend to gain an understanding of what written language sounds like (Sulzby, 1985; Sulzby, Buhle & Kaiser, 1999).

Research has also consistently demonstrates that children's literacy development begins long before they start formal instruction in elementary school (Allington & Cunningham, 1996; Burns, Griffin, & Snow, 1999; Clay, 1991; Teale & Sulzby, 1986). Thus it's advisable to start vocabulary instruction early with learners. Young children with relatively small vocabularies comprehend less well. Since they comprehend less well, they often choose to read less. Over time, students who read less acquire smaller vocabularies and comprehend less in later years (Stanovich, 1986). Children with smaller vocabularies will continue to lag behind children with larger vocabularies and the source of these difficulties occurs very early in life (Biemiller & Slonim, 2001). Therefore, it is crucial to start vocabulary acquisition when the learners are young. Researches carried out in the areas of factors contributing to children's reading difficulty and delays in language development have come up with conclusive findings that successes or struggles with reading can be observed very early in a learner's life. (Kerbow et al., 1999). Kerbow et al. (1999) observed that the students involved in the study faced learning and reading difficulties because they lacked the necessary vocabulary proficiency in their early phase of learning. Hence, it is vital to embark on vocabulary knowledge building with young learners (Biemiller & Slonim, 2001).

Concerns with literacy development have also led to the discovery of individual discrepancies of vocabulary abilities among young children starting school (Beck & McKeown, 2009), with detected significant differences in vocabulary size among children already by the end of second grade (Biemiller, 2003). Biemiller

(2012) further suggested that a child's vocabulary is predominantly determined by the words learned from parents and those who came into contact with the child. In fact, a year of kindergarten, grade one, or grade two contributes minimally to a child's vocabulary (Cantalini, 1987; Christian, Morrison, Frazier, & Massetti, 2000; Morrison, Smith, & Dow-Ehrensberger, 1995).

Vocabulary is found to be an excellent predictor of language competence and as such, can be considered as vital to young learners (Astika, 1993; Chall, 1958; Klare, 1974, 1975; Koda, 1989). This is very much in accordance with findings that a lack of adequate vocabulary is mainly responsible for the inability of children to comprehend books they need to read in school (Becker, 1977; Chall & Conard, 1991; Chall, Jacobs, & Baldwin, 1990; Lescaux & Kieffer, 2010; Scarborough, 2001; Silverman & Crandall, 2010), further highlighting the importance of improving vocabulary instruction in primary grades.

As advised by Cunningham and Stanovich (1997) and Hazenberg and Hulstijn (1995), if possible, one should initiate efforts to enhance vocabulary acquisition as early as possible for one's vocabulary size has an impact throughout one's life span with those having insufficient vocabularies running a much higher risk of performing poorly academically. According to Rowe, Raudenbush and Goldin-Meadow (2012), these difficulties can be detected very early in life. So much so that those with below-threshold vocabularies are often being mistaken for those who have a reading disability (Biemiller, 2010). Therefore, likely, the single best thing we could do to increase literacy would be to increase vocabulary size during the primary grades, preferably starting from Year 1.

1.2.4 Vocabulary Threshold

According to Beck and McKeown (1991), five to six year olds have a working vocabulary of 2,500 to 5,000 words and the average student learns about 3,000 words per year in the early school years where vocabulary growth is considerably worse for disadvantaged students than it is for advantaged students.

Nation and Waring (1996) advocated a vocabulary size of around 20,000 word families as the ideal vocabulary size for meaningful learning. Interestingly, a word family would include a base word, its inflected forms, and a few reasonably regular derived forms. They added that second language learners needed first to concentrate on the high frequency words of the language.

The aim is for beginning learners and readers to reach the threshold where they can start to learn from context. Simply put, if one does not know enough of the words on a page and comprehend of what is being read, one is not able to learn from context with ease. Previously, Liu and Nation (1985) have shown that we need a vocabulary of about 3000 words, which provides coverage of at least 95% of a text before we can efficiently learn from context with unsimplified text. However, researchers now believed that learners needed to know a minimum of 98% of the vocabulary in a text to be able to read comfortably (Nation & Webb, 2011). In addition, Nation (2006) suggested that between 6,000 and 7,000 words are necessarily required to provide 98% coverage in daily listening, while between 8,000 and 9,000 words are required for pleasure reading. This further proves that a learner needs more start-up vocabulary compared with previous figures, and this is just to comprehend general texts.

1.3 The Picture Word Inductive Model (PWIM)

According to Calhoun (1999, p. 21), "PWIM is an inquiry-oriented language arts strategy that uses pictures containing familiar objects and actions to elicit words from children's listening and speaking vocabularies." Joyce, Weil and Calhoun (2004) deemed PWIM to be the core of some very effective curriculums that serve as a reading programme, not only for kindergarten and primary students, but also for older beginning readers and writers in secondary and high school. Joyce, Weil and Calhoun (2004) identified PWIM with the research-based, instructional method of teaching vocabulary to beginning readers. They maintained that PWIM is successful where it helps the learners to develop large sight vocabularies via the natural ways for children to approach the learning of a language.

The adapted PWIM, apart from incorporating the inductive thinking and the concept attainment models of teaching, and employing pictures and texts to teach vocabulary, will be supported by the use of mother tongue. For example, in teaching the word "house" first, the teacher will put up a picture with the picture of a house in it. Next, the teacher will attempt to elicit the word "house" from the students' vocabulary knowledge. Here, the students are allowed to say the word "house" in their mother tongue if they do not know the word in English. The teacher will then provide the English equivalent of the word given by the students in their mother tongue. After that, the teacher will paste the word "house" near to the picture of the house and read the word aloud. The students will be asked to repeat after the teacher.

In short, this adapted PWIM is a combination of the inductive thinking and concept attainment models of teaching with the inquiry-oriented method of using pictures and words, and the mother tongue to teach or induce vocabulary acquisition

and is deem an effective way of learning a language for beginning learners of the target language.

1.4 Statement of the Research Problem

In the Malaysian education system, the English language remained the main medium of instruction until the Education Enactment Bill was passed in 1971. The Malay language was then introduced as the medium of instruction. Before the end of the 1970s, the change was completed and all subjects were taught in the Malay language with the English language retained and taught as one of the subjects in the curriculum.

A steady decline in the standard of English among learners in the country soon followed and voices of dissatisfaction have since been consistently heard among the public via various media and educational forums.

When it comes to identifying what brings forth the steady decline in the standard of English among learners in the country, perhaps no one puts it more aptly than Ambigapathy Pandian, who said the following:

In Malaysia, as the movement to make Bahasa Malaysia the official language of Malaysia grew after independence in 1957, along with it grew the perception that English needs to be "walled in." Consequently, the medium of instructions in schools and universities were shifted from English to Bahasa Malaysia in stages. By the nineteen seventies the transformation was complete and English was successfully walled in as a second language with scant regard for what was being "walled out." The transformation allowed Bahasa Melayu to flourish and proficiency levels in the language increased while those of English deteriorated. (Pandian, 2003, p. 62)

The standard of English in Malaysia has become alarming to educators and stakeholders. This has been espoused in many studies (Fauziah & Nita, 2002; Kabilan & Naginder, 2007; Samuel & Bakar, 2008; SeeToh, 2005), with poor motivation and lack of English usage and exposure among learners being some of the essential causes of low English language communication and proficiency (Choy & Troudi, 2006; Krashen, 1976; Pillay, 1995). Based on the findings of these studies, the main weaknesses of the learners often point to weak vocabulary, grammar, reading, writing, and even a low ability in proper sentence construction. In addition, some of the proponents of vocabulary acquisition have lamented that many students, especially young learners, encounter problems with poor vocabulary knowledge. As reported in the Star newspaper, only 28% of the students achieved a minimum credit in the 2011 SPM English paper against Cambridge 1119 standards, with only 23% Bumiputera, 42% Chinese and 35% Indian students scoring at a level equivalent to a Cambridge 1119 credit or above ("Master of Languages," 2012, September 12).

Table 1.1

English Performance, 2010

Ethnicity	Students achieving at least a credit in English Cambridge 1119 (%)
Bumiputera	23%
Chinese	42%
Indian	35%

Notes. Taken from Examinations Syndicate, Starspecial, *The Star*, 12 September 2012, p. 4.

Additionally, comparing Malaysia's PISA 2009+ ranking against other countries, apparently Malaysia trails behind many other countries. Malaysia ranks in the bottom third of 74 participating countries – below the international and the

Organisation for Economic Cooperation and Development (OECD) average ("Push to Do Much Better," 2012, September 12). In reading, Malaysia ranks 55th, below Singapore (5th) and Thailand (53rd), but slightly above Indonesia, which ranked 62nd.

The public have voiced their feelings of unease and dissatisfaction at the steady decline in the standard of English among learners in the country. These voices of dissatisfaction have been consistently expressed in various media and in educational forums. The decline in the standard of English is undeniable and the entire issue has resulted in serious concerns, not only among the parents of the learners, but also among the nation's politicians and academicians.

In response, Deputy Prime Minister and Education Minister Tan Sri Muhyiddin Yassin has announced new initiatives such as the latest "Upholding Bahasa Malaysia and Strengthening English" policy to improve students' proficiency in English ("Bye-bye PPSMI," 2011, November 13), and extending the Literacy and Numeracy (LINUS) programme to include English literacy under the Government Transformation Programme ("LINUS Programme for Early Learning," 2012, September 5). These initiatives indicate that there is a very real problem with regard to the English language competency of Malaysian students, and the acknowledgement comes not only from the government, but also from within academic circles.

Researches by Malaysian academicians such as Ahmad et al. (2008, 2010, 2011), Ghanaguru et al. (as cited in Judith & Noreen, 2011), Subramaniam et al. (2009), Noorizah and Zaini (2009), Nurul (2006), Tuluhong (2006), Chin (2005), SeeToh (2005), Lim (2003), and Fatimah (1999) highlighted a strong positive

correlation between vocabulary acquisition and reading comprehension and the importance of vocabulary knowledge in the course of second language learning and their studies. They also mentioned significance of vocabulary knowledge to achievement in the subjects of the school curriculum, as well as in formal and informal speaking and writing.

For instance, in the study by Ghanaguru et al. (as cited in Judith & Nooreen, 2011) on reading problems and strategies of primary school students, many students were found to encounter problems with their vocabulary and they did not possess enough confidence in their ability to acquire new vocabulary in a given text. They also acknowledged that in-service English language teachers perceived that their students in the primary schools had reading problems.

In the same light, Noorizah and Zaini (2009), in their study on the vocabulary learning strategies of English as a Foreign Language (EFL), discovered that many EFL learners consider reading to be a very difficult and time-consuming process, and these learners cited lack of vocabulary knowledge as the main culprit of their predicament.

Nurul (2006) also pointed out that our students are not able to read fluently, despite having exposure to phonics in early reading. The inability to read fluently is not only affecting their levels of proficiency in the language, but it is also hampering them from achieving their full potential academically. Reading is essential to success (Nurul, 2006) and since the importance of vocabulary instruction in one's reading achievement has been widely acknowledged (NICHD, 2000; IRA, 2002; Nation, 1990), focus should then be on enhancing students' vocabulary knowledge. Should one's vocabulary knowledge improve, one's ability to read should improve

automatically since vocabulary knowledge is significantly and positively correlated with reading.

The findings of Malaysian academicians further supported the findings of theorists and researchers such as Baumannn (2009), Hunt and Beglar (2005), Carlisle (2002), IRA (2002), Read (2000), Cunningham and Stanovich (1997), Laufer (1997), Hazenberg and Hulstijn (1996) Nation (1990, 1994) and others, with regard to the significance of vocabulary acquisition. As Read aptly put it, "Words are the basic building blocks of language, the units of meaning from which larger structures such as sentences, paragraphs and whole texts are formed" (2000, p. 1). Based on the findings of Nation and Webb (2011), learners need to know a minimum 98% of the vocabulary in a text, to be able to read comfortably. Otherwise, learners would face the dual predicament of having to master the language and the subject matter at the same time, a mammoth task for all children concerned. Gupta and MacWhinney (1997) went as far to state that vocabulary acquisition can be considered one of the most crucial processes in human development since we could never acquire language without a system for learning words, and without language, human culture would be stagnant and eventually perish.

Closer to home, numerous studies on vocabulary acquisition strategies such as vocabulary learning using children's stories (Radzuwan, 2011), vocabulary learning through image sketching among primary school children (Subramaninam et al., 2009), vocabulary acquisition through vocabulary scrapbook (Md Deni et al., 2007) and via Henrikson's (1996) model of vocabulary acquisition have been explored in the Malaysian context. In addition, Nurul (2006) has done research on using picture books and the whole word approach in aiding students in their early reading while SeeToh (2005) has focused on vocabulary learning via Computer-Assisted Language

Learning (CALL) or Computer-Based Language Learning (CBL). All these initiatives pointed to the significance of vocabulary knowledge to literacy development and the urgent need to address the lack of focus on the teaching of vocabulary. Malaysian researchers have viewed vocabulary knowledge as essential to literacy development and language competence and therefore, is of critical importance to the typical language learner. Thus, there exists a real and immediate need for an effective programme to look into this issue.

Moreover, the *Kurikulum Bersepadu Sekolah Rendah* (KBSR) aims to enhance students' communicative competence, placing emphasis on the integration of the four skills as well as language areas (*Kementerian Pendidikan Malaysia*, 1989) and this contributes to the neglect of vocabulary acquisition in our Malaysian classrooms (Wong & Shameem, 2004). According to Stern (1992), the CLT approach overly emphasises on the single concept "communication," providing little or minimum direction on how to handle vocabulary although supportive vocabulary is clearly needed for practical language use in CLT (Schmitt, 2000). As Meara (1996, p. 35) fittingly put it, "...lexical competence is at the heart of communicative competence." Thus, to achieve communicative competence, the issue of vocabulary knowledge need to be addressed first.

Undeniably, the gap in vocabulary knowledge is an immediate concern and needs to be addressed accordingly. Apparently, a good foundation in vocabulary is crucial to language learning and having a headstart would provide one with credible scaffolding for more effective language acquisition. As contended by Snow (1999) and Trevarthen (1993, 1994), it is essential for language learning to take place early in one's life because a child is distinctively placed for language development early in life and subsequently, for considerable accelerated learning.

In the wake of such mindset, there exists a real need for an effective programme in vocabulary acquisition at school level – starting with the Year 1 students, as proposed by the researcher. Therefore, a study on how the PWIM effects the vocabulary acquisition of Year 1 students would fill the gap in ESL research and vocabulary learning in the Malaysian context.

1.5 Objectives of the Study

The first objective of this study is to find out if the target students' vocabulary acquisition is enhanced with the proposed method of vocabulary instruction, the adapted PWIM. To achieve this objective, a purposive sampling (Babbie, 2008) will be used. The method of vocabulary instruction studied is adapted from the PWIM method (Calhoun, 1999). This method uses pictures and words containing familiar objects and actions, and scenes to elicit words from students' listening and speaking vocabularies. The second objective of this study is to find out the impact of the PWIM on the subjects' recall of the vocabulary items learnt as compared to the CLT approach. Finally, the third objective is to document the effect of PWIM on the subjects' retention of the vocabulary items learnt, compared to the CLT approach advocated by the Ministry of Education (MoE) in the teaching of English in all the Malaysian public schools. This research focuses on the impact of the PWIM in a quasi-experimental research on the vocabulary acquisition of Year 1 students in a national primary school in a rural area. As such, the study focuses on the impact on vocabulary acquisition, and it does not intend to investigate or identify the strengths and weaknesses of the learning method.

1.6 Research Questions

This study will address the following research questions:

RQ1: Is there any significant difference in the vocabulary acquisition of the Year 1 students who received the PWIM intervention?

RQ2: Is there any significant difference in the vocabulary recall of the Year 1 students who received the PWIM intervention compared with those who did not receive the intervention?

RQ3: Is there any significant difference in the vocabulary retention of the Year 1 students who received the PWIM intervention compared with those who did not receive the intervention?

1.7 Research Hypotheses

To answer the research questions listed in the previous section, the following null hypothesis will be put to test.

Hypothesis 1 (H₀₁₎:

There is no significant difference in the vocabulary pretest and posttest scores of the Year 1 students who received the PWIM intervention.

Hypothesis 2 (H_{o2}) :

There is no significant difference in the vocabulary posttest scores of both intervention and control groups.

Hypothesis 3 (H_{03}) :

There is no significant difference in the vocabulary delayed posttest scores of both intervention and control groups.

1.8 Significance of the Study

The Malaysian education system has undergone numerous reforms, the most recent being the Malaysia Education Blueprint 2013-2015. A comprehensive review of the country's education system was launched by the Ministry of Education with the aim to address the weakness of the Malaysia's education system (Malaysian Education Blueprint, 2012). In the blueprint, the English language was mentioned in that all should accept that the language is a reality and mastered, is an asset undeniably. Thus, the gained insights of this research set to bring benefits, not only to the students and teachers, and module writers but it will also be useful to policy makers.

The PWIM method, if proven effective, will certainly serve to equip English language teachers with an alternative vocabulary instruction to take their teaching to a higher level. This will help students to acquire a strong foundation in vocabulary, which will in turn help them to improve their proficiency in the English language and further facilitate their language development, leading to overall academic improvements.

As for policy makers involved in curriculum planning and developing, this study will afford them insights to the importance of vocabulary knowledge and expand their knowledge in vocabulary learning. Consequently, helping towards facilitating the design of a more comprehensive syllabus that would include vocabulary instruction, which is rather neglected in the current syllabus that focus on teaching the four language skills, namely listening, speaking, reading, and writing, together with language contents (*Kementerian Pendidikan Malaysia*, 2003).

This research is significant to the domain of second language acquisition in the development of vocabulary knowledge among SL learners. This is because it will fill a gap in ESL research and vocabulary learning in Malaysia and extends the knowledge base that currently exists in that field. Findings in research have consistently shown that the extent of students' vocabulary knowledge relates strongly and positively, not only to their language development, but also to their overall academic and professional success. Therefore, a research that explores vocabulary acquisition is a worthwhile endeavour as it provides insights into the cognitive process involved in vocabulary acquisition. This in turn will serve to contribute to the corpus of knowledge related to vocabulary acquisition, especially among those who are unacquainted with its potential to facilitate vocabulary instruction in the language classroom. The findings from the study may have the capacity to impact the methods by which vocabulary acquisition are currently being undertaken in schools.

This study is modelled after the PWIM (Calhoun, 1999) and intends to observe the effects on the target students in their vocabulary acquisition. Previous studies conducted by non-Malaysian researchers on PWIM have shown that students made substantial gains in vocabulary knowledge with the method. The study hopes that if the findings of this study - on Year 1 students in our national primary schools in a rural area – are found to be positive, it will initiate the beginning of an on-going professional development opportunity in Malaysia, similar (but adapted) to the method that has been implemented by the Iowa Department of Education in the United States of America and the Saskatoon Public Schools in Canada. This will further enhance vocabulary acquisition, a key factor in successful language development, which in turn, will play a significant part in the students' overall educational achievement.

1.9 Research Methodology

The design of this study is quasi-experimental with random assignment of intervention and control groups. As such, assignments of subjects are not entirely random except, when it comes to assignment of intervention and control groups, a coin was flipped to decide which group will form the intervention group and which will be the control group. In addition, this study which employed purposive sampling is guided by the PWIM, a research-based method of vocabulary instruction to promote literacy. The PWIM employs pictures containing objects and actions to elicit words from children's listening and speaking vocabularies (Calhoun, 1999). The PWIM model capitalizes on children's ability to think inductively and at the same time, teach them to develop and use concepts. However, the PWIM adapted for this study, apart from using pictures and words in reading comprehensions, also allows the employment of the students' mother tongue to elicit words from the students' speaking and listening vocabulary, further encouraging students' participation in the classroom.

The study was carried out on a group of Year 1 students from a national school in a rural area who received the intervention while another group of Year 1 students from another school in the same area formed the control group which did not receive similar intervention. Instead, the control group was taught via the CLT approach, the method advocated by the MoE for classroom teaching in Malaysia (*Kementerian Pendidikan Malaysia*, 2003). Both groups received equal number of hours of instruction from the teachers involved. Instruments used were pretest, posttest and delayed posttest, questionnaire, and interviews.