

AN ANALYSIS OF VOCABULARY USED IN ESSAYS WRITTEN BY
UPPER SECONDARY SCHOOL AND UNIVERSITY STUDENTS

A MASTER'S PROJECT

BY

PUMARIN SAPA-ASA

presented in partial fulfillment of the requirements for the

Master of Arts degree in English

at Srinakharinwirot University

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ABSTRACT

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Advisor: Dr. Saengchan Hemchua.

The purpose of this study was to analyze the number of words used in essays written by grade 11 upper secondary school students and third-year English majors in order to compare productive vocabulary size between these two groups. Thirty grade 11 English-French Program students at Udornphithayanukul Secondary School and thirty English majors studying at Rajabhat Institute Udornthani in 2005 academic year were asked to write a two-hour essay. VocabProfile, a software program, was used to analyze the participants' essays for vocabulary size. This program groups words into four word levels: Base List One includes the first 1,000 most frequent words; Base List Two includes the next 1,000 most frequent words; Base List Three includes words frequently used in the upper secondary and university texts; and Base List Four includes words which are not in the other three lists. Comparison of means of each word level between essays written by the two groups were measured by t-test for independent sampling. The results revealed that third-year English majors significantly applied a higher number of words in Base List Three than upper secondary school students did at the .05 level. This indicated that the higher level of schooling in Thai school system could help students learn more English academic words. Moreover, when comparing between the four word levels, it was found that words in Base List One were used the most (88.48%, 88.61%) by both groups, whereas a smaller number of words in Base List Two, and Base List Three were used.

การวิเคราะห์คำศัพท์ที่ใช้ในงานเขียนเรียงความภาษาอังกฤษของ
นักเรียนชั้นมัธยมศึกษาตอนปลายและนิสิตมหาวิทยาลัย

บทคัดย่อ
ของ
นางสาวกมลกรีน สรรพอาษา

เสนอต่อบัณฑิตวิทยาลัย มหาวิทยาลัยศรีนครินทรวิโรฒ เพื่อเป็นส่วนหนึ่งของการศึกษา
ตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต สาขาวิชาภาษาอังกฤษ
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การวิจัยครั้งนี้มีจุดประสงค์เพื่อวิเคราะห์ปริมาณคำศัพท์ในงานเขียนของนักเรียนระดับ 11 (มัธยมศึกษาปีที่ 5) เอกอังกฤษ ฝรั่งเศส โรงเรียนอัครพิทยานุกูล และนักศึกษาวิชาเอกภาษาอังกฤษ ชั้นปีที่ 3 มหาวิทยาลัยราชภัฏอุดรธานี ปีการศึกษา 2548 เพื่อเปรียบเทียบปริมาณคำศัพท์โดยให้นักศึกษาเขียนเรียงความตามหัวข้อที่กำหนดภายในเวลา 2 ชั่วโมง วิเคราะห์คำศัพท์จากงานเขียนของนักเรียนชั้นมัธยมศึกษาตอนปลาย จำนวน 30 คน และ นิสิตมหาวิทยาลัยจำนวน 30 คน โดยใช้โปรแกรมคอมพิวเตอร์ VocabProfile โปรแกรมนี้จัดรวบรวมคำศัพท์ไว้ 4 กลุ่ม คือ กลุ่มที่ 1 (Base List One) คือคำศัพท์ที่ใช้ทั่วไปและมีความถี่ในการปรากฏสูง 1,000 คำแรกในภาษาอังกฤษ กลุ่มที่ 2 (Base List Two) คือคำศัพท์ 1,000 คำที่มีความถี่สูงเป็นลำดับที่ 2 กลุ่มที่ 3 (Base List Three) คือคำศัพท์ที่ปรากฏในหนังสือและงานเขียนระดับมัธยมศึกษาตอนปลายและมหาวิทยาลัย กลุ่มที่ 4 (Base List Four) เป็นคำศัพท์ที่ไม่ปรากฏในกลุ่มใดที่กล่าวมา วิเคราะห์เปรียบเทียบปริมาณคำศัพท์ของนักเรียนทั้งสองกลุ่มโดยใช้ค่าสถิติ t-test ผลการวิจัยพบว่า นักศึกษาชั้นปีที่ 3 ใช้คำศัพท์ในกลุ่มที่ 3 หรือคำศัพท์วิชาการมากกว่านักเรียนชั้นมัธยมศึกษาตอนปลายและเมื่อเปรียบเทียบปริมาณคำศัพท์ทั้ง 4 กลุ่มพบว่า นักเรียนทั้ง 2 ระดับใช้คำศัพท์ในกลุ่มที่ 1 ซึ่งเป็นคำศัพท์ที่พบบ่อยในงานเขียนทั่วไปมากที่สุด ส่วนคำศัพท์ในลำดับถัดมาทั้ง 3 กลุ่มใช้น้อยมาก

The Master's Project Committee and Oral Defense Committee have approved this Master's Project as partial fulfillment of the requirements of the Master of Arts Degree in English of Srinakharinwirot University.

Chair of Master's Project

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This Master's Project has been approved as partial fulfillment of the requirements for the Master of Arts Degree in English of Srinakharinwirot University.

.....Dean of the Faculty of Humanities

(Assistant Professor Chaleosri Pibulchol)

February....., 2006

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Pumarin Sapa-asa

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CHAPTER 1

Introduction

Background

Vocabulary is central to language and therefore is important to language learners (Zimmerman. 1997: 1). Vocabulary working as function and content words is required to put into the sentences to enable humans to communicate among themselves. In addition, the knowledge of vocabulary is noticeably important to reading and writing comprehension. According to Lipson and Wixson (2003), vocabulary is a prime predictor to effective reading. One of the factors that make humans understand a text depends on the reader's vocabulary storage. With a larger vocabulary, learners tend to understand a text better. They point out that many students with inadequate vocabularies are faced with serious obstacles to literacy. Furthermore, vocabulary is more important to reading comprehension than inferencing ability, and the ability to grasp main ideas (Anderson and Freeboy. 1981). This emphasizes that vocabulary is interwoven with reading. Regarding vocabulary and writing ability, vocabulary is found to correlate highly with global assessment of writing quality (Astika. 1983). In addition, Witte and Faigley (1984) explain that weak writers do not have "working vocabulary capable of extending, in ways prerequisite for good writing, the concepts and ideas they introduce in their essays."

It is a common sense that vocabulary is considered the basic medium in communication by which humans use to express their ideas, emotions, and experiences (Nault. 1982). When communication becomes more complex and sophisticated, the knowledge of vocabulary needs to be refined and expanded to several thousand of words (Laufer and Shmueli. 1997). This leads to the question: How much vocabulary does a second or foreign language learner need? To answer

this question, it is necessary to know how many words there are in English and how many words native speakers should know. Schmitt (2000) reports that vocabulary size of the English language has a wide range from 400,000 to two million words. *Webster's Third New International Dictionary*, one of the largest dictionaries of English, contains about 54,000 word families. Regarding the words that native speakers know, adult native speakers know around 20,000 word families (Nation and Waring. 1997). Therefore, EFL/ESL learners should learn these 20,000 word families in order to build native-sized vocabulary (Richards. 2000).

Yodnil's (1980) study of word recognition of 279 first-year students at Srinakharinwirot University revealed that the students knew an average of 1,700 words, 18,000 words fewer than the number recommended by Richards (2000). It obviously shows that Thai learners have a limited vocabulary, which may cause them difficulty in reading and writing. Crow and Quigley (1985) explain that because of the difference in vocabulary size between native and non-native English speakers, a 10-to 20 minute reading task for native speaker becomes a one- to- two- hour ordeal for non-native speakers, as the reading process is broken into small fragments of discourse by constant recourse to a dictionary. Moreover, when these EFL/ESL learners are assigned to write essays under limited time, they can produce very short essays consisting of basic words. Therefore, word study according to the purpose of learners is needed (Nation. 1990).

According to Nation (2001), vocabulary is divided into four groups: high-frequency words, academic words, technical words, and low-frequency words. About 80 percent of words in the text are high-frequency words, around 9 percent are academic words, the remaining 10 percent are technical words and low-frequency words. The most useful words for learners are high frequency words. These 2,000

high frequency words of English are very useful and important for learners of English. It is worth learning them because they cover about 80 percent of most texts, and they will be read often. Apart from the first 2,000 frequent words, academic words are also important for learners who study in upper secondary school or at a university. A list of 570 academic word families created by Coxhead (2000) is useful for learners studying English for academic purposes.

Several researchers explored the size of the English vocabulary. Sujana (2000) is one of those who analyzed the amount of vocabulary in eighty essays written by first-year to fourth-year English majors at Rajabhat Institute Mahasarakham. She found that Thai students tended to produce most words in Base List One which is high-frequency words, whereas a much smaller number of words used were in Base List Two, Three, and Four, which are the next 1,000 high frequency, academic words and low-frequency words.

As mentioned, Sujana (2000) explored the amount of vocabulary in the compositions written by the first to fourth –year English majors who were within the university level in Rajabhat Institute. This study, therefore, studies across the levels by using the informants who study not only in the university level but also in the high school level to find out whether the vocabulary size used between these two groups is the same or not.

This present study explored the size of vocabulary used in essays written by grade 11 upper secondary school students studying English-French at Udonphithayanukul School and third-year English majors at Rajabhat Institute Udonthani, in the first semester of the academic year 2005. Noticeably, Rajabhat Institute Udonthani English majors were selected as the subjects in this study because there has been little research carried out with rural Rajabhat Institute students. This study will help both students and instructors to improve their learning and teaching of vocabulary in reading and writing.

Objective of the Study

The objective of the study was to compare the number of words used in essays written by grade 11 upper secondary school students and third-year English majors in order to see the variation of vocabulary used between these two groups.

Hypothesis

Third-year English majors use more words in Base List Two and Base List Three than grade 11 upper secondary school students.

Significance of the Study

The results of this study can be used as an assessment of the students' productive vocabulary use and as guidelines for the teachers of English for the teaching of productive vocabulary.

Scope of the Study

This research studied the number of words used in students' essays. Thirty essays written by grade 11 upper secondary school students at Udornphithayanukul School and 30 by the third-year university students at Rajabhat Institute Udornthani, in the first semester of academic year 2005, were used as the data.

Definition of Terms

1. Productive Vocabulary Use refers to the vocabulary size found in students' written products by grade 11 upper secondary school students at Udornphithayanukul School and third- year Rajabhat Institute Udornthani English majors

2. Vocabulary Size is defined as the overall word tokens, word types, and word families and the number of word tokens, word types, and word families in each list found in the informants' writing.

3. Vocabulary Level in this study, VocabProfile, which is a computer program developed by Nation (1995) is used and the program groups words into four word levels.

1. Base List One including the 1,000 most frequent words in English (see Appendix).

2. Base List Two including the next 1,000 most frequent words (see Appendix).

3. Base List Three including words which are not among the first 2,000 words of English but are frequently used in the upper secondary and university texts in a wide range of subjects (see Appendix).

4. Base List Four including words which are not found in any of the three base lists. Words such as proper nouns and acronyms are in this group. Words in this list cannot be grouped into word families.

4. Word Family consists of a headword with its inflected and derived forms. For example, *leaks, leaking, leaked, leaky, leakiness, leakage, and leaker* are counted as one word family with the head word *leak* (John. 2000).

5. Word Token refers to each occurrence of words in a text that is counted. If the same word form occurs more than once, each occurrence of it is counted. Words that are counted in this way are called tokens or running words (Nation. 2001). For example, the sentences “The first time I saw you, I was impressed right away. You made me feel active and eager to go to work every day.” consist of 24 word tokens.

6. Word Type refers to a number of different words in a text. If the same word occurs again, it is counted only once. For example, in the sample sentences given above, each of the following eighteen words: *the, first, time, saw, was, impressed, right, away, made, me, feel, active, and, eager, go, work, every,* and *day* appears one time. The words *I, you,* and *to* each of which occurs two times. In brief, these 24 word tokens contain 21 word types in the text.

Overview of the Study

This study explored the frequency of words in the students' essays written by grade 11 upper secondary school students majoring in the English-French Program and third-year English majors. The literature of vocabulary in four main areas: vocabulary size, vocabulary acquisition, the development of receptive and productive vocabulary, and research on vocabulary size is reviewed in Chapter 2. Chapter 3 looks at the computer program VocabProfile developed by Paul Nation (1995). Chapter 4 is the results of the study. Chapter 5 presents the results of the analysis, discussion, application of the study, and suggestions for further studies.

CHAPTER 2

Review of the Related Literature

In this chapter, the related literature on vocabulary size, vocabulary knowledge, the development of passive and active vocabulary as well as related research on vocabulary is reviewed in order to provide thorough background knowledge to the study.

1. Vocabulary Size

To know the size of the learning task facing second language learners, teachers of English as a second language are interested in measures of native speakers' vocabulary size because ESL/EFL can develop their vocabulary in order to build native-sized vocabulary. It was found that the children in grade 1 know almost 17,000 basic words and about 7,000 derivatives or 24,000 words in all while the sixth grade students know 31,500 basic words and 18,000 derivatives, or a total of 49,500 words (Dawson. 1957). It is also estimated that undergraduate native speakers should know around 20,000 words and that their vocabulary should add between 1,000 to 2,000 words per year or 3 to 7 words per day (Nagy and Anderson. 1984). Similarly, it is suggested that English native speaking graduates should know around 20,000 word families (Nation and Waring. 1997), and they will add 1,000 word families a year to their vocabulary size. Likewise, a five- year- old beginning school will have vocabulary of around 4,000 to 5,000 word families and a university graduate will have vocabulary of around 20,000 word families.

There are several figures concerning the vocabulary size for English as a second or foreign language (ESL/EFL) proposed by researchers. It is proposed that EFL/ESL intermediate students know 2,000 words and their vocabulary should increase at least 3,000 words when they study in a university (O' Shea. 1974). Similarly, intermediate Thai students should know 2,000 words (Durr. 1977). Furthermore, the average vocabulary size of ESL/EFL learners, graduates of high school and university students ranges between 1,500 to 4,000 word families (Hill and Laufer. 2003). However, it is suggested that ESL/EFL learners should learn 20,000 word families in order to build the same amount of vocabulary average the native speakers have.

Although a language makes use of a large number of words, not all of these words are equally useful. Adult native speakers should know around 20,000 of these word families mentioned above; however, a much smaller amount of words, only around 2,000-3,000, is needed to provide a basis for productive use in speaking and writing (Nation and Waring. 1997). Nation (2001) proposes four kinds of vocabulary that language learners need to know according to their purposes: high-frequency words, academic words, technical words, and low-frequency words.

High frequency words are often found in all kinds of materials. They include both function words including articles, prepositions, pronouns, and conjunctions and content words including nouns, verbs, adjectives, and adverbs. The classic list of high frequency words in *A General Service List of English Words* (GSL) by Michael West (1953) contains approximately 2,000 word families. Learners need to know these words because they cover around 80 percent of most texts.

Academic words contain the 570 word families derived from *Academic Word List* (AWL) created by Coxhead (2000). These words are useful for academic purposes because they occur frequently in most kinds of academic texts. Typically, these words make up about 9 percent of the running words in the text.

Technical words are closely related to the topic and subject area of the text. They differ from one subject area to another. Technical words consist of 1,000 words covering about 5 percent of words in the text.

Low frequency words contain words that are not high-frequency, not academic, and not technical words. There are thousands of them in the language covering around 5 percent of the words in an academic text. These words occur only once in the text and they are unlikely to be found again for a very long time.

Apparently, with a large number of words in English, it is impossible that native and non- native speakers can remember all of them. Besides, not all of them are useful. Learners therefore need to concentrate first on the high frequency words of the language which covers a lot of text. In addition, if learners intend to go on to academic study in upper high school or a university, there is a need for general academic vocabulary. If the learner has no special academic purpose, he/she should deal with low frequency words (Nation and Waring. 1997: 16).

2. Vocabulary Knowledge

Vocabulary learning is divided into two systems according to its use: receptive and productive. Receptive vocabulary is defined as language items which can only be recognized and comprehended in the context of reading and listening materials while productive vocabulary refers to language items which the learner can recall and use appropriately in speech and writing (Gairns and Redman. 1986).

Similarly, receptive vocabulary means learners are able to recognize a word and recall its meaning, to see which shade of meaning is suitable for the context, and to expect what words will collocate with it. Productive vocabulary includes receptive knowledge and the ability to extend it. That is, learners not only recognize and comprehend the meaning of a word but also are able to use it appropriately. Therefore, if the word is learned for listening or reading, a receptive knowledge is sufficient, whereas if the word is learned for listening, speaking, reading, and writing, both receptive and productive vocabulary must be required (Nation. 1990).

However, knowing a word is sometimes considered sufficient under one circumstance but not sufficient under others. It is suggested that any individual's knowledge about words depends on many reasons such as the person and his/her motivation, desires, and needs for the word. Therefore, vocabulary knowledge does not appear to be a simple throwing of a switch between knowing and not knowing. Instead, knowledge about words may include information that may cause learners to choose not to produce them because of social or other reasons; the image that we wish to project to others. Therefore, lack of production may be due to choice, not lack of knowledge (Hatch and Brown. 1995).

Besides the division of vocabulary in terms of receptive and productive vocabulary, there is also vocabulary which is acquired by intentional or incidental learning, direct or indirect vocabulary learning, and tutored or untutored language learning. From these different ways of learning vocabulary, students can produce essays by using vocabulary derived directly from teachers in the classroom, and also incidentally through reading the materials.

Hatch and Brown (1995) define intentional learning as learning being designed, or intended by teachers or students, while incidental learning is the type of

learning that is a byproduct of doing or learning something else. They also explain that intentional learning does aid the learning of words but most of them are learned incidentally. That is, learners are taught through reading.

Similarly, Nation (1990) explains about direct vocabulary learning that learners get when doing exercises and activities focusing on vocabulary. These exercises are word-building exercises, guessing words from context, vocabulary games, and learning words in lists. In contrast, in indirect vocabulary learning, learners' attention is focused on other features, the message that is conveyed by a speaker or writer. Read (2000) also agrees that in this learning, learners are given a reading or listening task without being told to focus on the vocabulary in the input and without being warned that they will be taking a vocabulary test after completing the task.

In accordance with Hatch and Brown (1995) and Nation (1990)'s idea, Klien (1986) proposes two types of second and foreign language learning: tutored and untutored language learning. The tutored learning requires the use of systematic learning such as instructions by the presentation of materials and exercises while the untutored learning is free from systematic guidance such as everyday communication. Noticeably, this type of learning will occur when learners are in the second language environment.

With the incidental learning focusing on vocabulary, largely through reading, there are many factors involved in this kind of learning through reading. The type of materials or the choice of texts which learners are exposed to during reading has an effect on the type of word they can potentially learn or on new words which they are exposed to, including the number of times they encounter certain types and

the amount of prior knowledge they need to learn during reading experience (Gardner. 2004).

Considering that vocabulary acquisition is a process, McCathy (1990) explains mental lexicon as the process of the mind in organizing words. This process consists of three steps: input, storage, and retrieval. In the first step, when children learn their mother tongue, all linguistic input is spoken, but for the student of a second or foreign language, spoken and written language play equally important roles right from the start. Learners are considered to be subjected to the informal inputs, where vocabulary is acquired almost unconsciously. The sources of informal inputs may be in the form of radio, films, television, pop music, internationally marketed commercial products, and the international use of languages at airports and in other travel contexts. The second step is the storage involving the process of trying to capture the essence of organization in the mental lexicon and to illustrate the ways in which individual items cross-refer to one another. For example, learners would store words according to spelling patterns such as the word *honey* is associated with *money*. In addition, each word can be expected to have attached to sound pattern such as *loan* and *phone*, and attached to meaning pattern such as ‘It was absolutely *tinute*’ (*tiny/minute*), which people sometimes produce *blends* in their L1, where half of one word crowds in one half of another. The third process is the retrieval referring to the ability to summon up the word when it is needed to use. That is, a language learner can actively use a particular word when it is needed, without too much mental searching.

Regarding the vocabulary development, Henriksen (1999) proposes three dimensions of vocabulary development: dimension 1 partial to precise knowledge; dimension 2 depth of knowledge, and dimension 3 receptive and productive. In terms

of partial to precise knowledge dimension, learners are expected to pronounce the word, explain the meaning, identify the domain, provide word associations and suggest other forms of the word. Learners at first are allowed to be vague about meaning. Then, precise comprehension will come later and lexical development can be characterized as a move or progression from rough categorization or vagueness to more precision and mastery of finer shades of meaning. That is, this stage allows learners to have knowledge ranging from zero to partial then to precise knowledge. All word knowledge ranges on a continuum, rather than being known versus unknown. The second dimension is called the depth of knowledge referring to “the quality of the learner’s vocabulary knowledge” At this stage, the focus is on the complexity of vocabulary knowledge and types of knowledge comprising full understanding or a rich meaning representation of a word. That is, learners are required to know not only knowledge of a word’s referential meaning (i.e. the extensional relations between concept and referent) but also its different intentional links or sense relations to other words in the vocabulary such as antonym, synonym, hyponymy, gradation and collocational restrictions. The third dimension, namely receptive and productive dimension, implies the learners’ ability to use words in comprehension and production.

Regarding vocabulary teaching, there are two kinds of instruction: direct or explicit instruction and indirect or implicit instruction.

Nagy (1997) states that explicit instruction (i.e. definition) plays a great important role in the vocabulary growth of second-language learners. Shostak (2004) suggests a definition method: teachers have students look up words in a dictionary, write down and/or memorize definitions, use the words in sentences, find synonyms, and then complete worksheets or take quizzes. This method provides students to gain

a specific meaning of a word they come across in their reading, key and interest information about the history of the word, and a better understanding of interrelated words in word families.

Apart from explicit vocabulary instruction, learners can pick up much of their vocabulary knowledge from context. Nagy (1997) explains that indirect or explicit vocabulary is contextual learning. The context plays a less important role than explicit instruction because second-language learners will be less effective than native speakers at using content, at least until they have achieved a fairly high level of L2 proficiency. Besides, early stages of second-language acquisition involve a small number of high frequency words, for which there is a greater pay-off instructionally. In addition, Shostak (2004) proposes the contextual approach, which allows learners to explain the meaning of a word by looking at its semantic properties, syntactic cues or by examining typographic clues from charts, graphs or pictures. Learners may be able to provide only a partial meaning of a word and occasionally may even be misled.

This section has provided some basic concepts of receptive and productive vocabulary including vocabulary acquisition to explain how it is developed.

3. The Development of Passive and Active Vocabulary

Laufer (1998) investigated the development of passive and active vocabulary in a second language to see if the informants are the same or different by comparing two groups of EFL learners in Israel (grade 10 and grade 11, with 6 and 7 years of English instruction respectively) on passive, controlled or elicited active, and free active vocabulary. The distinction between controlled active vocabulary and free active vocabulary is that controlled active vocabulary is aiming at the words that

learners produce when prompted by a task. In contrast, free active vocabulary has to do with words at one's free will, without any specific prompts for particular words as is the case of free composition.

The results show that in passive vocabulary, there are 3,500 word families in grade 11 as opposed to 1,900 in grade 10. In addition, their controlled active vocabulary was also larger, although not as much; 2,550 word families as opposed to 1,700. From the study, she indicated that an additional year of instruction affected the learning. Both passive and controlled active vocabulary had increased. However, with regard to the relationship between them, the passive vocabulary is larger than the controlled active. Besides, the gap between the two types of lexical knowledge had widened at a higher level of language proficiency. Regarding free active vocabulary, the result shows that free active vocabulary knowledge had not progressed in spite of gains in the other two types: passive and controlled active. It did not correlate at all with the passive and the controlled active knowledge.

In free active vocabulary, the lack of progress of 11th graders means that in spite of an increase in passive vocabulary and a good progress in controlled active vocabulary size, learners did not put this knowledge into use when left to their own choice of lexis. There are several hypotheses to explain these facts.

1. Free active vocabulary reached a plateau and then ceased to progress.

Learners seem to have 'fossilized' their free vocabulary of beyond 2,000 words per composition and did not progress even when their passive and controlled active vocabularies improved. According to Laufer (1995), active lexicon was measured and it showed that words that are not among the 2,000 most frequent words or 'beyond 2,000' are found in the learner's language. This can suggest that there is a certain room for improving the beyond 2,000 score with an additional year of

instruction. However, those students do not wish to reach this beyond 2,000 in spite of the fact that these additional words would help them in their free expression.

Laufer (1995) adds that the plateau in free active vocabulary may be the result of the lack of incentive to use more advanced, infrequent, and error-prone words.

2. Noticeably, learners are not encouraged to take a risk and use more difficult vocabulary because teachers may only be satisfied with the learners' ability to get the meaning across.

3. Grading conventions in school emphasize correctness and seldom reward lexical richness. Students do not get enough reward for lexical variety, as they do not want to endanger their grades.

4. Conventional re-write exercises usually focus on alternative structures rather than on alternative vocabulary. Instead, if learners had been given exercises and tasks which were specifically designed to elicit the new vocabulary that was taught, they might have been more willing to incorporate it into their free production.

Regarding the relationship between passive and active vocabulary, Laufer (1998) explains that an increase in one's passive vocabulary will lead to an increase in one's controlled active vocabulary, and leads to a larger gap between the two at the same time. When one's passive vocabulary is low, it consists of the most frequent useful words that cannot be avoided in expression. That means, repeated use of these words reinforces their active knowledge. In contrast, as the passive vocabulary size expands, less frequent words are learnt. The learner can often convey meaning without using these words. To sum up, the higher the passive vocabulary size, the higher the number of words that may not enter the active lexis. She also adds that if not 'pushed' to use them, they may never be activated and therefore remain in passive vocabulary only.

In short, this section tries to explain that even if students or learners have sufficient passive vocabulary, they surprisingly use only simple words by avoiding using more advanced, infrequent, and error-prone words. The hypotheses explaining this fact are from students refusing to study more beyond the 2,000 most frequent words, teachers satisfying only the correct meaning, including conventional grading and exercises in the materials.

4. Related Research

There have been several studies related to vocabulary size.

Boonyaudomsart (1976) showed that in *Economics: An Introductory Analysis*, there were 2,956 new general English words. Among them, 2,119 were general English words, and 837 were technical English words. Only 360 words out of 2,119 general words or 16.98% of general English words were the most useful words in West's *A General Service List of English Words (GSL)*, the basic word list of 2,000 words.

Laufer and Nation (1995) analyzed the vocabulary size by using the computer software *Lexical Frequency Profile (LFP)* as a measure to look at the proportion of high-frequency general service and academic words in learners' writing. The 65 participants were foreign learners of English in New Zealand and Israel. They were divided into three groups. Group 1 were the 22 lowest proficiency of New Zealand learners; group 2 included 20 first semester Israeli learners; group 3 were 23 Israeli learners who had completed two semesters. All of them were asked to write two compositions. The data were analyzed by computer software which grouped words into four lists: the first 1,000 most frequent words, the second 1,000, *the University Word List (UWL)*, and the 'not-in-the-lists' word list. For each composition, the LFP

was calculated on the basis of the proportion of word families at each of these four levels. The results showed that group 1 had the largest number of the first 1,000 words, while group 3 had the smallest. In contrast, group 1 used the smallest number of UWL, whereas group 3 used the largest. Regarding the second 1,000 words, and the 'not-in-the-lists' words, the three groups were significantly different. It was concluded that group 3 was able to use more of the sophisticated vocabulary which was the UWL and not in the lists than group 1 and 2. That is, the higher one's vocabulary knowledge, the fewer high frequency words were used in a composition. Therefore, group 3 had more writing advancement than group 1 and 2.

Sujan (2000) analyzed the amount of vocabulary and lexical errors in written products of the first to fourth-year English majors at Rajabhat Institute Mahasarakham, and investigated if there was any vocabulary development of these students. Eighty essays, twenty from each level, were randomly selected for vocabulary size analysis by using the software program VocabProfile. The results showed that most of the words used by all groups of students were words in Base List One, whereas a much smaller number of words were in Base List Two, Base List Three, and Base List Four. This is because the students might be less familiar with these three lists. In addition, there was high frequency of occurrence of lexical errors. However, the number of words in base list three used by the fourth-year students was higher than the third-year students, which shows that there was some development of vocabulary size in Base List Three which is the sophisticated vocabulary.

Cobb and Horst (2001) tested the amount of high frequency vocabulary and academic vocabulary in the on-line resources. They designed a 13-week experimental course and on-line resources and used 33 students who registered for the experimental vocabulary course at Concordia University (Montreal). The 33 students represented a

variety of first language backgrounds. About two-thirds of the students were speakers of Asian languages (Chinese and Vietnamese) while about one third had Romance language backgrounds (Quebec French, Spanish or Portuguese). They found that the learners could recognize the meaning of 80% of the tested words at the 2,000, 3,000 and academic levels. However, some of the French speaking students scored high on the academic list (which contains many words of Latin origin) but low on the 2,000 list (which contains many words of Germanic origin). Many of the Asian students (mostly Chinese speakers) scored high on the test of the 2,000 list but low on the other lists. This supported that the Latin vocabulary of English would be of essential to learning academic vocabulary (Corson. 1997).

Khongphan (2004) analyzed the frequency of words in 23 reading passages in English reading textbook of Mathayomsuksa 5 entitled *Practice in Comprehension II* to assess if the word level in this book was appropriate for learners or not. The data were analyzed by VocabProfile Program, which grouped words into four lists. The results revealed that words in the 23 reading passages in the textbook contained many of the most 1,000 frequent words of English or 79.1% of 10,696 running words. Words in list three which includes academic words in upper secondary and university texts appeared the least which accounted for 3.4%. Words in list two which are the second 1,000 most frequent words and list four which are not any of the three base lists occurred for 7.2% and 10.4% respectively. It can be concluded that the 23 passages provided coverage of the vocabulary of the most 2,000 frequent words, which were suitable basic vocabulary for learners who learn English as a foreign language. Also, these passages contain academic words which prepare learners for their further study. Therefore, this book is appropriate for Matthayomsuksa 5 students who study at the second level. If students read this kind of book, they will

incidentally learn vocabulary covering the most frequently used words and academic words. With this richer vocabulary, students then are more likely to produce good essays.

Naprakhon (2005) explored academic words in the political reports environment. He first asked whether words in the academic word list (AWL) were significantly high in political reports and what the top 50 academic words in the political corpus were. The corpus of 122,811 token words taken from a local online newspaper, *The Nation*, was analyzed against the AWL of 570 words by using the Concordance Program. The results showed that words in the AWL covered 5.7% of the total words in the corpus. Besides, the top 50 words in the AWL were clearly politically-related words. The corpus contained 513 words out of 570 academic words, which accounted for 90%. Consequently, the results indicated that political reports could be an alternative material for academic vocabulary learning and teaching. Noticeably, reading political reports might provide useful results in preparing learners for academic vocabulary at the university level. Then, if learners read this kind of political news, they will have background knowledge related to this field and store the academic words in the memory at the same time and lastly, students can produce essays covered with academic words.

This section has reviewed studies related to vocabulary size. It can be concluded that the first 2,000 frequent words and academic words are required for learners who study English as a foreign language. These two kinds of words are necessary because they are often found in all kinds of materials including the academic materials. However, the number of the first 2,000 frequent words and academic words varied according to the type of genre; therefore, learners may need to read a variety of materials so as to meet a variety of words. Finally, if learners know

these kinds of words, they will have background knowledge and then they are able to produce good writing.

CHAPTER 3

Methodology

In this chapter, the participants and the procedures for conducting the research namely data collection and data analysis are presented. The research instrument and statistical treatment are also described.

1. Participants

The data were collected from 30 grade 11 upper secondary school students studying in English-French Program at Udornphithayanukul School, and 30 third-year English majors who registered at Rajabhat Institute Udornthani, in the first semester of the academic year 2005. These two groups were selected because they have studied English for a while and they cooperated to produce an essay.

2. Procedure

2.1 Data Collection

All participants were asked to write an essay on the topic 'Teenagers and Jobs' in class within two-hour time limit without using a dictionary. The scope of the topic provided for the informants is "In some countries, teenagers have part-time jobs while they are still students. Do you think this is a good idea? Support your opinions by using specific reasons with examples." This topic is chosen for the study because students can write freely without the use of any particular background knowledge. That is to say, the content is related to the students' lives; therefore, all students are able to use their vocabulary knowledge freely.

2.2 Data Analysis

Sixty essays written by grade 11 upper secondary school students and third-year English majors were analyzed by Nation's software program "Vocabprofile" (Nation, 1995). This program reveals the total number and percentage of frequency of occurrence of word tokens, word types, and word families in each word list (see Table 1 for more details of how the program operates).

3. Instrument

The computer program VocabProfile developed by Nation of the English Language Institute, Victoria University of Wellington, New Zealand was used to analyze the participants' essays to obtain the frequency of word occurrences within a text. In this program, there are four ready-made vocabulary lists: Base List One includes the most frequent used 1,000 words of English; Base List Two includes the next 1,000 most frequent words of English; Base List Three includes words which are not in the first 2,000 words of English (in Base List One and Two) but are frequently used in the upper-secondary school and university texts from a wide range of subjects; Base List Four are words which are not in any of the other three aforementioned lists. All of these base lists include the base forms of words and their derived and inflected forms; for example, the head word *avoid* has its family members *avoided*, *avoiding*, *avoidable*, *avoidance*. They are counted for tokens, types, and families. This program is used to see how many words in the text are and are not in the four ready-made base lists and also to see what percentage of the words in the text are covered by the lists. Note that, the words taken from *A General Service List of English Words (GSL)* by Michael West (1953) are for Base List One and Two, and *Academic Word List (AWL)* by Coxhead (2000) are for Base List Three.

The Analysis of Vocabulary Size

1. The essay of each student was typed into the computer.
2. The words from the essays were analyzed and grouped into the four levels by Nation's VocabProfile Program as mentioned in the instrument and then the percentage of words in each list was calculated.

Sydney is one of the most popular holiday destinations in the world. A list of must-do things while on a trip to this vibrant city includes visits to the Opera House and Darling Harbour. More adventurous tourists also climb the famous Sydney Harbour Bridge and surf at the local beaches. But a group of lucky winners from 88 Peak FM, led by DJ PK and Sena Hoy, chose to explore a side of Sydney that not many Thais have seen. These adventurous souls paraded in the Sydney Gay and Lesbian Mardi Gras. (Bangkok Post Student Weekly, April 18, 2005, p. 10)

TABLE 1 THE NUMBER OF WORDS USED IN THE SAMPLE PARAGRAPH

Word List	Word tokens		Word types		Word families
	No	%	No	%	
Base List One	62	66.7	44	62	40
Base List Two	10	10.8	9	12.7	9
Base List Three	0	0	0	0	0
Base List Four	21	22.6	18	25.4	-
Total	93		71		49

The table shows that there were 93 word tokens in the sample paragraph. These word tokens or running words were classified into 71 word types and 49 word families. All the words in the paragraph were grouped into three lists: Base list One,

Two, and Four. From the table, it can be seen that words in Base List One were the most frequently used. That is, there were 62 word tokens, which made up 66.7%, 44 word types (62%), and 40 word families. In Base List Two, 10 word tokens which made up 10.8%, nine word types (12.7%), and nine word families were found. There were no word tokens, word types, and word families found in Base List Three. Finally, 21 word tokens, which made up 22.6% and 18 word types (25.4%) were found in Base List Four.

4. Statistical Treatment

The number of words used in the participants' essays written by grade 11 upper secondary school students and third-year English majors was collected, grouped, analyzed and then compared. The means and standard deviations were calculated on the basis of the proportion of word tokens at each levels: Base list One, Two, Three, and Four. In this study, t-test was used for an analysis.

In conclusion, 30 essays written by grade 11 upper secondary school students in English-French Program at Udornphithayanukul School and 30 by third- year English majors at Rajabhat Institute Udornthani were analyzed by the computer program, VocabProfile, to compare the number of words used or vocabulary size in the informants' written production. This program groups words into four groups: Base List One includes the first most frequent 1,000 words of English; Base List Two includes the next 1,000 most frequent words; Base List three includes academic words; Base List Four includes words which are not in the other three lists. The data were calculated in percentage.

CHAPTER 4

Findings

In this chapter, the research findings are presented according to the research objective. It aimed to compare vocabulary used in essays written by grade 11 upper secondary school students and third-year English majors. Table 2 presents the number of word tokens used in grade 11 upper secondary school students' essays. Table 3 presents the number of word tokens used in third-year English majors' essays. Table 4 presents the comparison of mean difference in the number of word tokens at each word level in essays written by grade 11 upper secondary school students and third-year English majors to investigate if there were differences between these two groups of students.

**TABLE 2 THE NUMBER OF WORD TOKENS USED IN GRADE 11
UPPER SECONDARY SCHOOL STUDENTS' ESSAYS**

Word Level	Word token	
	Mean	Percent
Base List One	124.33	88.48
Base List Two	5.67	3.84
Base List Three	4.53	3.18
Base List Four	6.10	4.43
Total	140.63	100

Table 2 shows the number of word tokens used in grade 11 upper secondary school students' essays in four word levels: Base List One, Two, Three and Four. When comparing the number of word tokens used at these four levels, it was found that Base List One (88.48%) were used the highest followed by Base List Four (4.43%), Base List Two (3.84%), and Base List Three (3.18%). The results indicated that these upper secondary school students highly used word tokens in Base List One which are mostly basic and simple words, whereas word tokens in Base List Three which are academic words were used the least.

TABLE 3 THE NUMBER OF WORD TOKENS USED IN THIRD-YEAR ENGLISH MAJORS' ESSAYS.

Word Level	Word token	
	Mean	Percent
Base List One	156.60	88.61
Base List Two	7.07	4.09
Base List Three	7.47	4.22
Base List Four	5.67	3.16
Total	176.81	100

Table 3 presents the number of word tokens used in essays written by third-year English majors in four word levels: Base List One, Two, Three, and Four. When comparing the number of word tokens across these four word levels, it was found that third-year English majors frequently used word tokens in Base List One (88.61%), followed by Base List Three (4.22%), and Base List Two (4.09%). Word tokens in Base List Four were used the least. Similar to the use of word tokens of upper secondary school students, the results indicated that third-year students most often used the number of word tokens in Base List One, the most frequent words, whereas word tokens in the other three lists were relatively low.

To compare the number of word tokens used between grade 11 upper secondary school students and third- year university students, the vocabulary used in their essays were statistically analyzed by t-test to explore if there was any difference between the use of word tokens of these two groups of students. Mean difference was calculated on the basis of the proportion of word tokens at each word level: Base List One, Two, Three, and Four.

TABLE 4 COMPARISON OF MEAN DIFFERENCE IN THE NUMBER OF WORD TOKENS AT EACH WORD LEVEL BETWEEN GRADE 11 UPPER SECONDARY SCHOOL STUDENTS' ESSAYS AND THIRD-YEAR ENGLISH MAJORS' ESSAYS

Word Level		Grade 11	Third-Year	t-test	P
Base List One	Mean	88.48	88.61	0.15	0.87
	SD	3.30	3.52		
Base List Two	Mean	3.84	4.09	0.51	0.61
	SD	2.07	1.57		
Base List Three	Mean	3.18	4.22	2.53	0.01*
	SD	1.42	1.74		
Base List Four	Mean	4.43	3.16	2.24	0.02*
	SD	2.52	1.79		

*p < .05

As can be seen from Table 4, the two groups of learners were found to be significantly different from each other in the use of word tokens in Base List Three and Base List Four. In Base List One and Two, the use of word tokens of grade 11 upper secondary school students and third-year students was not different from each other. On the contrary, with regard to Base List Three, academic words, upper secondary school students significantly used fewer words of this type than third-year students did. Similarly, the two groups were significantly different from each other in Base List Four. In short, the results indicated that the university students applied more words in Base List Three than upper secondary school students did.

CHAPTER 5

Conclusion and Discussion

In this chapter, the study and research findings are summarized. Then, discussion, applications, the limitations of the study, and suggestions for further study are presented.

Summary of the Study

Thirty grade 11 upper secondary school students studying in English-French Program at Udornphithayanukul School and thirty third-year English majors registered at Rajabhat Institute Udornthani were asked to write an essay on the topic 'Teenagers and Jobs' in class within two-hour time limit without using dictionaries. The essays written by these two groups were typed into a computer then the essays were analyzed and grouped into four word levels by Nation's VocabProfile program. This program reveals the total number and percentage of frequency of occurrence of word tokens, word types, and word families in each word level. To compare the number of words used in essays written by these two groups, t-test was applied to find mean difference in the number of word tokens at each word level between grade 11 upper secondary school students and third-year English majors.

The objective of the study was to compare the number of words used in essays written by grade 11 upper secondary school students and third-year English majors in order to see the variation of vocabulary used between these two groups. The findings indicated that grade 11 upper secondary school students and third-year English majors were significantly different from each other in the use of words in Base List Three which are academic words. That is, third-year English majors used more words in Base List Three which are academic words than upper secondary school students did.

Discussion

There are two main research results to be discussed in this study: (1) the number of word tokens used in essays written by grade 11 upper secondary school students studying at Udornphithayanukul School and third-year students studying at Rajabhat Institute Udornthani and (2) the comparison of mean difference in the number of word tokens used between these two groups.

1. The number of word tokens used in essays written by grade 11 Udornpittayanukul School and third-year Rajabhat Institute Udornthani students.

From the results, it was found that these two groups were most familiar with the first 1,000 frequent words or Base List One, whereas they less frequently used the words in Base List Two, the second 1,000 frequent words, and words in Base List Three, academic words, which are frequently used in the upper-secondary school and university texts. This implies that they may lack academic and infrequent words. Otherwise they may avoid using these words and applied more common or high frequency words instead. This supports the findings of Laufer (1998) that as passive vocabulary size expands, less frequent words are learnt. However, learners often conveyed meaning without using these words. It may be that students avoided using more advanced and infrequent words because they focused only on their grades so they strongly emphasize the correctness of words used. Therefore, instead of using infrequent words, the students chose to use more basic words in order to achieve good grades. Moreover, the reasons those students were not familiar with these non-basic words because the students may lack vocabulary. This supports the findings of Sujana (2000) that these words are usually not covered in direct teaching because in the classroom, teachers usually use words which are frequent ones to get the meaning across, whereas more difficult or less frequent words are acquired in contextual

learning, such as in the students' own reading outside classroom. However, in most schools and universities in Thailand, students are not usually required to read texts written in English during their study. Therefore, they have few opportunities to meet these non basic words. Therefore, when students are assigned to write an essay, it is difficult for them to bring these words into their writing.

2. The comparison of mean difference in the number of word tokens used between these two groups.

This study aimed to compare productive vocabulary size of upper secondary school and university students. It was hypothesized that university students would use more academic and less frequent words than upper secondary school students. As expected, the results showed that students who studied at Rajabhat Institute Udonthani, the higher level, used more words in Base Lists Three which are academic words. It is likely that students in the higher level can produce words in Base List Three than those in the lower level. It is possible that third-year students have studied more English courses than upper secondary school students have. In addition, university students are required to read more academic books, do more reports, and write more essays than upper secondary school students do; therefore, they may gain more extensive range of vocabulary than those students. On the contrary, upper secondary school students may have a narrow range of less frequent and academic vocabulary because their textbooks do not contain those like textbooks in university level. Moreover, exercises in upper secondary school level are made mostly in the form of multiple choice, which does not encourage students to think and write critically. As a result, most secondary school students may not pay much attention to less frequent and academic vocabulary like students in the university level.

Application

The findings of this study can be applied in vocabulary teaching and learning as follows.

1. The finding of the study revealed that the students used mostly the basic words or words in Base List One, whereas the number of academic words in Base List Three were less used in writing. Therefore, it is recommended that teachers should motivate the students by encouraging them to use these words; for example, encouraging them to read materials covered with academic words and then asking them to practice these words in a variety of situations.

2. Since most exercises for upper secondary school students are made in the form of multiple choice; consequently, students are less effective in writing. Therefore, teachers should design courses requiring students to do more writing. In this case, students should have more opportunities to practice and incorporate more academic and less frequent words into their free production.

3. Teachers should assign students to read more text written in English such as newspaper, novels, short stories inside and outside the class in order that those students increase their word knowledge and are able to bring it into their writing.

Limitations of the Study

The study has some limitations as follows:

1. This study focused only on vocabulary used in essays written by upper secondary school students at Udornpitthayanukul School and third-year Rajabhat Institute Udornthani both of which are institutions of the government. Therefore, the findings might not be generalized to essays written by students from private schools. This is because most students enrolled in government schools tend to have higher proficiency than those of some students in private schools because they have passed the entrance examination organized by the government.

2. The findings of this study cannot be generalized to vocabulary size of Thai students in general because of the small size of the data. That is, with a bigger data, the study may yield different results.

Suggestions for Further Studies

The results of the study raise interesting topics which can be explored further as follows:

1. In this research, the informants' vocabulary size was examined via sixty essays which is a small sample size data. Therefore, the vocabulary use of the students found in this study may not be the representative of the students' vocabulary use. To gain a more representative sample of students' vocabulary size, a larger number of students' essays should be applied.

2. This study focused only on the breadth of word knowledge; namely, vocabulary size. Therefore, there should be a study of the depth of word knowledge; maybe in the use of collocations, the high frequency words and academic words in order that we understand more how the words are used.

3. This research was conducted with only two groups of informants, namely university and upper secondary school students. Therefore, there should be similar research which studies vocabulary use of students at other levels such as primary school.

4. There should be a comparative study of written and spoken vocabulary use at different levels so as to know the students' ability of these two skills.

5. To study vocabulary development, there should be a longitudinal study on students' vocabulary use after receiving a particular teaching approach.

REFERENCES

REFERENCES

- Anderson, R., & Freeboy, P. (1981). The lexical plight in second language reading. In J. Coady, & T. Huckin (Eds.), *Second Language Vocabulary Acquisition*. pp. 20-34. Cambridge: Cambridge University Press.
- Astika, G. G. (1993, June). Analytical assessments of foreign students' writing. *RELC Journal*, 24(1): 61-71.
- Boonyaudomsat, D. (2003). *An analysis of the general English vocabulary and the frequency of occurrence in economics: An introductory analysis by Paul Anthony Samuelson*. Unpublished thesis, Srinakharinwirot University, Bangkok, Thailand.
- Cobb, T. (2000). The complete lexical tutor for data-driven learning on the web. Retrieved April 20, 2005, from URL: <http://132.208.224.131/>.
- Coxhead, A. (2000). A new academic word list. *TESOL Quarterly*, 34(2): 213-238.
- Crow, J. T., & Quigley, J. R. (1985, September). A semantic field approach to passive vocabulary acquisition for reading comprehension. *TESOL Quarterly*, 19(3): 497-551.
- Dawson, M. A. (1957). *Guiding Language Learning*. New York: Haycourt, Brace & World, Inc.
- Durr, T. A. (1977). Country Report: Thailand. *Regional Meeting of Teaching of English in Asia*. Tokyo: Japanese National Commission for UNESCO.
- Gairns, R., & Redman, S. (1986). *Working with Words: A Guide to Teaching and Learning Vocabulary*. Cambridge: Cambridge University Press.
- Gardner, D. (2004, March). Vocabulary input through extensive reading: A comparison of words found in children's narrative and expository reading materials. *Applied Linguistics*, 25(1): 1-37.

- Hatch, E., & Brown, C. (1995). *Vocabulary, Semantics and Language Education*. Cambridge: Cambridge University Press.
- Henriksen, B. (1999, June). Three dimensions of vocabulary development. *Studies in Second Language Acquisition*, 21(2): 303-318.
- Hill, M., & Laufer, B. (2003). Type of task, time-on-task and electronic dictionaries in incidental vocabulary acquisition. *International Review of Applied Linguistics in Language Teaching*, 41(2): 87-106.
- Khongphan, W. (2004). *Vocabulary Occurrences: An Analysis of Reading Passages in Practice in Comprehension II*. Unpublished thesis, Srinakharinwirot University, Bangkok, Thailand.
- Klien, W. (1986). *Second Language Acquisition*. New York: Cambridge University Press.
- Laufer, B. (1995). Beyond 2000: a measure of productive lexicon in a second language. In L. Eubank, L. Selinker., & M. Sharwood Smith (Eds), *The Current State of Interlanguage*. pp. 265-272. Philadelphia: John Benjamins Publishing Company.
- Laufer, B. (1998, June). The development of passive and active vocabulary in a second language: same or different? *Applied Linguistics*, 19(2): 255-271.
- Laufer, B., & Nation, P. (1995, September). Vocabulary size and use: Lexical richness in L2 written production. *Applied Linguistics*, 16(3): 307-332.
- Laufer, B., & Shmueli, K. (1997, June). Memorizing new words: Does teaching have anything to do with it? *RELC Journal*, 28(1): 89-108.
- Lipson, M. Y., & Wixson, K. K. (1998). *Assessment and Instruction of Reading and Writing Difficulty*. New York: Pearson Education Inc.
- McCarthy, M. (1990). *Vocabulary*. Oxford: Oxford University Press.

- Nagy, W. (1997). On the role of context in first-and second-language vocabulary learning. In N. Schmitt, & M. McCarthy (Eds.), *Vocabulary, Description, Acquisition and Pedagogy*. pp. 64-83. New York: Cambridge University Press.
- Nagy, W. E., & Anderson, R.C. (1984, October). How many words are there in printed school English? *Reading Research Quarterly*, 19(3): 304-330.
- Nakprakhon, B. (2005). *Academic Vocabulary in Political Reports: A Corpus-Based Study*. Unpublished thesis, Srinakharinwirot University, Bangkok, Thailand.
- Nation, I. S. P. (1990). *Teaching and Learning Vocabulary*. Boston: Heinle and Heinle.
- Nation, I. S. P. (2001). *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.
- Nation, I. S. P., & Waring, R. (1997). Vocabulary size, text coverage and words lists. In N. Schmitt, & M. McCarthy (Eds.), *Vocabulary, Description, Acquisition and Pedagogy*. pp. 6-19. New York: Cambridge University Press.
- Nault, W. H. (1992). *Word Power*. Chicago: World Book Childcraft International, Inc.
- O'Shea, M. (1974). Vocabulary selection through word list comparison. *Pasaa*, 4(1): 91-102.
- Read, J. (2000). *Assessing Vocabulary*. Cambridge: Cambridge University Press.
- Schmitt, N. (2000). *Vocabulary in Language Teaching*. Cambridge: Cambridge University Press.
- Shostak, J. (2004). The value of direct and systematic vocabulary instruction. Retrieved April 20, 2005, from http://www.sadlier-oxford.com/pdf/9147-9_VW_WhitePaper_Vol7.pdf.

- Sujan, P. (2000). *An Analysis of Vocabulary Used in Rajabhat Institute Mahasarakham English Majors' Writing*. Unpublished thesis, Srinakharinwirot University, Bangkok, Thailand.
- West, M. (1953). *A General Service List of English Words*. London: Longman.
- Witte, S. P., & Faigley, L. (1984). Coherence, cohesion, and writing Quality. In R. Graves (Ed). *Rhetoric and Composition*. pp. 186-201. Upper Montclair, NJ.: Boyton/Cook.
- Yodnil, S. (1980). *A Study of Vocabulary Recognition of the First Year Students at Srinakharinwirot University Prasarnmit*. Unpublished thesis, Srinakharinwirot University, Bangkok, Thailand.
- Zimmerman, C. B. (1997). Historical trends in second language vocabulary instruction. In J. Coady, & T. Huckin (Eds.), *Second Language Vocabulary Acquisition*. pp.5-19. Cambridge: Cambridge University Press.

APPENDIX

Base List One

a	always	bar	body
able	among	base	book
above	amount	battle	both
accept	ancient	be	box
accord	and	bear	boy
account	animal	beauty	branch
across	another	because	bread
act	answer	become	break
actual	any	bed	bridge
add	appear	before	bright
address	apply	begin	bring
admit	appoint	behind	brother
adopt	April	being	build
advance	arise	believe	burn
advantage	arm	belong	business
affair	army	below	but
afford	around	beneath	buy
after	arrive	beside	by
again	article	best	call
against	as	better	can
age	ask	between	capital
ago	association	beyond	car
agree	at	big	care
air	attack	bill	carry
all	attempt	bird	case
allow	august	bit	catch
almost	average	black	cause
alone	away	blood	centre
along	back	blow	certain
already	bad	blue	chance
also	ball	board	change
although	bank	boat	character
charge	council	develop	effect
chief	count	die	effort
child	country	difference	eight
choose	course	difficult	either
church	count	direct	eleven
circle	cover	discover	else
city	creature	disease	employ
claim	cross	distance	end
class	crowd	distinguish	enemy
clean	cry	district	English
clear	current	divide	enjoy
clock	custom	do	enough
close	cut	doctor	enter
club	dance	dog	entire
coast	danger	door	equal

cold	dark	double	escape
color	date	doubt	even
come	daughter	down	evening
command	day	draw	event
common	dead	dream	ever
company	deal	dress	every
compare	December	drive	evil
complete	decide	drop	example
concern	declare	dry	excellent
condition	deep	due	except
connect	degree	during	exchange
consider	deliver	each	exercise
contain	demand	ear	exist
content	describe	early	expect
continue	desert	earth	expense
control	desire	east	experience
corner	destroy	easy	experiment
cost	detail	eat	explain
could	determine	edge	express
extend	fix	god	home
eye	floor	gold	honour
face	flower	good	hope
fact	follow	great	horse
factory	food	green	hot
fail	for	ground	hour
fair	force	grow	house
faith	forget	guard	how
fall	form	habit	however
familiar	former	half	human
family	forth	hall	hundred
famous	fortune	hand	husband
farm	four	handle	idea
fashion	free	hang	if
fast	Friday	happen	impossible
favor	friend	happy	in
fear	from	hard	inch
February	front	hardly	include
feed	full	have	increase
feel	furniture	he	indeed
fellow	future	head	independent
few	gain	health	influence
field	game	hear	instead
figure	garden	heat	intend
fill	gate	heaven	interest
find	gather	heavy	into
fine	general	hello	introduce
finger	gentle	help	iron
finish	get	here	it
fire	gift	hide	January
first	give	high	join

fish	glad	hill	judge
fit	glass	history	July
five	go	hold	June
just	little	mile	neither
justice	live	million	never
keep	local	mind	next
kill	long	minister	night
kind	look	minute	nine
know	lose	miss	no
lack	lot	modern	none
lady	love	moment	nor
land	low	Monday	north
language	machine	money	not
large	main	month	not
last	make	more	note
late	man	moreover	November
law	manner	morning	now
lay	many	most	number
lead	March	mother	object
learn	mark	motor	observe
least	market	mountain	occasion
leave	marry	mouth	October
left	mass	move	of
length	material	Mrs.	off
less	matter	much	offer
letter	may	music	office
level	maybe	must	often
library	mean	name	oh
lie	measure	narrow	oil
life	meet	nation	old
lift	member	native	on
light	memory	nature	once
like	mention	near	one
likely	mere	necessary	only
limit	metal	neck	open
lime	middle	need	operate
listen	might	neighbour	opinion
opportunity	please	public	represent
or	point	pull	respect
order	political	purpose	rest
ordinary	poor	put	result
organize	popular	quality	return
other	population	quarter	rich
otherwise	position	quiet	ride
ought	possess	quite	right
out	possible	race	ring
over	post	raise	rise
owe	power	rank	river
own	practical	rate	road
page	prepare	rather	roll

pain	present	reach	room
paint	preserve	read	rough
paper	press	ready	round
part	pressure	real	rule
party	pretty	reason	run
pass	prevent	receive	rush
past	price	recognize	safe
pay	print	record	sail
peace	private	red	same
people	problem	reduce	Saturday
perfect	produce	refuse	save
perhaps	product	regard	say
permanent	production	regular	scale
permit	programme	relation	scarce
person	progress	religion	scene
picture	promise	remain	school
piece	proper	remark	science
place	propose	remember	sea
plan	protect	repeat	season
plant	prove	reply	seat
play	provide	report	second
secret	silence	spot	suffer
secretary	silver	spread	suggest
see	simple	spring	summer
seem	since	square	sun
seize	single	stage	Sunday
sell	sit	stand	supply
send	situation	standard	support
sense	six	start	suppose
sensitive	size	state	sure
September	skill	stay	surface
serious	sky	steel	surprise
serve	sleep	step	surround
service	slight	stick	sweet
set	slow	still	system
settle	small	stock	table
seven	smile	stone	take
several	so	stop	talk
shadow	social	store	taste
shake	society	storm	teach
shail	soft	story	tear
shape	soil	straight	tell
share	some	strange	ten
she	son	stream	term
shine	soon	street	terrible
shoe	sort	strength	test
shoot	sound	strike	than
shore	south	strong	that
short	space	struggle	the
should	speak	study	then

shoulder	special	subject	there
show	speed	substance	therefore
side	spend	succeed	they
sight	spirit	such	thing
sign	spite	sudden	think
thirteen	who	young	
thirty	why		
this	wide		
though	wife		
thousand	wild		
three	will		
through	willing		
throw	win		
Thursday	wind		
thus	window		
to	wing		
today	winter		
together	wise		
too	wish		
top	with		
total	within		
touch	without		
toward	wonder		
town	wood		
trade	word		
train	work		
travel	word		
tree	work		
trouble	world		
trust	worse		
try	worth		
Tuesday	would		
turn	write		
what	wrong		
when	year		
whether	yellow		
which	yes		
while	yet		

Base List Two

abroad	annoy	autumn	bicycle
absence	anxiety	avenue	billion
absent	anxious	avoid	bird
absolute	apart	avoidance	birth
absolutely	apology	awake	bite
accident	apologize	axe	bitter
accuse	applaud	baby	blade
accustom	applause	bag	blame
ache	apple	baggage	bless
admire	approve	bake	blind
advantage	approval	balance	block
advertise	arch	band	boast
advertisement	argue	barrer	boil
advice	argument	bare	bone
aeroplane	arrange	bargain	boarder
afraid	arrangement	barrel	borrow
afternoon	arrest	basin	bottle
agent	arrow	basket	bottom
agriculture	artificial	bath	boundary
ahead	ash	bathe	bow
aim	ashamed	bay	bowl
airplane	aside	beam	brain
alike	asleep	bean	brass
alive	astonish	beard	brave
aloud	astonishment	beast	breakfast
altogether	attend	beat	breath
ambition	attentive	beg	breathe
amongst	attention	behave	bribe
amuse	attract	behavior	brick
anger	attractive	bell	broad
angle	audience	belt	broadcast
angry	aunt	bend	brother-in-law
brown	chalk	complicated	crush
brush	charm	compose	cultivate
bucket	cheap	confess	cup
bundle	cheat	confidence	cure
burst	check	confuse	curious
bury	cheer	congratulate	curl
bus	cheese	conquer	curse
bush	cheque	conscience	curtain
busy	chest	conscious	curve
butter	chicken	convenience	cushion
button	Christmas	conversation	customer
cage	civilize	cook	dad
cake	classify	cool	damage
calculate	clay	copper	damp
calm	cliff	copy	deaf

camera	climb	cork	dear
camp	cloth	corn	debt
canal	cloud	correct	decay
cape	coat	cottage	deceive
captain	coarse	cotton	decrease
card	coat	cough	deed
carriage	coffee	courage	deer
cart	coin	cousin	defeat
castle	collar	cow	defend
cat	collect	coward	delay
cattle	colony	crack	delicate
caution	comb	crash	delight
cave	combine	cream	department
cent	comfort	creep	descend
centimetre	commerce	crime	deserve
century	committee	critic	desk
ceremony	companion	crop	despair
chain	compete	crown	devil
chair	complain	cruel	diamond
dictionary	elastic	fasten	frame
dig	elder	fat	freeze
dinner	elect	fate	frequent
dip	electric	father	fresh
dirt	elephant	fault	fright
disappoint	empire	feast	fruit
discipline	empty	feather	fry
discuss	enclose	female	fun
disgust	encourage	fence	funeral
dish	engine	fever	fur
dismiss	entertain	fight	furnish
disturb	envelope	film	gallon
ditch	envy	firm	gap
dine	especial	flag	garage
dollar	essence	flame	gas
donkey	essential	flash	gay
dot	exact	flat	generous
dozen	examination	flavor	girl
drag	excess	flesh	glory
drawer	excite	float	goat
drink	excuse	flood	govern
drown	explode	flour	grace
drum	explore	flow	gradual
duck	explosion	fly	grain
dull	extra	fold	gram
dust	extraordinary	fond	grammar
duty	extreme	fool	grand
eager	fade	foot	grass
earn	faint	forbid	grateful
earnest	false	forest	grave
ease	fan	forgive	grease

educate	fancy	fork	greed
efficient	far	formal	greet
egg	farther	forward	grey
grind	humble	jaw	liberty
guess	hunger	jealous	lid
guest	hunt	jewel	limb
guide	hurry	joint	lip
guilty	hurt	joke	liquid
gun	hut	journey	literature
hair	ice	joy	litre
hammer	ideal	juice	load
handkerchief	idle	jump	lord
harbor	ill	key	loss
harm	imagine	kick	loan
harvest	imitate	kilogram	lock
haste	immediate	kilometer	lodging
hat	immense	king	log
hate	important	kiss	lone
hay	improve	kitchen	loose
heal	industry	knee	loud
heat	inform	kneel	loyal
heart	ink	knife	luck
height	inn	knock	lump
hesitate	inquire	knot	lunch
hinder	insect	ladder	lung
hire	inside	lake	mad
hit	instant	lamp	mail
hole	instrument	landlady	male
holiday	insult	landlord	manage
hollow	insure	latter	manufacture
holy	interfere	laugh	map
honest	international	lazy	master
hook	interrupt	learn	mat
horizon	invent	leaf	match
hospital	invite	leg	meal
host	inward	lend	meantime
hotel	island	lessen	meanwhile
meat	nest	pardon	pocket
mechanic	net	parent	poem
medicine	nice	park	poison
melt	noble	particular	practice
mend	noise	passage	president
merchant	nonsense	passenger	probable
mercy	noon	paste	procession
merry	nose	path	profession
message	noun	patient	profit
metre	nuisance	pattern	prompt
mild	nurse	pause	pronounce
milk	nut	paw	property
mill	oar	pearl	proud

militre	obey	peculiar	pump
milimetre	ocean	pen	punctual
miner	offend	pencil	punish
miserable	official	penny	pupil
mistake	omit	per	pure
mix	onto	perform	purple
model	onward	pet	push
modest	oppose	photograph	puzzle
moon	opposite	pig	qualify
moral	organ	pick	quantity
motion	origin	pigeon	quarrel
mouse	ornament	pile	quart
mud	overcome	pinch	queen
multiply	outline	pint	question
murder	overflow	pipe	quick
mystery	pack	pity	rabbit
nail	pad	plain	radio
neat	pair	plane	rail
needle	pale	plaster	rain
neglect	pan	plough	rake
nephew	parcel	plural	rapid
rare	rid	saucer	shut
raw	ripe	saw	sick
ray	risk	scatter	signal
razor	rival	scent	silk
realize	roar	scissors	sincere
really	roast	scold	sing
recommend	rob	scorn	sink
receipt	rock	scrape	skin
refer	rod	scratch	skirt
reflect	roof	screen	slave
refresh	root	screw	slide
regret	rope	search	slip
rejoice	rot	seed	slope
relieve	row	self	smell
remedy	royal	sentence	smoke
remind	rub	serve	smooth
rent	rubber	sew	snake
repair	rubbish	shade	snow
replace	rude	shallow	soap
reproduce	rug	shame	sock
republic	ruin	sharp	soldier
reputation	rust	sheep	solemn
request	sacred	sheet	solid
reserve	sacrifice	shelf	solve
resign	sad	shell	sore
resist	saddle	shelter	sorry
responsible	sake	shield	soul
restaurant	salary	shilling	soup
retire	sale	ship	sour

revenge	salt	shirt	sow
review	sample	shock	spade
reward	sand	shop	spake
ribbon	satisfy	shout	spell
rice	sauce	shower	spill
spin	sugar	thirst	tray
spit	suit	thorn	treasure
splendid	supper	thorough	treat
split	suspect	thread	tremble
spoil	swallow	threat	trail
spoon	swear	throat	tribe
sport	sweat	thumb	trick
staff	sweep	thunder	trip
stain	swell	ticket	truck
stairs	swim	tide	true
stamp	swing	tidy	trunk
star	sword	tie	tube
station	sympathy	tight	tune
steady	tail	till	twist
steam	tall	tin	ugly
steap	tame	tip	umbrella
steer	tap	tire	uncle
stem	tax	title	unit
stiff	taxi	tobacco	universe
sting	tea	toe	upper
stir	telegraph	tomorrow	upright
stocking	telephone	ton	upset
stomach	temper	tongue	urge
stove	temperature	tonight	vain
strap	temple	tool	veil
straw	tempt	tooth	verb
strict	tend	tough	verse
string	tender	tour	vessel
strip	tent	towel	victory
stripe	thank	tower	violent
stroke	theatre	toy	virtue
stuff	thick	track	vowel
stupid	thief	translate	voyage
suck	thin	trap	wage
waist	weed	widow	wrist
wake	weigh	wine	worship
wander	wet	wipe	wrap
warm	wheat	wire	yield
wash	wheel	witness	zero
wax	whip	wool	
weapon	whisper	worm	
wealth	whistle	worry	
weather	whole	wound	
weave	wicked	wreck	

Base List Three

abandon	allege	assign	capable
abnormal	alliance	assimilate	capacity
absorb	allocate	assist	capture
abstract	allude	assume	carbon
academic	ally	assure	career
accelerate	alphabet	astronomy	catalogue
access	alter	atmosphere	category
accompany	alternative	atom	cater
accomplish	ambiguity	attach	cease
accumulate	amorphous	attain	cell
accurate	analogy	attitude	challenge
achieve	analyze	attribute	channel
acid	angular	auspices	charter
acquire	anomaly	author	chemical
adapt	anonymous	authorize	circuit
adequate	apparatus	automatic	circumstance
adhere	appeal	avail	civic
adjacent	append	available	clarify
adjective	appendix	averse	classic
adjust	appreciate	aware	client
administer	approach	awe	clinic
adolescent	approximate	axis	code
adult	area	battery	coefficient
advocate	aristocrat	benefit	cogent
affect	arithmetic	biology	coincide
affiliate	arouse	bomb	collapse
affluence	ascribe	bore	collide
aggregate	aspect	bread	colloquial
aggression	aspire	bubble	column
agitate	assemble	bulk	comment
aid	assent	bureaucracy	commission
alcohol	assess	calendar	commit
align	asset	cancel	commodity
commune	console	crystal	devise
communicate	constant	culture	devote
community	constitute	cumbersome	diagram
compel	construct	currency	diameter
compensate	construe	cycle	dictate
competence	consult	cylinder	diffuse
complement	consume	data	digest
complex	contract	debate	dimension
complicate	contaminate	decade	discern
comply	contemplate	decimal	discourse
component	contend	decline	dispense
compound	context	dedicate	disperse
comprehend	continent	deflect	displace
comprise	contingent	defer	dispose
compulsion	contract	deficient	dispute

compute	contradict	define	dissipate
conceive	contrary	definite	dissolve
concentrate	contrast	deflect	distinct
concept	contribute	degenerate	distort
conclude	controversy	deliberate	distribute
condense	convene	democracy	diverge
conduct	converge	demonstrate	diverse
confer	convert	denominator	divine
configuration	cooperate	denote	doctrine
confine	coordinate	dense	domestic
conflict	correlate	deny	dominate
conform	correspond	depress	drain
confront	create	deprive	drama
Congress	credible	derive	drastic
conjunction	creditor	design	drug
consent	crisis	detect	durable
consequent	criterion	detriment	duration
conserve	criticize	deviate	dynamic
consist	crucial	device	economy
edit	evaluate	forgo	hostile
elaborate	evaporate	formula	huge
electronic	eventual	formulate	hypothesis
element	evident	fossil	identical
elicit	evoke	foundation	identity
eliminate	exclude	fraction	ignorant
eloquent	execute	fragment	ignore
emancipate	exert	fraternal	illuminate
embody	exhaust	fraud	illustrate
emerge	expand	friction	image
emigrant	expel	frontier	immigrate
emotion	expert	frustrate	impact
emphasize	explicit	fuel	imperial
empirical	exploit	fulfill	implement
enable	exponent	function	implication
energy	export	fund	implicit
enhance	expose	fundamental	imply
enlighten	external	fuse	import
enrich	extract	generate	impose
ensure	facilitate	genuine	impress
entity	faction	geography	impressive
enumerate	fallacy	geometry	impulse
environment	fare	germ	incentive
episode	feasible	goal	incessant
equate	feature	grant	incident
equation	federal	graph	incidental
equidistant	fertile	gravity	incline
equilibrium	final	guarantee	income
equipment	finance	hemisphere	incompatible
err	finite	heredity	inconsistent
establish	fluctuate	hero	incorporate

estate	fluent	hierarchy	index
estimate	fluid	homogeneous	indicate
ethics	focus	horror	indigenous
individual	interval	liberate	molecule
induce	intervene	linguistic	momentum
infer	interview	litigate	monarch
inferior	intimacy	locate	morphology
inflation	intrinsic	locomotion	motive
ingenious	intuitive	logic	muscle
inherent	invade	luxury	myth
inherit	inverse	magic	navy
inhibit	invest	magnetic	negative
initial	investigate	magnitude	negotiate
initiate	invoke	maintain	nerve
injure	involve	major	network
injustice	irrigate	majority	neutral
innate	isolate	manifest	niche
innovation	issue	manipulate	norm
insist	item	margin	normal
inspect	job	maternal	notate
instance	journal	mathematics	notion
instinct	judicial	matrix	novel
instruct	justify	mature	nuclear
integer	kindred	maximum	null
integrate	knight	medium	nutrient
intellect	label	mental	objective
intelligent	laboratory	metabolism	oblige
intelligible	labour	metaphor	obsolete
intense	launch	method	obtain
interact	layer	microscope	obvious
interlock	lecture	migrate	occupy
interlude	legal	military	occur
intermediate	legislate	minimum	odd
internal	legitimate	minor	odor
interpret	leisure	mobile	option
interrelate	lens	modify	orbit
intersect	liberal	moist	orientate
oscillate	postulate	publish	resource
outcome	potential	purport	respective
overlap	pragmatic	pursue	respond
oxygen	precede	quote	restore
parenthesis	precipitate	radiant	retain
parliament	precise	radical	retard
participate	preliminary	radius	reveal
partisan	premise	random	reverberate
passive	preposition	range	reverse
peasant	prestige	ratio	revise
pendulum	presume	rational	revive
period	prevail	react	revolt
perpendicular	previous	rebel	rhythm

perpetrate	primary	rectangle	rigid
perpetual	prime	recur	rigor
persist	primitive	reform	role
perspective	principle	refute	rotate
pertain	prior	region	route
pertinent	proceed	reign	rudimentary
pervade	process	reinforce	rural
pest	proclaim	reject	saint
phase	procure	release	sanction
phenomenon	prohibit	relevance	satellite
philosophy	project	reluctant	saturate
physical	propagate	rely	schedule
planet	propensity	remove	scheme
plead	proportion	render	score
plot	proprietor	repress	secret
pole	prosper	repudiate	section
policy	protest	require	secure
pollution	province	research	seek
port	provoke	reservoir	segment
portion	prudence	reside	select
positive	psychology	residue	sequence
series	subdivide	tense	underlie
sex	subjective	tentative	undertake
shift	subordinate	terminology	unduly
shrink	subsequent	territory	uniform
sibling	subside	terror	unify
signify	subsidize	text	upsurge
similar	subtle	texture	urban
simultaneous	suburb	theft	usage
site	suffice	theorem	utility
skeleton	sum	theory	utilize
sketch	summary	thermal	utter
sociology	superficial	tiny	vague
solar	superimpose	tissue	valid
sophisticated	superior	tolerate	vary
source	supplement	tone	vast
sovereign	suppress	topic	vein
spatial	supreme	trace	velocity
specify	surplus	tractor	verbal
spectrum	survey	tradition	verify
speculate	suspend	traffic	version
sphere	sustain	trait	vertical
spontaneous	switch	transact	vibrate
stable	symbol	transfer	violate
starve	symptom	transform	virtual
stationary	synthetic	transparent	visible
statistic	tangent	transport	vision
status	tangible	treaty	visual
stereotype	tape	trend	vital
stimulate	task	triangle	vocabulary

stipulate
strata
stress
structure
style

team
technique
technology
telescope
temporary

trivial
tropical
tyre
ultimate
undergo

volume
voluntary
withdraw
x-ray

VITAE

VITAE

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