

AN ANALYSIS OF ACADEMIC VOCABULARY IN BUSINESS NEWS:

A CORPUS-BASED STUDY

A MASTER'S PROJECT

BY

KRONGKARN BOONYAPAPONG

Presented in Partial Fulfillment of the Requirements

for the Master of Arts Degree in English

at Srinakharinwirot University

October 2007

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AN ABSTRACT

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This study addressed two research questions regarding academic words used in business news. Firstly, it asked about the percentage of *Academic Word List* (AWL), which appeared in the corpus of business news collected from *The Nation*, and secondly, what the top 100 frequently used academic words were in the corpus. The framework of this study was based on Coxhead's(2000) 570- *Academic Word List* (AWL). A corpus of 859,890 running words taken from a local online newspaper, *The Nation* was analyzed against the AWL of 570 words by using the *Concordance Program*. The results revealed that words in the AWL covered 2.09 % of the total words in the corpus, and the top 100 frequently used words in the corpus clearly represented the field of business. The results indicated that business news might be a beneficial source for English for Specific Purposes (ESP) for students majoring in business administration and people who involve in the business field.

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ของ
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เสนอต่อบัณฑิตวิทยาลัย มหาวิทยาลัยศรีนครินทรวิโรฒ เพื่อเป็นส่วนหนึ่งของการศึกษา
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การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อสำรวจจำนวนคำศัพท์ทางวิชาการในข่าวธุรกิจ จากหนังสือพิมพ์ เดอะเนชั่น ออนไลน์และ รวบรวมคำศัพท์วิชาการที่พบมากเป็น 100 อันดับแรก ในการศึกษา คำศัพท์วิชาการที่นำมาเป็นกรอบการศึกษา คือ กลุ่มคำศัพท์วิชาการ (Academic Word List) จำนวน 570 คำ ซึ่งพัฒนาโดยค็อกซ์ เฮด (2000) ผู้วิจัยได้รวบรวมข้อมูลจากข่าว อิเล็กทรอนิกส์เพื่อสร้าง Corpus จำนวน 859,890 คำ และวิเคราะห์จำนวนคำศัพท์ดังกล่าวด้วย โปรแกรมคอมพิวเตอร์ Concordance ผลการศึกษาพบคำศัพท์วิชาการ 2.09 เปอร์เซ็นต์ ในข่าว ทางธุรกิจและคำศัพท์ที่พบมาก 100 อันดับแรกนั้นส่วนใหญ่เกี่ยวข้องกับวงการธุรกิจ ผลการศึกษา พบว่าข่าวธุรกิจสามารถใช้เป็นบทเรียนเพื่อศึกษาและพัฒนาความสามารถด้านคำศัพท์สำหรับผู้เรียน ภาษาอังกฤษเฉพาะทาง และเอื้อประโยชน์แก่นักศึกษาวิชาเอกการบริหารธุรกิจ และ บุคคลใน วงการธุรกิจ

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

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October....., 2007

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CHAPTER 1

INTRODUCTION

1.1. Background.

Vocabulary is one of the key elements for communication. Learning and mastering vocabulary skills is a requirement for successful language learning. In the second edition of *Oxford English Dictionary*, there are full entries for 171,476 words in current use, and 47,156 obsolete words. According to McCrum and Robert (1992), there are 500,000 words to 1,000,000 words including scientific words. While Grolier (1999) states that the vocabulary has grown from 650,000 to 750,000 words. Similarly, Oxford University Press (1989) and Wilton (2001) claim that there are 616,500 words in a dictionary. The number of English words has grown from 50,000 to 60,000 words in Old English to about a million today. The tenth edition of *Merriam- Webster's Colligation Dictionary*, consists of a collection of more than 14.5 million citations (Merriam Webster 1993).

As there are a huge number of vocabularies to be learned, vocabulary should be taught through appropriate an approach to achieve and to communicate in each language through the skills of speaking, listening, reading and writing. The researchers profess that direct and explicit instruction of a set number of vocabulary words will improve academic success in all content areas. Stahl and Fairbanks (1986) suggest that teaching students 350 words each year may improve learning by as much as 10% to 30%. Further, Beck, Perfetti & Mckeown (1982) found that students who were given direct instruction in word meaning were better able to perceive the

meaning of untaught words than in the control subjects. Hence, the students or learners should learn vocabulary as much as they can. At first, students learn basic vocabulary in primary or high school. Next, they study specific vocabulary at university, so called English for Academic Purposes (EAP).

In order to be successful in learning English, learners for Academic Purposes (EAP) need to know general vocabularies, general EAP vocabularies (Academic Word List), and specific vocabularies for use in their academic areas in education such as business, technology, politics, law, music, mathematics and science, knowledge of some less-frequent words vocabulary building skills including the uses of prefixes, suffixes and roots to produce words. It is also essential to learn information about word families such as synonyms, antonyms, hyponyms etc, vocabulary learning techniques including dictionary use, ways of dealing with meaning and learning of new words and unknown words.

There have been many attempts to define what exactly academic vocabulary is. Many people think that academic vocabulary is more difficult than that in general English. The AWL (Academic Word List) is a list of academic words devised by Averil Coxhead, a researcher based in New Zealand. She compiled the AWL (Academic Word List), placing on computer several hundred written academic texts (about 3.5 million words in total). She found 10 percent of academic words at the college level (Coxhead 2000). She then analyzed them to see which ones were used most frequently. The 570 words families on the AWL are thought to be important for students preparing for an academic study. If learners study these words, and try to use them actively, they will be able to use English vocabulary more successfully.

Previously, some parts of a newspaper were selected to be used as teaching materials. Currently online newspapers are very popular for reading, and they could be interesting for all people who are interested in business fields. Generally, people understand business news better if they know more academic words. The researcher was particularly interested in business news. This study aimed to analyze academic vocabulary in the corpus of business news by using Coxhead's AWL. It is beneficial for those who want to learn academic vocabulary mostly used in business news.

1.2. Research Questions

This study addresses two research questions.

1. What is the percentage of the words in the AWL appearing in business news in the online database of *The Nation*?
2. What are the 100 most frequently used academic words in the AWL in business news in the online database of *The Nation*?

1.3. Scope of the Study

A corpus of 859,890 words was taken from business news reports at www.nationmultimedia.com, an on-line database, from every other day during June 1, 2006 to November 30, 2006. The analysis was to address the following:

- 1.The number of Coxhead's AWL words in the corpus of business news
- 2.The top 100 AWL words in the corpus of business news

1.4. Significance of the Study

This research examined the number of academic words in business news in *The Nation*, an online news-website of a local newspaper written in English in Thailand. The benefits of this study are as follows:

1. The findings reveal a source of academic vocabulary.
2. The findings give an alternative approach for learners of English for Academic Purposes (EAP).
3. The findings can be the guidelines for further studies in academic words and other corpus-based study concerns.
4. The findings are beneficial for undergraduate students majoring in business administration and people who are involved in business.

1.5. Definition of Terms

1. Academic words

Academic words are a list of words which appear at the high level of frequency in English academic texts. The list, compiled by Averil Coxhead, contains 570 word families (See an appendix) from a corpus of 3,500,000 running words of written academic texts.

2. Words types

Words types are words of different word forms. A word which is repeated several times is counted only once.

3. Word tokens

Word tokens refer to the total number of word forms that occur in a text.

If each word appears more than once in a text, it is counted each time it is used.

4. Business news

Business news refers to online business news which is available at www.nationmultimedia.com. The news is mostly written by Thai people, and is concerned with both national and international businesses.

5. Corpus

A corpus refers to a large body or a collection of samples of texts which is in the form of writing held on a computer. In this study, the corpus was created by taking business news from www.nationmultimedia.com. It comprised 859,890 words in business news.

6. Concordance Program (CP)

Concordance Program is a computer program that helps in the educational field. It is used to create word lists, count word frequency, compare different usages of a word, analyze keywords, and find phrases and idioms. The Concordance Program is a general-purpose working tool for studying of text, whether the text is literary, linguistic, historical, philosophical, legal, commercial, and political or of other kinds. In this study, the Concordance Program was used to search for academic words in the corpus of business news.

1.6. Overview of the Study

This study analyzed academic vocabulary in a corpus of business news. Chapter 1 presents background information, research questions, scope of the study, significance of the study, definition of terms, and overview of the study. Chapter 2

relates vocabulary learning, research on academic vocabulary learning, research on academic vocabulary and the previous research. Chapter 3 focuses on the analytical tool and procedures. Chapter 4 reports the results of the study, and the last chapter discusses the results of the analysis and presents the AWL (Academic Word List) words found in the corpus of business news. It also summarizes the results of the findings and gives suggestions for further studies.

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

This chapter is related to vocabulary learning, research on vocabulary learning, research on academic vocabulary and previous research.

2.1. Vocabulary Learning

Kamil and Hiebert (in press) define vocabulary as knowledge of words and word meanings, and they further comment that vocabulary is very complex. In general, English language learners recognize that vocabulary is one of the key elements to communicate in speaking, reading, writing and listening. Baumann et al., (2003) point out that the extent of vocabulary learning relates strongly to overall academic success. Stanovich (1986) notes that “the rich get richer and the poor get poorer.” This means that to be able to develop vocabulary in communication in English, the learners have to learn a lot of it.

Vocabulary learning has the following characteristics: they are incidental, receptive and productive (RPV), incremental, and depth learning.

With regard to the first characteristic so called incidental vocabulary learning, Grass (1999) defines it as the “side- effect” of the activity which neglects the active role of the learner. Ellis (1994) also criticizes that incidental learning occurs with unconscious learning. Most scholars agree that except for the first few thousand most common words, second language vocabulary is predominantly acquired incidentally (Huckin & Coady 1999). Paribakht and Wesche (1999) define incidental learning as what takes place when learners focus on comprehending meaning rather than on the explicit goal of learning new words. Grass (1999) claims that incidental learning most

likely occurs when the words in the two languages are cognated and there is a constant exposure of related second language words in use.

Concerning the second characteristic, vocabulary learning includes the receptive and productive capacities of the learners. Receptive vocabulary refers to the words and expressions that learners can understand when reading or listening to them. Productive vocabulary refers to the words and expressions that learners can use correctly when producing oral or written language. Both capacities need to be developed by learners so that they can communicate effectively.

Paribakht and Wesche (1997) explain the framework for vocabulary learning by specifying stages of vocabulary learning from the earlier stages to the output stage. The framework aims to move the learners from the receptive to the productive stage as follows:

1. At first, the learners notice the vocabulary and then connect it with past learning.
2. Second, the learners understand its meaning in certain contexts.
3. Third, the learners use the vocabulary in various situations.
4. Fourth, the learners can internalize the new vocabulary through integration.
5. Fifth, the learners use appropriate vocabulary in their production of language.

With regard to the third characteristic, incremental learning includes the increase of capacity of using vocabulary by learning it many times. It is unrealistic that learners can memorize a word with full knowledge of it when they see or hear it only once. They have to encounter the word quite frequently. Paribakht and Wasche (1993) have developed a vocabulary knowledge scale with five stages related to incremental learning as follows:

1. The word is unfamiliar.
2. The word is familiar but the meaning is not known.
3. A translation can be given.
4. The word can be used appropriately in a sentence.
5. The word is used accurately both semantically and grammatically.

Concerning the fourth characteristic of vocabulary learning, depth learning involves quality vocabulary development. Depth of vocabulary deals not only with meaning, but also with morphology, syntax, sociolinguistic aspects. It also includes differences between written and spoken uses and strategies for approaching unknown words. Paribakht and Wasche (1996) suggest stages to increase knowledge of words as follows:

1. Generalization: being able to define the words
2. Application: selecting an appropriate use of the word.
3. Breadth of meaning: recalling the different meanings of the word.
4. Precision of meaning: applying the word correctly to all possible situations.
5. Availability: being able to use the word productively.

Similarly, Paribakht and Wasche (1996) suggest another vocabulary learning aspect. To develop the ability of vocabulary learning effectively, learners need to use the following lists.

1. Frequency of occurrence
2. Word register
3. Word collocation
4. Word morphology
5. Word semantics
6. Word polysemy and the relationship of sound to spelling
7. Knowledge of the equivalent of the word in the mother tongue

All in all, learning vocabulary includes incidental, receptive and productive (RPV), incremental, and depth learning. Next, related research on vocabulary learning is discussed.

2.2. Research on Vocabulary Learning

Vocabulary development is the foundation of success of language learning. In order to achieve their goal of better academic vocabulary learning, learners make their vocabulary development from knowing previous words and vocabulary instruction. Herman (1989) discusses three approaches to vocabulary instruction namely definitional, contextual and conceptual. Each approach is discussed as it relates to learning new words and to improving comprehension. The definitional or contextual approaches is used when each is not as effective as the combination of both in improving comprehension. The conceptual approach builds more thorough word knowledge and is more likely to affect comprehension, but it is time consuming in terms of teacher preparation and allocated class time. Not all words need in-depth instruction to which the conceptual approach lends itself. This type of instruction is recommended for teaching words to understand a text.

Meara (1997) suggests that the use of metaphors may help the learners' thinking, but metaphors fail to explain or predict behavior. He develops two simple models to illustrate their value in explaining behavior, raising questions and suggesting ways of research. One model raises questions about acquiring words through exposure to reading materials. A second model attempts to explain the difference between receptive and productive vocabulary items, and how words move from one category to the other. Ellis (1997) argues that the acquisition of phonological form, collocation and grammatical class results from unconscious

analysis of sequence information. But the acquisition of semantics and the mapping of form to meaning are accomplished by conscious learning processes. It is likely that much of language learning is the memorization of strings (phonological and syntactic) resulting in the formation and retention of patterns in long-term memory. Laufer (1997) claims that knowing a word involves knowing its form, morphological structure, syntactic pattern, meaning, connotation, pragmatics, lexical relations, and collocations. Factors that increase learning difficulty include pronounceability, foreign phonemes and phonotactics, suprasegmentals, spelling, morphological complexity, existence of similar forms, register restrictions, idioms and polysemy.

However, Swan (1997) proposes that there is also a lot of common ground that provides a ready-made pattern, enabling us to shortcut the process. The learners do not have to relearn all the conceptual apparatus that allows them to name the universe. The studies show that association is a very productive method of learning new words.

Ryan (1997) explains that learning the orthographical form of L2 vocabulary is a receptive and a productive process. The orthography and morphological structure of an L2 may require reading strategies which are different from the L1. Logographic orthographies require word recognition skills while phonemic orthographies require phonemic processing.

Schmitt (1997) lists, groups and discusses 58 strategies of vocabularies. He reports about a survey of Japanese learners of English, asking which strategies they use and which they find helpful. Bilingual dictionaries comes the most helpful, followed by repetition and guess from context. As learners' vocabulary increases, they employ more "deep processing" strategies connecting with synonyms, using vocabulary in a sentence, and analyzing parts of speech.

Overall, vocabulary development is one of the factors to success in language learning. Three approaches to vocabulary learning are first, the definitional, contextual and conceptual vocabulary learning; second, receptive and productive learning; third, depth learning.

2.3. Research on Academic Vocabulary

English as Second language learners who are from non-native speaking countries have difficulty in understanding what they read. A major cause of this difficulty is that they don't know the meaning of new words, especially words that are written in the content area textbooks. Limited vocabulary prevents students from comprehending a text (Cynthia and Johnson, 2004).

Corson (1997) has studied the learning and use of academic English words by students who came from different socio-cultural backgrounds. He claims that the Graeco-Latin vocabulary of English, which dominates the language's academic vocabulary, offers different levels of potential difficulty for students from different classes, cultural, or linguistic social groups. He explains that people from different backgrounds use academic words in different ways; these differences increase during peak periods of word acquisition, like adolescence. L1 and L2 students who have different ways to produce language and different arrangements of mental lexicon can lead to socio-cultural variations in the learning and use of words. Saville-Troike (1984) states that vocabulary learning is the most important aspect of speaking for academic achievement in learning another language. Corson (1997) supports systems of thought which influence learners in learning language. He quotes that Western categories of thought are rooted in the history of Western institutions. For example, they categorize fields of studies according to medicine, geography, linguistics, and psychology which have become much more separated than in many other cultures.

This complex separation also extends into areas of Western thoughts that influence their academic systems and give them advantages to develop their culture of literacy.

For instance, many readers who encounter academic words often ignore them. Corson (1997) suggests when people become more aware of the derivational rules of English, the learning and use of academic Graeco-Latin words become easier. This is a specific kind of learning in English. He explains that these language awareness skills offer a different level of organization that is supplementary to other ways of analyzing words. Some researchers have suggested that new words are best understood by analogy to known words (Anglin, 1993). Some have proposed rule-based types of analysis: expressing meaning to each part of a word and combining them (White, Power, & White, 1989). It can be said that one technique probably suits some words, and other techniques suit some other words.

Corson (1997) points out that learning L2s other than English seems very useful for academic vocabulary advancement. For example, learning Latin and ancient Greek used to offer vocabulary benefits to students of English. These benefits still seem essential to learning and using morphologically complex and low-frequency words.

To sum up, vocabulary knowledge is the most important aspect of language proficiency for academic success in learning another language.

Factors which influence language learners to reach their academic goals are firstly, backgrounds of people affecting the use of academic words; secondly, systems of thought and the root of learners' history having power over cultures; thirdly, ability to identify academic words; and fourthly, understanding academic words by analogy.

2.4. Previous Research

A number of researchers have studied academic vocabulary in different genres to investigate what high frequency words are in each field. In order to know academic vocabulary in vocabulary learning, it is very beneficial to find out and study what have been done previously in the related field. The previous research is presented as follows:

Para (2004) has studied high frequency words in civil engineering research articles. A total of 126 research articles were used as data in this study and he found that there were 10% academic words in the engineering research articles by using the AWL in the Coxhead's framework.

Nakprakorn (2005) has studied the percentage and the top 50 academic words in a corpus of political reports. The corpus of 122,811 running words from *The Nation* was analyzed against the AWL of 570 words by using the Concordance program. He found that there were 5.7% academic words in the political corpus and the top 50 words in AWL were clearly political- related words.

Similarly, Dejitsak (2006) has studied the percentage and the top 50 words in a corpus of sport news. The corpus of 102,050 running words from *The Nation* was analyzed against the AWL of 570 words by using the Concordance program. She found that there were 1.79% academic words in the sport corpus and the top 50 words in AWL were clearly related to the field of sport news.

In conclusion, previous studies are beneficial guidelines for this research. Findings from previous research showed the following results. First, 10% of AWL were found in civil engineering research articles. Second, 5.7 % of AWL were found in a corpus of political reports. Third, 1.79% were found in a corpus of sport news.

CHAPTER 3

METHODOLOGY

This chapter comprises two main parts: the analytical tool and procedures. In the section of the analytical tool, the analytical framework including the Academic Word List (AWL) and the Concordance Program (CP) are discussed. The procedure section presents the information of the method used in selecting the data and a corpus creation.

3.1. Analytical Tool

3.1.1. Analytical Framework

The framework used in this study is based on Coxhead's (2000) Academic Word List (AWL), which is a list of words which appear with high frequency in English-language academic texts, including a software program which can calculate word frequency and text types. The list which was collected by Averil Coxhead at Victoria University of Wellington, New Zealand, contains 570 word families and is divided into 10 sublists. Sublist 1 consists of 60 most common words in the AWL. Each sublist contains 60 word families, except for sublist 10, which contains 30 word families. These 570 words consist of head-words plus their inflected and derived forms, (e.g. *concept*, *conception*, *concepts*, *conceptual*, *conceptualisation*, *conceptualise*, *conceptualised*, *conceptualises*, *conceptualising*, *conceptually*) and there are around 3,100 word-forms altogether.

To find these words, academic journals, textbooks, course workbooks, lab manuals, and course notes were gathered and analyzed. The list was collected

following an analysis of over 3,500,000 words of text. The words selected for the AWL are words which occur frequently in a range of academic subjects, such as the arts (including history, psychology, sociology, etc.), commerce (including economics, marketing, management, etc.), law and the sciences (including biology, computer science, mathematics, etc.). This means that the AWL is useful to all second-language learners who wish to study the English language no matter in what their fields of study are.

3.1.2. The Corpus-based Study

Corpus (Corpora: plural) refers to an electronic authentic language database that can be available via the internet or as software installed on the desktop (Hasselgard, 1997). Language in a corpus can be either a collection of written or spoken texts; for example, collection of written texts can be from newspapers, business letters, popular fiction, books, or magazines, published or unpublished school essays and etc. Collections of spoken texts can be any recorded formal or informal conversations, radio shows, weather broadcast or even business meetings and etc.

Generally, users of a corpus use the searching tool the concordance to look for a huge number of language contexts analyzed (Witton, 1993); this feature provides users not only better quality of examples but also more exposures to an unfamiliar word.

Traditional language learners rely heavily on dictionaries as the main source to look up word definitions and examples; however, this task is often too laborious and time-consuming (Cobb, 2003). By using the concordance tool of corpus to search for

word contexts, learners are involved in a more speedy and efficient language learning experience.

Currently, a computer corpus may store many millions of running words whose features can be analyzed by means of tagging and the use of a concordance program. The term corpus is almost synonymous with the term machine-readable corpus. Interest in the computer for the corpus linguist comes from the ability of the computer to carry out various processes. The type of analysis now is achieved in a few moments on a desktop computer. The unifying characteristics of the corpus-based research include the use of a large, representative electronic database of spoken or written texts, or both, and the use of computer-assisted analysis techniques.

3.1.3. The Concordance Program (CP)

The Concordance Program is a basic tool for the corpus linguist. It is being used in language teaching and learning, data mining and data clean-up, literary and linguistic scholarship, translation and language engineering, corpus linguistics, natural language software development, lexicography, content analysis in many disciplines including accountancy, history, marketing, musicology, politics, geography, media studies and etc. The Concordance Program can count word frequencies, compare different usages of a word, make indexes and word lists, analyze keywords and find phrases and idioms.

To sum up, analytical framework used in this study is based on Coxhead's Academic Word List (AWL) which is very useful and is frequently used by English as a second language learner. Moreover, the corpus-based study is used to create a business corpus from business news. Lastly, the concordance Program is the main tool used to analyze the data in this study.

The following shows a sample page from the Concordance Program.

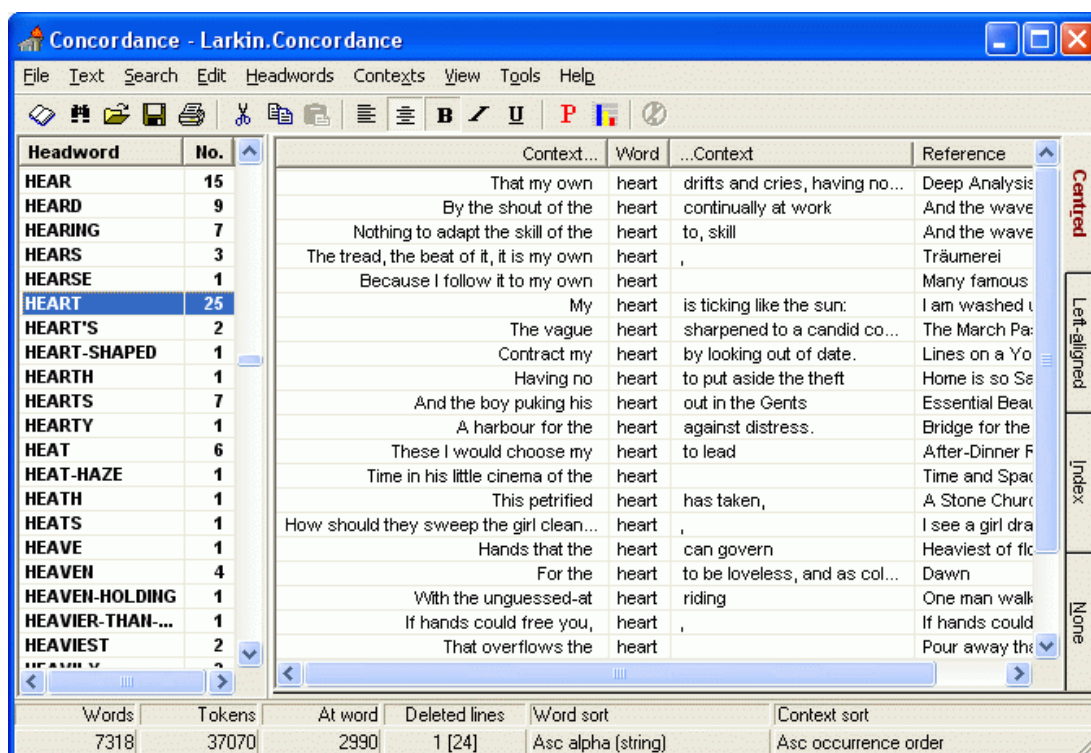


Figure 1 A Sample Page of the Concordance Program

Figure 1 presents a sample of the Concordance Program that can count word frequencies, compare different usages of a word, make indexes and word lists, analyze keywords and find phrases and idioms.

Source: <http://www.rjcw.freemove.co.uk>

3.2. Procedures

The research was conducted in these steps:

3.2.1. Data Collection

The data used in this study were business news taken from on-line database at www.nationmultimedia.com from June 1, 2006 to November 30, 2006. The business news was chosen every other day, totaling 604 news.

3.2.2. Corpus Creation

The target of this study was to create a corpus of words from business news at www.nationmultimedia.com. The steps in creating the corpus are as follows:

a) Business news from the website was copied. The homepage of the website shows links to different kinds of reports which are classified into sections, such as entertainment, sports, education, health, politics, and editorial. Then the business news texts were copied every other day.

b) Dates, months and the name of writer in the news were deleted from the texts. Only headlines and the body of the news were copied into a master file. For instance, there is a reference on the top of every page saying, “published on (date/month/year).” These phrases would affect the frequency of word list because the word *publish* is one of the words in the AWL.

c) The texts were collected into a business news file. Then the corpus was fully developed.

d) The corpus then was transferred into a hard-drive in a personal computer for the analysis.

3.3. Data Analysis

A concordance list of the corpus is produced by using the Concordance Program (CP) in order to answer the two main research questions in this study.

Research question 1: What is the percentage of the words in the AWL in business news?

The steps used to analyze to data for answering this question were as follows:

a) The total tokens of the corpus were searched by using the option Make Full Concordance.

- b) The total word tokens of the corpus were presented to program.
- c) The number of all word tokens the Concordance generated from the corpus was stored.
- d) The total AWL words were calculated by using the Concordance's Pick List tool. This tool added the total words of the AWL, headwords and their families. Then the AWL word tokens were acquired.
- e) The percentage of the AWL was obtained by using the following formula:

$$\text{The percentage of the AWL} = \frac{\text{Total AWL word tokens (d)} \times 100}{\text{Total word tokens in the corpus (b)}}$$

Research question 2: What are the 100 most frequently used academic words (AWL) in business news?

The following steps were used for answering this question:

- a) The frequency of each word in the AWL acquired from the process in the first research question was manually compared.
- b) The 100 most frequently used words were determined and stored.
- c) The 100 most frequently used words were reported.

In brief, the analytical tool used was Coxhead's (2000) Academic Word List (AWL). Also, the Concordance Program (CP) was used as a tool to analyze a large corpus academic word of over 859,890 words. Then, the procedure of this study was conducted in three steps: data collection, corpus creation and data analysis.

The next chapter shows findings of the study and a response to delineate research questions.

CHAPTER 4

FINDINGS

This chapter presents the findings of the study, and answers the two research questions. The results of the study are presented and discussed in two parts:

First of all, it presents the broader picture of the corpus of business news, such as academic word types, total academic word types in the corpus, total word tokens in the corpus and coverage of academic words in the corpus of business news. Then it presents the tables related to the questions of this study.

In order to explore the number of words in the AWL in the corpus of business news, the word tokens of both academic words and the entire corpus of business news were compiled.

Table 1 Academic word types, total academic word types in the corpus, total word tokens in the corpus and coverage of academic words in the corpus of business news.

Type of words	Number of words
Academic word types	476
Total academic word types	570
Total academic word types in the corpus	17,987
Total word tokens in the corpus	859,890
The AWL coverage (%)	2.09 %

Table 1 shows academic word types, total academic word types in the corpus, total word tokens and the AWL coverage in the business corpus. Academic word types in the corpus accounted for 476 of the total academic word types in the corpus. Meanwhile academic word tokens accounted for 2.09 % of the total word tokens in the corpus (17,987 out of 859,890). That is to say, the 2.09 % figure was the coverage of academic words in the corpus of business news.

In order to answer the second question, the 100 most frequently used academic word in business news, the frequency of academic headwords were compiled and counted as one word as presented in Table 2.

Table 2 The 100 most frequently used academic words in the corpus of business news.

Word families	Frequency	Percent
1. invest	2904	0.337
2. economy	1647	0.191
3. expand	1296	0.150
4. finance	1179	0.137
5. export	1107	0.128
6. project	1074	0.124
7. ministry	1023	0.118
8. revenue	903	0.105
9. partner	873	0.097
10.major	786	0.091
11.promote	771	0.089
12.target	720	0.083
13.consume	684	0.079
14. fund	678	0.078
15. policy	666	0.077
16.focus	624	0.072
17.create	573	0.066
18.area	561	0.065
19.issue	540	0.062
20.region	513	0.059
21.domestic	507	0.058
22.commit	471	0.054
23.effect	456	0.053
24.income	447	0.051
25.found	447	0.051
26. media	447	0.051
27. period	441	0.051
28. factor	440	0.051
29. network	435	0.050
30. institute	411	0.047

Table 2 (Continued)

Word families	Frequency	Percent
31. research	396	0.046
32. strategy	396	0.046
33. benefit	387	0.045
34. corporate	387	0.045
35. source	384	0.044
36. achieve	368	0.042
37. potential	363	0.042
83. decline	360	0.041
39. design	354	0.041
40. establish	354	0.041
41. investigate	354	0.041
42. contribute	353	0.041
43. prime	348	0.040
44. channel	342	0.039
45. generate	337	0.039
46. authority	318	0.036
47. credit	315	0.036
48. sector	315	0.036
49. despite	312	0.036
50. fee	312	0.036
51. survey	309	0.035
52. licence	306	0.035
53. annual	300	0.034
54. access	297	0.034
55. impact	288	0.033
56. index	276	0.032
57. purchase	264	0.030
58. maintain	263	0.030
59. previous	261	0.030
60. contrast	258	0.030

Table 2 (Continued)

Word families	Frequency	Percent
61.range	258	0.030
62.capacity	249	0.028
63.environment	243	0.028
64.overall	243	0.026
65.transfer	234	0.027
66.trend	231	0.026
67.overseas	228	0.027
68.ensure	225	0.026
69.individual	204	0.023
70.margin	189	0.023
71.sought	189	0.021
72. transport	189	0.021
73.initial	177	0.020
74. team	177	0.020
75. significant	171	0.019
76. estate	162	0.018
77. legal	162	0.018
78. volume	162	0.018
79. concept	150	0.017
80. similar	150	0.017
81. positive	147	0.017
82. ratio	138	0.016
83. goal	132	0.015
84. role	129	0.015
85. via	129	0.015
86. alternative	126	0.014
87. labour	123	0.014
88. culture	120	0.013
89. implement	120	0.013
90. available	117	0.013

Table 2 (Continued)

Word families	Frequency	Percent
91. currency	117	0.013
92. instance	117	0.013
93. structure	114	0.013
94. specific	108	0.009
95. internal	105	0.012
96. normal	105	0.012
97. challenge	102	0.011
98. image	102	0.011
99. phase	99	0.011
100.exceed	87	0.010

Table 2 shows the 100 most frequently used academic words in the corpus of business news. Some words have the equal frequency of use such as *income*, *found* and *media* (the same frequency of 447 or 0.051 %).

From the study, the most frequently used 100 words clearly reflected the field of business news, eg *invest*, *economy*, *expand*, *finance*, *export*, *project*, *ministry*, *revenue*, *partner* and *major*. The word *invest* had the highest frequency of occurrence (2904 or 0.337 %), while the words *exceed* had the lowest frequency (87 or 0.010%).

In order to examine academic vocabulary which can be found in a text, an example of business news in the corpus is presented as follows:

Economy flyers get a lounge at airport

Published on Sep 15, 2006

Thai Airways International Plc (THAI) will provide its first ***economy***-class lounge at Suvarnabhumi Airport, ***consisting*** of entertainment facilities; shower rooms, e-service and resting corners.

At the new airport, passengers will be surprised with several new services never before ***available*** in the Kingdom. The ***economy***-class lounge is rare among airlines, most of which ***operate*** only first- and business-class lounges. But THAI is following a ***trend*** at other new airports which have started offering ***economy***-class lounges.

Charnchai Singtorij, vice-president of the cargo and mail ***commercial*** department of THAI, said the airline faced tough competition in the aviation industry, forcing it to find new ways to please customers.

The lounge, he said, would include televised entertainment such as films, music videos, sports, ***documentaries*** and world news, in addition to Internet services.

Passengers will also have a rest ***area*** that includes plenty of seating and showers in 18,000 square metres of space.

Apart from the ***economy*** class lounge, the airline will offer first-class and business-class passengers a ***traditional*** Thai spa, private movie theatre and shower rooms.

"We hope that all the lounges will convince passengers to use THAI," said Charnchai.

Although there is reason to feel excited about these ***innovations*** in Bangkok, Singapore's Changi Airport already has them.

THAI hopes to solicit feedback from travellers on how to improve services.

The carrier ***predicts*** that the number of ***transfer*** passengers going through Bangkok will increase 20 per cent in the first year of ***operation***. Each year, Don Muang Airport receives three million ***transit*** passengers.

To reach that ***projection***, THAI plans to add more international flights, such as a Bangkok-Johannesburg route, by the end of the year. The airline also plans to start ***operating*** more flights to India and long-haul destinations.

THAI will ***operate*** a few international flights from Suvarnabhumi Airport on September 22 to Seoul, Beijing, and Guangzhou. The company begins ***domestic*** flights from the new airport on September 15. All other international flights will officially ***operate*** on September 28.

Today THAI will start flying from Suvarnabhumi to Phitsanulok, Chiang Mai and Ubon Ratchathani.

Not only will THAI start using the new airport today, Australian budget airline Jet Star will ***commence*** flights to it from down under.

The above example shows academic words which can be found in business news. There are 15 academic words in the business news (in bold and italics), which are *available, area, commence, consist, documentary, domestic, economy, innovate, operate, predict, project, tradition, transfer, transit* and *trend*. These words occur once, but *economy* occurs the highest, 5 times, *operate* 4 times and *commence* 2 times in the sample news.

It can be concluded from the results in Table 2 that the number of academic words in the corpus of business news was lower than those in Coxhead's (2000) AWL. There were 17,987 academic word tokens or 476 academic word types found in the corpus, but 94 academic words did not occur in the corpus. The disappearance of these words can be explained that some words may be frequently found in a particular field, for example, in scientific texts, or political news. However, this is not surprising because academic words, as the name suggests, are naturally found in academic texts. From the study, there were 7 words which occurred more than 1,000 times. They were *economy, expand, finance, export, project, ministry* and *invest*. It is remarkable to note that the highest-frequency word used in the corpus news was *invest*. It occurred more than 2,000 times.

CHAPTER 5

CONCLUSION AND DISCUSSION

This chapter presents the conclusion of the results of the analysis and the discussion on how AWL words found in the corpus of business news differ from Coxhead's (2000) AWL. Then a summary of the results and pedagogical implications of the findings and suggestions for further studies are presented.

5.1. Conclusion

This section presents the answers to the two research questions.

Research question 1: What is the percentage of the words in the AWL appearing in the corpus of business news from *The Nation*?

The AWL words accounted for 2.09 % of all the word tokens in the corpus of business news. There were 17,987 academic words tokens out of the number of 859,890 word tokens in the corpus. The AWL coverage in the corpus was 2.09, which was recorded about 7.91 less than that by Coxhead's (2000) coverage of academic corpus (10%).

Research question 2: What are the 100 most frequently used academic words in the AWL in business news in this study?

The 100 most frequently used academic words in the corpus related to the field of business. From the corpus, *invest*, the most frequently used academic word, occurred 2,904 times or accounted for 0.337 %. It was followed by *economy* (1,647 or 0.191 %) and (1,296 or 0.150 %). The least frequently used words in the words of the top 100 of the corpus were *phase* and *exceed*, which had the frequency of use at 0.011% and 0.010 %.

5.2. Discussion

Notwithstanding by, the academic word from the AWL has only 2.09 % coverage of the corpus of business news from *The Nation* online news database. The findings showed that the percentage of academic words was too low. Therefore, it should not be considered an academic text. As previous study in the corpus of political news, the AWL words accounted for 5.7% (Nakprakorn. 2005). There were 7,020 out of the total 122,811 words tokens in the political corpus. Similarly, in a corpus of sport news, the AWL word accounted for 1.79% (Dejtisak 2006). There were 1,834 out of the total 102,050 words tokens in the sport corpus.

As mentioned in the introduction, the findings of this study would reveal a source of academic vocabulary and create an alternative way for learners of English for Specific Purposes who may read business news and the people who study or work in the business field. In addition, the results offer an important list of academic vocabulary in the corpus of business news and should be taken into account by language teachers in deciding whether this kind of text should be used as a teaching material. Knowing this commonly used list of academic words for the people who are in the business field will facilitate their reading comprehension and speed in having access to business information. According to the study, the number of academic words in business news was not the same as Coxhead's (2000) study.

5.3. Applications

1. The Concordance Program is very useful for language learning.

The learners may use concordance lines to highlight some words in the AWL in context by saving texts in plain text files and use them to make a concordance form.

They can present the learners with appropriate contexts for the use of vocabulary.

Furthermore, the highlighted vocabulary always comes with collocations that learners can understand in different situations. The program can show in the Content View by clicking on a line and the double-clicking on any word can show the Full text View which the concordance was made will display the position itself to display that word.

2. The Concordance Program is also beneficial to language learners. They can use the interactive concordance for self-study of vocabulary. However, teachers may explain how to use the program to the language learners so that they will be able to use it efficiently by themselves.

3. The academic vocabulary in the corpus of business news which has been found in this study may be useful for English for Specific Purposes courses and for the people who are involved in the business field. The learner must be familiar with those words by creating language activities to teach all communication skills.

To sum up, this section has provided the value of the Concordance Program and Academic Word List (AWL) for language learners such as education fields, business fields and the general fields that related in the business areas. The learners can study vocabulary from teachers, or they can study by themselves. Also, the findings from this study may give beneficial information for teachers and learners in English for Specific Purpose program and all of people who are revolved in the business fields.

5.4. Limitations of the Study

1. The data collected from this study might be regarded as a local-oriented news from only one source, an online –database of English newspaper in Thailand *The Nation*. In addition, most of the business news in the corpus was written by local

Thai people. Therefore, the corpus might not be representative of business news as compared to international sources such as *CNN*, *BBC*, *The Sun* or *Times*.

2. The results of this study might not be exactly the same as other results from similar research in the future because the data were unique and dependent on the situations occurring only at a certain period of time.

3. According to the small size of the corpus, the findings cannot be easily generalized. A study on a larger corpus may yield different findings.

5.5. Suggestions for Further Studies

1. This study was conducted with only a corpus of business news. There should be similar research with another genre, such as advertising, law or technology. Also, there should be research with a larger size of news at the internationally level such as *CNN*, *BBC*, *The Sun*, *Times*, *Bangkok Post* and etc.

2. There should be a comparative study of academic words in a corpus of business news in a Thai newspaper and an international newspaper which cover a large scale of news content.

3. There should be a comparative study of the AWL in a spoken corpus in the business news. It would also be an alternative source for learners and the people in the business field.

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APPENDIX

THE ACADEMIC WORD LIST (AWL)

The following list consists of the head-words in AWL , which takes the 570 head-word families in the list adapted in Coxhead (2000) and re-ordered the list by frequency groups, from "group 1" (most frequent) to "group 10" (least frequent).

abandon	abstract	academy	access	accommodate
accompany	accumulate	accurate	achieve	acknowledge
acquire	adapt	adequate	adjacent	adjust
administrative	adult	advocate	affect	aggregate
aid	albeit	allocate	alter	alternative
ambiguous	amend	analogy	analyse	annual
anticipate	apparent	append	appreciate	approach
appropriate	approximate	arbitrary	area	aspect
assemble	assess	assign	assist	assume
assure	attach	attain	attitude	attribute
author	authority	automate	available	aware
behalf	benefit	bias	bond	brief
bulk	capable	capacity	category	cease
challenge	channel	chapter	chart	chemical
circumstance	cite	civil	clarify	classic
clause	code	coherent	coincide	collapse
colleague	commence	comment	commission	commit
commodity	communicate	community	compatible	compensate
compile	complement	complex	component	compound
comprehensive	comprise	compute	conceive	concentrate
concept	conclude	concurrent	conduct	confer

confine	confirm	conflict	conform	consent
consequent	considerable	consist	constant	constitute
constrain	construct	consult	consume	contact
contemporary	context	contract	contradict	contrary
contrast	contribute	controversy	convene	converse
convert	convince	cooperate	coordinate	core
corporate	correspond	couple	create	credit
criteria	crucial	culture	currency	cycle
data	debate	decade	decline	deduce
define	definite	demonstrate	denote	deny
depress	derive	design	despite	detect
deviate	device	devote	differentiate	dimension
diminish	discrete	discriminate	displace	display
dispose	distinct	distort	distribute	diverse
document	domain	domestic	dominate	draft
drama	duration	dynamic	economy	edit
element	eliminate	emerge	emphasis	empirical
enable	encounter	energy	enforce	enhance
enormous	ensure	entity	environment	equate
equip	equivalent	erode	error	establish
estate	estimate	ethic	ethnic	evaluate
eventual	evident	evolve	exceed	exclude
exhibit	expand	expert	explicit	exploit
export	expose	external	extract	facilitate
factor	feature	federal	fee	file

final	finance	finite	flexible	fluctuate
focus	format	formula	forthcoming	foundation
found	framework	function	fund	fundamental
furthermore	gender	generate	generation	globe
goal	grade	grant	guarantee	guideline
hence	hierarchy	highlight	hypothesis	identical
identify	ideology	ignorance	illustrate	image
immigrate	impact	implement	implicate	implicit
imply	impose	incentive	incidence	incline
income	incorporate	index	indicate	individual
induce	inevitable	infer	infrastructure	inherent
inhibit	initial	initiate	injure	innovate
input	insert	insight	inspect	instance
institute	instruct	integral	integrate	integrity
intelligence	intense	interact	intermediate	internal
interpret	interval	intervene	intrinsic	invest
investigate	invoke	involve	isolate	issue
item	job	journal	justify	label
labour	layer	lecture	legal	legislate
levy	liberal	licence	likewise	link
locate	logic	maintain	major	manipulate
manual	margin	mature	maximize	mechanism
media	mediate	medical	medium	mental
method	migrate	military	minimal	minimise
minimum	ministry	minor	mode	modify

monitor	motive	mutual	negate	network
neutral	nevertheless	nonetheless	norm	normal
notion	notwithstanding	nuclear	objective	obtain
obvious	occupy	occur	odd	offset
ongoing	option	orient	outcome	output
overall	overlap	overseas	panel	paradigm
paragraph	parallel	parameter	participate	partner
passive	perceive	percent	period	persist
perspective	phase	phenomenon	philosophy	physical
plus	policy	portion	pose	positive
potential	practitioner	precede	precise	predict
predominant	preliminary	presume	previous	primary
prime	principal	principle	prior	priority
proceed	process	professional	prohibit	project
promote	proportion	prospect	protocol	psychology
publication	publish	purchase	pursue	qualitative
quote	radical	random	range	ratio
rational	react	recover	refine	regime
region	register	regulate	reinforce	reject
relax	release	relevant	reluctance	rely
remove	require	research	reside	resolve
resource	respond	restore	restrain	restrict
retain	reveal	revenue	reverse	revise
revolution	rigid	role	route	scenario
schedule	scheme	scope	section	sector

secure	seek	select	sequence	series
sex	shift	significant	similar	simulate
site	so-called	sole	somewhat	source
specific	specify	sphere	stable	statistic
status	straightforward	strategy	stress	structure
style	submit	subordinate	subsequent	subsidy
substitute	successor	sufficient	sum	summary
supplement	survey	survive	suspend	sustain
symbol	tape	target	task	team
technical	technique	technology	temporary	tense
terminate	text	theme	theory	thereby
thesis	topic	trace	tradition	transfer
transform	transit	transmit	transport	trend
trigger	ultimate	undergo	underlie	undertake
uniform	unify	unique	utilise	valid
vary	vehicle	version	via	violate
virtual	visible	vision	visual	volume
voluntary	welfare	whereas	whereby	widespread

And re-ordered the list by frequency groups, from "group 1" (most frequent) to "group 10" (least frequent).

group 1

analyse	approach	area	assess	assume
authority	available	benefit	concept	consist
constitute	context	contract	create	data
define	derive	distribute	economy	environment
establish	estimate	evident	export	factor
finance	formula	function	identify	income
indicate	individual	interpret	involve	issue
labour	legal	legislate	major	method
occur	percent	period	policy	principle
proceed	process	require	research	respond
role	section	sector	significant	similar
source	specific	structure	theory	vary

group 2

achieve	acquire	administrate	affect	appropriate
aspect	assist	category	chapter	commission
community	complex	compute	conclude	conduct
consequent	construct	consume	credit	culture
design	distinct	element	equate	evaluate
feature	final	focus	impact	injure

institute	invest	item	journal	maintain
normal	obtain	participate	perceive	positive
potential	previous	primary	purchase	range
region	regulate	relevant	reside	resource
restrict	secure	seek	select	site
strategy	survey	text	tradition	transfer

group 3

alternative	circumstance	comment	compensate	component
consent	considerable	constant	constrain	contribute
convene	coordinate	core	corporate	correspond
criteria	deduce	demonstrate	document	dominate
emphasis	ensure	exclude	framework	fund
illustrate	immigrate	imply	initial	instance
interact	justify	layer	link	locate
maximise	minor	negate	outcome	partner
philosophy	physical	proportion	publish	react
register	rely	remove	scheme	sequence
sex	shift	specify	sufficient	task
technical	technique	technology	valid	volume

group 4

access	adequate	annual	apparent	approximate
attitude	attribute	civil	code	commit
communicate	concentrate	confer	contrast	cycle
debate	despite	dimension	domestic	emerge

error	ethnic	goal	grant	hence
hypothesis	implement	implicate	impose	integrate
internal	investigate	job	label	mechanism
obvious	occupy	option	output	overall
parallel	parameter	phase	predict	principal
prior	professional	project	promote	regime
resolve	retain	series	statistic	status
stress	subsequent	sum	summary	undertake

group 5

academy	adjust	alter	amend	aware
capacity	challenge	clause	compound	conflict
consult	contact	decline	discrete	draft
enable	energy	enforce	entity	equivalent
evolve	expand	expose	external	facilitate
fundamental	generate	generation	image	liberal
licence	logic	margin	medical	mental
modify	monitor	network	notion	objective
orient	perspective	precise	prime	psychology
pursue	ratio	reject	revenue	stable
style	substitute	sustain	symbol	target
transit	trend	version	welfare	whereas

group 6

abstract	accurate	acknowledge	aggregate	allocate
assign	attach	author	bond	brief
capable	cite	cooperate	discriminate	display
diverse	domain	edit	enhance	estate
exceed	expert	explicit	federal	fee
flexible	furthermore	gender	ignorant	incentive
incidence	incorporate	index	inhibit	initiate
input	instruct	intelligence	interval	lecture
migrate	minimum	ministry	motive	neutral
nevertheless	overseas	precede	presume	rational
recover	reveal	scope	subsidy	tape
trace	transform	transport	underlie	utilise

group 7

adapt	adult	advocate	aid	channel
chemical	classic	comprise	confirm	comprehensive
contrary	convert	couple	decade	definite
deny	differentiate	dispose	dynamic	eliminate
empirical	equip	extract	file	finite
foundation	globe	grade	guarantee	hierarchy
identical	ideology	infer	innovate	insert
intervene	isolate	media	mode	paradigm
phenomenon	priority	prohibit	publication	quote
release	reverse	simulate	sole	somewhat

submit	successor	survive	thesis	topic
transmit	ultimate	unique	visible	voluntary

group 8

abandon	accompany	accumulate	ambiguous	append
appreciate	arbitrary	automate	bias	chart
clarify	commodity	complement	conform	contemporary
contradict	crucial	currency	denote	detect
deviate	displace	drama	eventual	exhibit
exploit	fluctuate	guideline	highlight	implicit
induce	inevitable	inspect	intense	infrastructure
manipulate	minimise	nuclear	offset	paragraph
plus	practitioner	prospect	radical	predominant
random	reinforce	restore	revise	schedule
tense	terminate	theme	thereby	uniform
vehicle	via	virtual	visual	widespread

group 9

accommodate	analogy	anticipate	assure	attain
behalf	bulk	cease	coherent	coincide
commence	compatible	concurrent	confine	controversy
converse	device	devote	diminish	distort
duration	erode	ethic	format	founded
inherent	insight	integral	intermediate	manual



mature	mediate	medium	military	minimal
mutual	norm	overlap	passive	portion
preliminary	protocol	qualitative	refine	relax
restrain	revolution	rigid	route	scenario
sphere	subordinate	supplement	suspend	team
temporary	trigger	unify	violate	vision

group 10

adjacent	albeit	assemble	collapse	colleague
compile	conceive	convince	depress	encounter
enormous	forthcoming	incline	integrity	intrinsic
invoke	levy	likewise	nonetheless	notwithstanding
odd	ongoing	panel	persist	pose
reluctance	so-called	straightforward	undergo	whereby

VITAE

VITAE

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