

AN ANALYSIS OF ACADEMIC VOCABULARY IN ECONOMIC NEWS:

A CORPUS-BASED STUDY

A MASTER'S PROJECT

BY

CHUTIMA MANITAYAKUL

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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Chutima Manitayakul.(2007). *An Analysis of Academic Vocabulary in Economic News*. Master's Project, M.A.(English). Bangkok: Graduate School, Srinakharinwirot University. Advisory Committee: Assistant Professor Dr. Nitaya Sukaeresup, Dr. Walaiporn Chaya and Ajan. Tuanta Laosooksri.

This study addressed two questions regarding academic words in economic news. Firstly, it asked about the percentage of *Academic Word List* (AWL) which appeared in the corpus of economic news collected from *The Nation*, and secondly, what the top 100 frequently used academic words were in the corpus of economic news. The framework of this study was based on Coxhead's (2000) 570- *Academic Word List* (AWL). The corpus of 258,306 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 3.47 % of the total words in the corpus of economic news, and the top 100 frequently used words in the corpus clearly represented the field of economic news. The results indicated that economic news might be a beneficial source for English for Specific Purposes (ESP), students and general people who involve the economic field.

การวิเคราะห์คำศัพท์ทางวิชาการในข่าวเศรษฐกิจ

บทคัดย่อ
ของ
ชุตินา มานิตยกุล

เสนอต่อบัณฑิตวิทยาลัย มหาวิทยาลัยศรีนครินทรวิโรฒ เพื่อเป็นส่วนหนึ่งของการศึกษา

ตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต สาขาวิชาภาษาอังกฤษ

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การศึกษาค้นคว้าครั้งนี้มีวัตถุประสงค์เพื่อสำรวจจำนวนคำศัพท์ทางวิชาการในข่าว
เศรษฐกิจ จากหนังสือพิมพ์ออนไลน์ เดอะเนชั่น และ คำศัพท์วิชาการที่พบมาก เป็น 100
อันดับแรก ในการศึกษา คำศัพท์วิชาการที่นำมาเป็นกรอบการศึกษาค้นคว้าครั้งนี้คือกลุ่มคำ
ศัพท์วิชาการ (Academic Word List) จำนวน 570 คำ ซึ่งพัฒนาโดยค็อกซ์ เฮด (2000)
ผู้วิจัยนี้ได้รวบรวมข้อมูลจากข่าวอิเล็กทรอนิกส์เพื่อสร้าง Corpus จำนวน 258,306 คำ
และวิเคราะห์คำศัพท์ดังกล่าวด้วยโปรแกรมคอมพิวเตอร์ Concordance ผลการศึกษาพบ
คำศัพท์วิชาการ 3.47 เปอร์เซ็นต์ ในข่าวเศรษฐกิจและคำศัพท์ที่พบมาก 100 อันดับแรก
นั้นส่วนใหญ่เกี่ยวข้องกับวงการเศรษฐกิจ นอกจากนี้พบว่าข่าวเศรษฐกิจสามารถใช้เป็น
แหล่งศึกษาคำศัพท์สำหรับผู้เรียนภาษาอังกฤษเฉพาะทาง และสามารถเป็นประโยชน์แก่นัก
ศึกษาวิชาเศรษฐศาสตร์ และ บุคคลทั่วไปที่อยู่ในวงการเศรษฐกิจ

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.....¹⁹....., 2007

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Chapter 1

Introduction

1.1 Background

Language is an effective tool of communication that people all over the world have been using for thousands of years. Vocabulary as a part of a language has been coined to represent objects and activities that humans have seen, used and done throughout all these ages.

Languages of humans have been developed and vocabulary has been expanded to serve their needs to describe the world around them and express the new ideas.

At present vocabulary is getting more complicated for the learners to use in writing, speaking, listening and reading.

Witte and Faigley (1984) stated that poor writers did not have working vocabulary capability to write a good piece of writing and they had difficulties to introduce new concepts and ideas in their essays.

Moreover, the learners have problems when they read a text in a specific field because they are not familiar with the vocabulary in that certain field. Although these learners already possess study skills to an advance level in their own language, they still need to transfer these them into English and adjust them to a different academic environment. They certainly need help from the other elements of EAP (English for Academic Purposes) to improve their capacity to communicate and express themselves well in their major field of study. Therefore, they are required to learn a member of vocabulary in a higher education setting.

Nation (1990) has developed the university word list (UWL), containing about 800 word families. He said that the list covers around 8.7 percent of academic words in texts, and he points out that high frequently used words are the most important in teaching and learning vocabulary. It is very useful for learners at higher education level to learn academic word because if they know more of these words, they will be able to understand what they read better than learners who know fewer academic words.

If learners do not know the most frequent 2,000 words, it is suggested that they learn them as their first priority. These words cover about 80% of academic words in texts and newspapers, about 87% of the words in novels, and over 90% of the running words in informal conversation. They are very useful words in all uses of English (West, 1953).

Using a computer –assisted method, Coxhead (2000) compiled the Academic Word List containing 570 word families that are very useful for learners who will study in English in senior high school or university. It contains words such as *theory*, *compile*, *demonstrate* and *minimum* etc. These words cover about 10% of the running words in academic articles and text books, about 4% of the words in newspapers, and less than 2% of the words in novels and conversation, so it is clearly a specialized vocabulary list. Academic vocabulary is a very important learning goal for learners who are going to do academic studies in English. One way of seeing the importance of this vocabulary is to look at the difference it makes to the density of unknown words in an academic text. A vocabulary of 2,000 high frequency words provides 80% of text coverage and a density of unknown words of 1 in 5. A vocabulary of 2,570 that includes high frequency words plus academic words provides 90% text

coverage and a density of unknown words of 1 in 10. In other words, learning the academic words doubles the amount of comprehensible context available.

This study aimed to investigate the number of academic word in economic report in a local English newspaper in Thailand. The concordances program was used to analyze academic words in the corpus of economic news. The result of this research will help the students who study at higher education level to better their English language learning. It will also be useful for teachers who teach and use academic vocabulary in their teaching and conducting.

1.2 Research Questions

1. What is the percentage of the words in the AWL that appear in economic news taken from *The Nation*?
2. What are the 100 most frequently used academic words in the AWL in economic news?

1.3 Scope of the Study

A corpus of 125,000 words was taken from economic news at www.nationmultimedia.com, a database, from January 6, 2006 to January 7, 2007.

The analysis was in the following aspects:

1. The number of Coxhead's AWL words in the corpus of economic news was analyzed.
2. The 100 most highly used academic words in the corpus of economic news were presented.

1.4 Significance of the Study

The significant advantages of this study are as follows:

1. The results of the study will be used as guidelines for teachers of English to choose what vocabulary to teach in priority of importance. For example, they should teach the most frequent and essential academic words to facilitate learning.
2. The results will be used as a guideline for preparing teaching materials and learners of English for Specific Purposes (ESP).
3. A list of 100 words will be beneficial for students who study in economics so that they will comprehend economic texts better.
4. The findings will benefit all people involved especially those who are interested in enhancing their business communication.

1.5 Definition of Terms

1. Academic words such as *sustain, adjust, comprise, derive* and etc, are words that are common in different kinds of texts. In this study, Coxhead's (2000) Academic Word List (AWL) which contains 570 word families with both high frequency and high coverage in an academic text was used as an analytical framework. Coxhead used a corpus of 3.5 million words, plus the software which can calculate frequency of a word and how many different text types in the corpus a word occurs in. The texts are from academic journals and university textbooks in disciplines such as art, commerce and natural science.

2. Word Token refers to each occurrence of a word in a text that. If the same word occurs more than once, each occurrence of it is counted. Words that are counted in this way are called tokens or running words (Nation2001).

3. **Word Type** refers to the number of different words in a text. If the same word occurs again, it is counted only once.

4. **Word Family** consists of a headword with its inflected and derived forms.

5. **Concordance Program** is a computer program that can help to analyze the language that is used in a real situation such as language teaching and learning, data mining and data clean-up, corpus linguistics, and the content analyses in many disciplines including accountancy, history, marketing, politics, geography and media studies.

6. **Corpus** is the database to collect texts in literature, history, several newspapers and journals. This research aimed to build a corpus to use for an analysis of economic news from www.nationmultimedia.com. It comprises 125,000 words in economic news.

7. **Economic news** refers to online news on economy which is available at www.nationmultimedia.com. The web page provided direct link to the economic archives which were kept in a text format. Most of the news was written by local Thai people, and it concerned both local and domestic economic news.

1.6 Overview of the Study

This research aimed to analyze academic vocabulary in the corpus of economic news. The review of literature in Chapter 2 provides background information on vocabulary size, vocabulary knowledge, related research, academic word list and the corpus-based study. Chapter 3 discusses the methodology of the processes to analyze the data of academic word lists by using the theory of Coxhead (2000). Chapter 4 presents the results of the study. Chapter 5 presents summary of the finding and discusses the application of study and suggests for the further studies.

Chapter 2

Review of the Literature

This chapter focuses on vocabulary size, vocabulary knowledge, academic word list, and research related to the corpus-based study by Coxhead's (2002).

Finally, the related research was discussed.

1. Vocabulary Size

There have been various attempts to study vocabulary size. Generally, teachers of English as a second language may be interested in native speakers' vocabulary size because it can give some indications of the size of the learning task that requires second language learners to learn particularly those who need to study and work alongside native speakers in English medium schools and universities or workplaces. At present, native speakers should have a vocabulary size of around 20,000 word families and they should add roughly 1,000 word families a year to their vocabulary size. That means that a five year old beginning school will have a vocabulary of around 4,000 to 5,000 word families. A university graduate will have a vocabulary of around 20,000 word families (Goulden, Nation and Read, 1990). They should add between 3 to 7 words per day or about 1,000 to 2,000 words per year (Nagy and Anderson, 1984). These figures are very rough and there is likely to be differences between individuals. These figures do not include proper names, compound words, abbreviations, and foreign words. A word family is taken to include a base word, its inflected forms, and a small number of reasonably regular derived forms (Bauer and Nation, 1993) and they suggest vocabulary sizes larger than these, but well in

conducted studies the differences are mainly the result of differences in what items are included in the count and how a word family is defined.

A study of the vocabulary growth of non-native speakers in an English medium primary school (Jamieson, 1976) suggests that in such a situation, non-native speakers' vocabulary grows at the same rate as native speakers', but that the initial gap that existed between them is not closed. For adult learners of English as a foreign language, the gap between their vocabulary size and that of native speakers is usually very large, with many adult foreign learners of English having a vocabulary size of much less than 5,000 word families in spite of having studied English for several years. Richards, (2000) implies that EFL/ESL learners should learn 20,000 word families in order to build native-sized vocabulary. A large number of second language learners do achieve vocabulary sizes similar to those of educated native speakers, but they are not the norm. However, a study by Milton and Meara (1995) using the Eurocentric Vocabulary Size Test (Meara and Jones, 1988, 1990) showed that significant vocabulary growth could occur if this learning was done in the second language environment. In their study of an abroad program of 53 European students of advanced proficiency, the average growth in vocabulary per person approached a rate of 2,500 words per year over the six months of the program. This rate of growth is similar to the larger estimates of first language growth in adolescences. Although the goal of native speaker vocabulary size is possible, it is a very ambitious one for most learners of English as a foreign language.

Nation (2001) divides the level of vocabulary into four classes based on written academic text.

1. High frequency words are often found in all kinds of English language materials. They consist of function words and content words. Functions words are words such as articles, pronouns, and prepositions. Content words are words such as nouns, verbs, adverbs, and adjectives. West (1953) compiled a list of high frequency words in *A General Service List of English Words*, which includes about 2,000 word families. According to West, the list covers about 90% of words in informal conversation, 87% of words found in novels, and 80% of words found in academic texts and newspapers.

2. Academic vocabulary words consist of about 800 headwords (Nation and Newton, 1990). These words are frequently used in a wide range of academic texts including senior high school papers, university papers, and newspapers. Students intending to do academic study in English or read newspapers should be taught from this list of vocabulary.

3. Low frequency vocabulary is a word that might be used once or twice, then they may not be used for a long time. However, the division between low and high frequency words is a topic that has never been agreed on by researchers (Nation and Newton, 1990).

4. Technical vocabulary is related directly to the subject or topic of a text and varies from one topic area to the next. Some words are shared between topics and some are specific to their own topics. For any given subject, there are approximately 1,000 words.

2. Vocabulary Knowledge

Vocabulary knowledge is divided into two areas: receptive and productive. It includes words that speakers may understand if heard or read, but can not produce these words correctly (Haycraft, 1978). Productive vocabulary is defined as words that speakers understand, can pronounce correctly, and use correctly in speaking and writing.

Generally, the number of speakers' productive vocabulary is lower than their receptive vocabulary. However, (Hatch and Brown) state that knowledge of certain words may include information that makes the student choose not to use any particular word for several reasons. This might be because it is inappropriate because of its slang, negative meaning, or social values.

Besides this division, vocabulary knowledge is acquired through intentional and incidental learning. Intentional learning is defined as learning being designed by or intended for teachers or students. On the other hand, incidental learning is a result of learning or doing something else, such as reading, having a conversation, or studying something else.

Vocabulary knowledge involves the teaching of vocabulary which can be divided into two general approaches: definitional and contextual. Through the definitional method, students learn or get knowledge about vocabulary by looking up words in a dictionary, studying the definitions through memorization or copying, using a word in a sample sentence, learning the history of the word, and finding words with similar meanings (Shostak, 2004). In the contextual approach, teachers ask students to explain the meaning of a word by looking at semantic properties, syntactic cues, or by examining typographical clues from other sources. However, Shostak says

this can sometimes provide only a partial meaning of a word or might mislead the learner.

In brief, this section focuses on about the vocabulary size and vocabulary knowledge. At present, native speakers should have a vocabulary size of around 20,000 word families and Richard (2000) implies that EFL/ ESL learners should learn 20,000 families in order to build native-size vocabulary. Also Nation (2001) divides vocabulary into four classes: high frequency words, low frequency, academic vocabulary and technical vocabulary. Moreover, vocabulary knowledge is divided into two areas: receptive and production, and it acquired through intentional and incidental learning.

3. Related Research

There are several studies related to vocabulary size, vocabulary knowledge and academic words and a corpus study.

Boonyaudomstart (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)*.

Graves (1986) reported that studies of vocabulary size conducted prior to 1960 resulted in estimates ranging from 2,500 to 26,000 words for typical first-grade students, and from about 19,000 to 200,000 words for university graduate students. These discrepancies were due to lack of specificity regarding (a) differences between

words and word families. (b) definition of word knowledge.(c) the source used to represent English vocabulary.

Laufer and Nation (1995) analyzed the vocabulary size by using the computer software *Lexical Frequency profile (LEP)* as a measure to look at the proportion of high frequency general service and academic words in learner's writing. The 65 participants were foreign learners of English in New Zealand and Israel. They were divided into two groups. Group 1 were the 22 lowest proficiency of New Zealand learners; group 2 included 20 first semester 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 -list" word list. For each composition, the LEP was calculated on the basis of the proportion of word families at each of these four levels. The result showed that group 1 had the largest number of the first 1,000 words, while group 3 had the smallest. Regarding the second 1,000 words and the "not-in -the -list" words, the three groups were insignificantly different. It was concluded that group 3 was able to use more of the sophisticated vocabulary which was the UWL and not in the list 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 groups 1 and 2.

Adams (2000) suggests that new learning is the process of forming novel combinations of familiar concepts. Learning, as a language-based activity, is fundamentally and profoundly dependent on vocabulary knowledge.

Becker (1977) was among the first to highlight the importance of vocabulary development by linking vocabulary size to the academic achievement of disadvantage

students (Baumann and Kameenui, 1991). Thus, he asserted that vocabulary deficiencies were the primary cause of academic failure of disadvantaged students in grades 3 through 12. Almost a decade later, Stanovich (1986) proposed a model of school failure that emphasized the interrelated development of phonological awareness, reading acquisition, and vocabulary growth

Becker (1997) pointed out that the primary difficulty with sustaining early gains in reading was the lack of adequate vocabulary to meet the broad academic demands that begin in the upper-elementary grades and continue throughout schooling. In contrast to phonological awareness and early reading achievement, no research evidence supports the contention that specific vocabulary development method or program can bridge the vocabulary gap that exists at the onset of schooling between groups of students with poor versus rich vocabularies, and which continues to widen throughout school and beyond.

Nation (1990) explains about direct vocabulary learning that learners get if they do exercises and activities focusing on vocabulary. These exercises are word – building exercises, guessing a word from context, vocabulary games, and learning words in lists. In contrast, in indirect vocabulary learning, learners' attention is focused on other features or the message that is conveyed by a speaker or writer.

Reppen (2001) used the concordance program in a classroom to identify academic vocabulary in an academic corpus of cultural anthropology. They searched the words from the corpus that also occur in the *Academic Word List* as the target of the pretest. The results of pretest were used to determine which academic vocabulary items would be presented in the class.

Coxhead (2000) suggests several ways in teaching and learning the AWL. Firstly, it is recommended that the learners be exposed to academic environment in

different aspects such as reading academic texts and listening to academic lectures and discussions. Secondly, writing and speaking texts should not be difficult for learners. Lastly, direct learning of AWL such as word card or intensive study of academic text should be recommended.

Coxhead and Nation (2001) state that academic vocabulary is common in many different academic texts and not so common in non –academic texts. They point out that the AWL is a primary goal of the learners who want to take up academic study in English. Another goal of the development of the AWL is that it could be used by teachers as a part of program preparing learners for tertiary level study or used by students working alone to learn to share words in academic texts.

McEnery (2003) argues that later word lists are the product of the important development in computer which took place in the 1950s and 1960s. Vocabulary also came into focus in the register analysis which began in the 1960s. Then the important factor for the research in lexis came with the ability of the computer to give access to a large amount of data such as present day's corpora, which contain several million words which can be explored and retrieved information within a matter of second

Nakprakhon (2005) studied academic words in the political news. His point was to find whether words in the academic word list were significantly high in political reports and what the top 50 academic words in the political corpus were. A corpus of 122,811 token words. It was taken from a local online newspaper *The Nation*. Then it was analyzed against 570 words by using the Concordance Program. The results indicated that words in the AWL accounted for 5.7% of the total words in the corpus. The results showed that political reports could be an alternative for academic vocabulary learning.

According to a study conducted by Dejtsak (2006), the numbers of academic words in sports news were different from Coxhead's (2000) study. Coxhead claims that her AWL includes 570 word families which account for 10% of the total tokens in the Academic Corpus, and more than 94% of the words in the list occur more in 20 or more of the 28 subject areas of the academic areas. However, the results showed that the rate of academic words in the research was too low, less than 2%. Therefore, sports news should not be considered an academic text. The corpus of sports news was not a good academic text; therefore, it should instead be used as an ESP text, especially for physical education students.

In conclusion, this chapter shows some concepts on vocabulary size, vocabulary knowledge and academic word list and corpus study.

CHAPTER 3

METHODOLOGY

This chapter consists of two main sections: the analytical instrument and procedure. The analytical instrument section discusses the analytical frameworks including the *Academic Word List* (AWL), and the *Concordance* program. The procedure section focuses on the description of the method used in collecting the data and creating a corpus. This section aims to present stages of analyzing the data.

3.1 Analytical Instrument

3.1.1 Analytical Framework

The Coxhead's *Academic Word List* (AWL), which was developed at the School of Linguistics and Applied Language Studies at Victoria University of Wellington, New Zealand, was used as an analytical instrument to analyze the data. AWL contains 570 word families which have both high frequency and high coverage in academic texts, irrespective of subject area and discipline. These 570 words are not just word-forms, but head-words plus their inflected and derived forms. Totally there are around 3,100 word-forms altogether, e.g.: *concept: conception, concepts, conceptual, and conceptualization*.

3.1.2 The Concordance Program (CP)

A corpus is a collection of linguistic data, either written texts or recorded speech, which can be used as a starting-point of linguistic description or as a means of verifying hypotheses about a language (Crystal, 1991). A corpus can be thought of as a collection of texts gathered according to particular principles for some particular purposes such as a corpus of newspapers, a corpus of scientific novels, a Shakespeare

corpus, etc. Some corpora, for example, the British Nation Corpus and COBUILD, which have several million sentences, and over 100 million words, are often in an electronic format. A corpus contrasts with an archive because an archive is a collection where all kinds of texts are stored simply because each individual text is of interest in itself (Crystal, 1991, Tan, 2002 and Nation, 2001).

To explore a corpus, the researcher needs a software tool called a concordance program. This program enables linguists and researchers in applied linguistics to study lexical, syntactic, semantic, and stylistic patterns of a language. Sinclair (1991) points out that the concordance program is a tool that has been widely used by linguists and literary researchers. It provides a list of occurrences of either a particular word, or a part of a word or a combination of words in context, and it is drawn from a text corpus, which is presented in context. It also provides a list of words occurring in a text arranged in alphabetical order. As opposed to the index, the concordance provides the context in which the word occurs in a given text. Thus, all examples are listed with the search item in the middle of the screen and some contexts to the left and right of it. This program was used to analyze academic words in the corpus of economic news in this study.

A Sample Concordance Program

Concordance - 21 20052806.txtPlus22MoreFiles.txt Concordance

File Text Search Edit Headwords Contexts View Tools Help

Headword No. % Context Word Context Line

THE	9396	7.276	Chaturon blames coup for	economic	stump	2
TO	3788	2.918	Laissez-faire, or laissez-faire is short for "laissez faire, laissez aller, laissez...	economic	interventionism and taxation by the state beyond that which is perceived to...	37
OF	3570	2.765	In the early stages of European and American	economic	theory, laissez-faire economic policy was contrasted to mercantilist econo...	39
AND	3361	2.603	In the early stages of European and American economic theory, laissez-faire	economic	policy was contrasted to mercantilist economic policy, which had been the...	39
IN	2536	1.979	In the early stages of European and American economic theory, laissez-fair...	economic	policy, which had been the dominant system of the United Kingdom, Spain,	39
A	2018	1.563	Thaksin is also sending the message that his leadership is a win-win situat...	economic	crisis which would force Thailand to seek another financial rescue packag...	51
THAT	1402	1.086	Moreover, Thailand's recovery is not unique at all because every other crisi...	economic	performance than Thailand. What is more interesting, however, is the relat...	56
IS	1185	0.918	According to the National	Economic	and Social Development Board, for every Bt100 gained over the past five y...	59
ECONOMIC	1152	0.892	If you really are a Thai that loves your nation, you have to evaluate the suc...	economic	policy by the real increase in incomes and the income distribution rather th...	68
FOR	1138	0.881	If you really are a Thai that loves your nation, you have to evaluate the suc...	economic	growth. Thai Rak Thai has only targeted high economic growth - which is ...	68
SAID	1040	0.805	If you really are a Thai that loves your nation, you have to evaluate the suc...	economic	growth - which is actually not very high by regional standards - and growt...	68
ON	881	0.682	A serious economist wrote (and recently about Thailand's	economic	development. She said: "When economic policy creates growth but worsen...	74
AS	835	0.647	A serious economist wrote to me recently about Thailand's economic devel...	economic	policy creates growth but worsens income distribution, we must change t...	74
BE	832	0.644	A serious economist wrote to me recently about Thailand's economic devel...	economic	development, the sooner the better.	74
WITH	793	0.614	"Otherwise, the population at the low end of the distribution, who are gettin...	economic	growth, will join the dark sectors such as drug, prostitution, gambling and...	77
WILL	761	0.589	At last week's climate change conference in Bangkok, some countries expr...	economic	costs, not of climate change itself but of mitigating it.	114
BY	723	0.560	The dramatic effects of climate change are well articulated in the media. Mo...	economic	growth can be compatible with efforts to address climate change, and the...	116
GOVERNMENT	710	0.550	Without action, the	economic	costs of erratic weather will be high. Jakarta has been hit hard by floodin...	119
IT	691	0.535	China - being the biggest emitter of greenhouse gases in our region - has a...	economic	growth.	122
THIS	653	0.506	Concerns like these are not new. Whenever a call to address an environme...	economic	sectors in the countries concerned will jump to a damage-control response...	125
HAS	643	0.498	Concerns like these are not new. Whenever a call to address an environme...	economic	engines going. I am pleased to see that, despite reservations expressed, t...	125
PER	616	0.477	The UN	Economic	and Social Commission for Asia and the Pacific (Unescap) predicts that de...	128
ARE	611	0.473	The UN Economic and Social Commission for Asia and the Pacific (Unescap...	economic	powerhouses of China and India. The growth of these countries has been ...	128
CENT	604	0.468	The UN Economic and Social Commission for Asia and the Pacific (Unescap...	economic	opportunities to break out of the extreme poverty cycle. That is something t...	128
HAVE	596	0.462	Fortunately, tools and instruments are available for the Asia-Pacific region t...	economic	growth without degrading the environment, overexploiting resources and f...	131
HE	590	0.457	Unescap has been advocating a Green Growth strategy. It was endorsed ...	economic	development. They all agreed that Green Growth was a unique instrument ...	134
ECONOMY	578	0.448	Unescap has been advocating a Green Growth strategy. It was endorsed ...	economic	growth. It reconciles the number one millennium development goal, reducin...	134
FROM	563	0.436	Kim Hak-Su is the United Nations under-secretary-general and the executiv...	Economic	and Social Commission for Asia and the Pacific.	142
NOT	559	0.433	For foreign investors, his words were treated as a huge rubber stamp for ...	economic	modernisation. Since 1989, his group has invested over US\$700 million (Et...	156
WAS	555	0.431	On Monday, over 500 guests, including 70 Thai investors attended the one...	Economic	Forum, to explore economic opportunities in Vietnam. Foreign investors an...	168
POLITICAL	542	0.420	On Monday, over 500 guests, including 70 Thai investors attended the one...	economic	opportunities in Vietnam. Foreign investors and foreign exports who spoke...	168
GROWTH	539	0.417	On Monday, over 500 guests, including 70 Thai investors attended the one...	economic	growth. Last year, its economic index was second in Asia at 8.2 per cent ...	168
AT	530	0.410	On Monday, over 500 guests, including 70 Thai investors attended the one...	economic	index was second in Asia at 8.2 per cent and it attracted \$10.2 billion in inv...	168
WOULD	491	0.380	Vietnam, he said, needed to develop its human resources in radical ways t...	economic	expansion and keep up with competition in the region and the world. Withi...	177
THAILAND	464	0.359	My real polished crystal ball, nevertheless, tells me that the incoming 365 da...	economic	situation of 2007 will rekindle the frightening memories of 1997 in a very su...	207
YEAR	423	0.328	It will all boil down to one major theme: "balancing acts". In the	economic	field that means how Prime Minister Surayud Chulanont will go about strikin...	215
THAI	417	0.323	World Islamic	Economic	Forum to meet in Malaysia	259
BUT	406	0.314	KUALA LUMPUR - Government leaders and top business executives will m...	Economic	Forum, aimed at boosting cooperation among Muslim communities, event of...	263
AN	405	0.314	The first forum was held in 2005, and the meeting this year will focus on pr...	economic	cooperation.	269
ITS	387	0.300	Seeking to bring together world leaders, business people and eminent think...	Economic	Forum held in Switzerland.	271
MORE	386	0.299	The concept of a World Islamic	Economic	Forum emerged from an OIC meeting of business leaders held in Kuala Lum...	283
ALSO	357	0.276		ECONOMIC	POLICY	292

Words: 8924 Tokens: 129130 At word: 9 Word sort: Desc frequency Context sort: Asc occurrence order

start [Icons] Concordance [Icons]

Figure 1 A Sample Concordance Program
Source: <http://www.concordancesoftware.co.uk/>

A sample test of concordance program

Number	Word Frequency	PerCent
61	Business	0.195
62	His	0.191
62	Confidence	0.189
64	Than	0.189
65	Minister	0.186
66	Rate	0.186
67	People	0.181
68	Up	0.18
69	All	0.18
70	Our	0.179
71	Could	0.177
72	Were	0.173
73	Can	0.173
74	Development	0.172
75	Policy	0.17
76	About	0.167
77	If	0.167
78	Some	0.157
79	So	0.154
80		
81		
82		
83		

Figure 2 provides a sample of word ranks and frequency in the concordance program

3.2 Procedures

The study was conducted as follows:

3.2.1 Data collection

The data used in this study are a corpus of 125,000 words in economic news taken from www.nationmultimedia.com from January 9, 2006 to January 9, 2007.

There are totally 350 economic news.

3.2.2 Corpus Creation

The goal of this study was to accumulate a corpus of 125,000 words from economic news at www.nationmultimedia.com. The steps in creating the corpus were the following:

a) Economic news from the website was copied. The homepage of the website showed links to different archives which were grouped into smaller sections, such as sports, entertainment, education, health, politics and editorial. Then the text of economic news was copied one at a time.

b) Dates and months in the news were removed from the texts. Only headlines and the body of the news were copied into the master file. For example, there is a reference on the top of every page saying, “published on (date/month/year).” This phrase would affect the frequency of word list because the word *publish* is one of the words in the academic wordlist.

c) The texts were inserted into an economic news file. Then the corpus was fully developed.

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

3.2.3 Data Analysis

In this study, the researcher used a concordance list of the corpus developed by using the *Concordance* program to analyze the data. The results of the analysis were used to answer the two research questions.

Research question 1: What is the percent of AWL words that appear in economic news collected from *The Nation*?

The stages used to analyze the data to answer the first research 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 the program.
- c) The total number of word tokens in the Concordance which were generated from the corpuses were collected and kept in a file.
- d) The total AWL words were calculated by using the Concordance's Pick List tool from the website. This tool added the total words of the AWL, headwords and their families. Then the AWL word tokens were obtained.
- e) The percentage of the AWL was obtained by using the following formula:

The percentage of the AWL = $\frac{\text{total AWL word tokens}}{\text{total word tokens in the corpus}} \times 100$

total word tokens in the corpus

Research question 2: What are the 100 most frequently used academic words in economic news?

The following stages were used to answer the second research question.

a) The frequency of each word in the AWL obtained from the stages in the first research question was manually compared.

b) The 100 most frequently found academic words were determined and chosen.

c) The 100 most frequently academic words found were presented.

In brief, the study was based on Coxhead's (2000) *Academic Word List* (AWL). Also, the *Concordance* program was used as a tool to analyze a large corpus of academic words of over 100,000 words. The percentage of the AWL was obtained by using total AWL word tokens multiplied by 100 and divided by total word tokens in the corpus. The next chapter presents the results of this study.

CHAPTER 4

FINDINGS

The results of the study are presented and discussed in two parts:

First of all, the chapter presents the broader picture of the corpus of economic news, such as the academic word tokens, total word tokens and coverage of academic words in a corpus of economic 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 economic news, word tokens of both academic words and the entire corpus of economic news were compiled.

Table1. The academic word tokens, total word tokens in the corpus and coverage of academic words in the corpus of economic news.

Type of words	Number of words
Academic word tokens	8,970
Total word tokens in the corpus	258,306
The AWL coverage (%)	3.47 %

Table1 shows academic word tokens, total word tokens in the corpus and the AWL coverage in the economic news corpus. The results showed that academic word tokens accounted for 3.47 % of the total word tokens in the corpus (8,970 out of 258,306).

That is to say, the 3.47 % was the coverage of academic words in the corpus of economic news. In conclusion, AWL coverage in the corpus was about four percent which is less than Coxhead's (2000) study of academic corpus (10 %) and less than her specific findings on the coverage of vocabulary in science discipline (9.1%).

In order to answer the second question, the 100 most frequently used academic words in economic news, the frequency of academic headwords were compiled and presented in Table 2.

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

Word families	Frequency	Percent
1. Economy	3803	24.8
2. Invest	1328	8.66
3. Consume	543	3.54
4. Previous	440	2.87
5. Policy	440	2.87
6. Finance	406	2.64
7. Sufficient	386	2.51
8. Domestic	300	1.95
9. Export	294	1.91
10. Eventual	268	1.74
11. Fund	268	1.74
12. Factor	218	1.42
13. Cooperate	208	1.35
14. Affect	204	1.33
15. Issue	202	1.31
16. Index	194	1.26
17. Environment	194	1.26
18. Impact	180	1.17
19. Income	174	1.13
20. Benefit	170	1.10
21. Furthermore	168	1.09
22. Communicate	160	1.00
23. Implement	146	0.95

Table 2 (Continued)

Word families	Frequency	Percent
24. Duration	150	0.97
25. Conflict	150	0.97
26. Major	142	0.92
27. Commit	140	0.91
28. Ensure	136	0.88
29. Focus	136	0.88
30. Previous	136	0.88
31. Research	136	0.88
32. Despite	124	0.80
33. Positive	122	0.79
34. Indicate	120	0.78
35. Philosophy	112	0.73
36. Constitute	110	0.71
37. Administrate	108	0.70
38. Process	106	0.69
39. Differentiate	104	0.67
40. Framework	104	0.67
41. Concept	102	0.66
42. Expand	100	0.65
43. Consider	96	0.62
44. Found	94	0.61
45. Period	92	0.60
46. Area	92	0.60

Table 2 (Continued)

Word families	Frequency	Percent
47. Currency	92	0.60
48. Overall	90	0.58
49. Capacity	86	0.56
50. Chart	84	0.54
51. Establish	84	0.54
52. Achieve	82	0.53
53. Emerge	82	0.53
54. Justice	78	0.50
55. Partner	76	0.49
56. Decline	72	0.46
57. Involve	72	0.46
58. Media	72	0.46
59. Generate	56	0.36
60. Job	56	0.36
61. Mental	54	0.35
62. Normal	53	0.34
63. Mechanism	52	0.33
64. Decade	52	0.33
65. Guide	52	0.33
66. Never	52	0.33
67. Labour	50	0.32
68. Evidence	50	0.32

Table 2 (Continued)

Word families	Frequency	Percent
70. Debate	44	0.28
71. Obvious	42	0.27
72. Distribute	38	0.24
73. Expert	34	0.22
74. Monitor	34	0.22
75. Facilitate	32	0.20
76. Exposed	30	0.19
77. Link	30	0.19
78. Federal	26	0.16
79. Lecture	20	0.13
80. Network	20	0.13
81. Equipment	20	0.13
82. Exceed	18	0.11
83. Locate	18	0.11
84. Revolution	18	0.11
85. Ethic	16	0.10
86. Granted	16	0.10
87. Integrate	16	0.10
88. Legislate	16	0.10
89. Neutral	16	0.10
90. Guarantee	12	0.07
91. Liberal	12	0.07
92. Method	8	0.05

Table 2 (Continued)

Word families	Frequency	Percent
93. Formula	10	0.06
94. Accompany	8	0.05
95. Hence	8	0.05
96. Journal	8	0.05
97. Medical	6	0.03
98. Motive	4	0.02
99. Globe	2	0.01
100. Logic	2	0.01

Table 2 shows the 100 most frequently used academic words in the corpus of economic news. Some words have an equal frequency of use.

From the study, the most frequently used 100 words clearly reflected the field of the corpus of economic news, e.g. *economy*, *invest*, *consume*, *previous*, *policy*, *finance*, and *sufficient*. The word *economy* had the highest frequency of occurrence (3,803 or 24.8%), while the words *globe* and *logic* had the lowest frequency of occurrence (2 or 0.01 %).

In order to examine academic vocabulary which can be found in a text, an example of economic news in the corpus is presented.

An example of academic vocabulary found in the economic news.

TRICKLE-DOWN EFFECT

Published on June 3, 2006

SMEs hit hard by *economic* pressures Production costs, baht appreciation, interest rates all spell trouble Small and *medium*-sized enterprises (SMEs) are set to slash production and shed workers due to growing pressure from high oil and raw material prices, rising interest rates and political chaos, claims a *survey* by the University of the Thai Chamber of Commerce.

The Manufacturing Production *Index* for SMEs is forecast to drop to 98.94 in the second quarter. An *index* below 100 means SMEs are more pessimistic than optimistic about their manufacturing *economy*. While calling for the government to *subsidise* oil prices and end the political uncertainty, *respondents* in six industries believed the negative *factors* would extend to the end of this year.

According to the *survey* of 500 SMEs, 90 per cent said they thought *economic* growth in the second quarter would drop. Spiraling oil prices and rising raw material costs were blamed the most, followed by the political turmoil.

In addition, rising interest rates and the bath's appreciation have decreased the competitive advantages of SMEs, the *survey* said." Those negative *factors* will mark a difficult year for Thai SMEs," Aat Pisanwanich, director of the SME Study Centre (SMEC) of the University of the Thai Chamber of Commerce, said yesterday.

Evidence of a reduction in *consumption*, came yesterday from the *Revenue* Department, which reported that value-added tax collection in April was Bt1 billion below its *target*, due to a fall in imports. *Overall*, however, the department's tax collection was Bt300 million above *targets*.

Sirote Sawasdipanich, the department's director-general, said the situation was not worry some because VAT collection continues to grow at 15 per cent a year, which indicates strong *domestic* demand. The SMEC reported that skyrocketing energy and raw material costs and the political crisis are key *factors* behind the slowdown of the SME growth *index*. The figures in the first five months also showed that a drop in *domestic consumption* would lead to *economic* deceleration, Aat said.

Due to SME pessimism and the *consumption* drop, the country's gross *domestic* product will grow below 4 per cent, said Aat, adding that whether or not caretaker Prime Minister Thaksin Shinawatra returns to office, the country's growth would not *recover* "Activists might rally again in protest at the government's *administration* and that will directly *affect* the confidence of both *consumers* and foreign *investors* in the Thai *economy*," said Aat. Of the total GDP growth, SMEs production has a direct weight of 38 per cent or Bt2.7 trillion of the country's Bt7-trillion GDP. The number of SMEs in Thailand is currently about 2.5 million and growing. The SMEs are concerned over *economic* growth in the present circumstances. They will cut their manufacturing *capacity* because of the slowdown in *consumption*. The survey *focused* on six sectors: food and beverages; leather products; textiles and garments; automobiles and parts; chemicals and plastics; and rubber. The food and beverage and leather products *index* faced the biggest drops while the *index* of the remaining goods was higher than 100.

The decrease in *domestic consumption* and high competition from foreign goods flooding into the country has had a direct effect on the *index*. If the SMEs manufacturing *index* continues to fall, it will result in a decrease in employment and will even force SMEs to shut down operations. Only large-scale enterprises will survive because the government provides support for them instead of small and

medium players. It is estimated that the 19 million workers who work for SMEs account for 80 per cent of the country's total employment. To ensure survival, Aat said SMEs want the government to urgently help solve their problems, particularly the oil price rise and political turbulence. In addition, Aat urged the government to accelerate the mega-projects and budget disbursement and to conclude free-trade agreements that will *benefit* SMEs. Meanwhile, Aat said the country's *export* growth this year will not *exceed* 14 per cent, less than the government's *target* of 17.5 per cent. In the third quarter, *export* growth may not *exceed* 10 per cent because the bath's appreciation will cause a decrease in purchasing orders and also cut total *income*, he said.

The above example shows academic words in economic news. There are 16 academic words in the economic news (in bold and italics). They are *economic*(6), *survey*(4), *index*(7), *consumption* (5), *respondents*(1), *factors*(3), *evidence*(1), *revenue*(1), *target*(3), *overall*(1), *domestic*(4), *export*(2), *exceed*(2), *income*(1), *benefit*(1) and *capacity*(1).

In short, the results indicated that economic news should not be considered academic texts because they contain less than 10% of Coxhead's academic words. It might be acceptable if we look at newspapers as one of effective sources of authentic texts for ESP.

CHAPTER 5

CONCLUSION AND DISCUSSION

This chapter answers the two research questions: first the number of academic words from the AWL in the corpus of economic news and the first 100 words from the AWL used in the corpus. Then discussion, application, limitation of the study and suggestions for further studies are presented.

5.1 Conclusion

Research question 1: What is the percentage of the words in the AWL that appear in economic news?

The AWL words accounted for 3.47% in the corpus. There were 8,970 word tokens out of the number of 258,306 in the corpus. The AWL coverage in the corpus was about four percent less than the number recommended by Coxhead's (2000) study of academic corpus (10%).

Research question 2: What are the 100 most frequently used academic words in the economic news?

Most of the words (AWL) were related to the field of economics for example *economy, invest, consume, previous, policy, finance, and sufficient*. Of all the academic words from the AWL, *economy* occurred the most (3,803 times or 24.8%), followed by *invest* (1,328 times or 8.66%) and *consume* (543 times or 3.54%). The least frequently found words in the top 100 academic word list were *globe* and *logic* (2 times or 0.01%).

5.2 Discussion

As mentioned in chapter1, the findings of this study would be a useful criterion for judging which vocabulary should be used in economic news. Moreover, the findings can be used as a guideline for preparing teaching materials of English for Specific Purposes (ESP).

In addition, the results offer benefits to all people involved especially those who are interested in enhancing their business communication. According to the study, the numbers of academic words in economic news were different from Coxhead's (2000) study. She claimed that the 570 AWL word families accounted for around 10% of the total tokens in the academic corpus. However, the results showed only 3.47% coverage of the corpus. The number of academic words was too low (less than 4%). Therefore, the economic news should not be considered an academic text. In previous research, the AWL words accounted for 5.7% in the political news (Nakprakhon2005) and for 1.79% in sport news (Dejtisak 2006). It can be said that both the political and sport news should not be considered academic texts because they contain less than 10% of Coxhead's academic words. It might be acceptable if we look at newspapers as one of effective sources of authentic texts for ESP.

5.3 Applications

1. The concordance program is very useful to analyze the language that is used in a real situation for language teaching and learning, data gathering for corpus linguistics and text analysis. Also the teachers may use concordance lines in class to highlight some words in the AWL in context. This will help the learners to understand vocabulary in different situations.

2. Learners from beginner to advanced levels can use the interactive concordance to study vocabulary on their own in a self-access center, but the teacher should explain how to use this program before the learners do the activities.

3. Teachers should motivate the students by encouraging them to study academic words by reading materials covered with academic words and then asking them to practice these words in a variety of situations.

4. The results of AWL in the corpus of economic news are very useful for English for Specific Purposes. Teachers should teach the learners about word families by creating language activities in reading and listening.

In conclusion, the concordance program is useful for teaching vocabulary in different situations to learners of different levels especially for ESP students.

5.4 Limitations of Study

1. This study focused on AWL in a corpus of economic news in an online-database of English newspaper *The Nation*, Thailand. Therefore, the corpus might not be representative of economic news as compared with others such as the AP (Associated Press), CNN or BBC.

2. There was not any measurement of the learners' knowledge of academic vocabulary. Thus it would be impossible to study academic vocabulary development.

5.5 Suggestion for Further Studies

1. This study focused on only 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 so that we understand more how words are used

2. There should be a comparative study of AWL in a spoken corpus of economic news. If academic words occur frequently enough in the news, it would also be an alternative source for learners apart from newspapers.

3. To study vocabulary development, there should be a study of students' vocabulary use after receiving a particular teaching approach.

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APPENDIX

Coxhead's (2000) Academic Word List

The Coxhead's (2000) 570-Academic Word List (AWL) was used as a framework of this study.

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

contrast	diverse	extract
contribute	document	facilitate
controversy	domain	factor
convene	domestic	feature
converse	dominate	federal
convert	draft	fee
convince	drama	file
cooperate	duration	final
coordinate	dynamic	finance
core	economy	finite
corporate	edit	flexible
correspond	element	fluctuate
couple	eliminate	focus
create	emerge	format
credit	emphasis	formula
criteria	empirical	forthcoming
crucial	enable	foundation
culture	encounter	found
currency	energy	framework
cycle	enforce	function
data	enhance	fund
debate	enormous	fundamental
decade	ensure	furthermore
decline	entity	gender
deduce	environment	generate
define	equate	generation
definite	equip	globe
demonstrate	equivalent	goal
denote	erode	grade
deny	error	grant
depress	establish	guarantee
derive	estate	guideline
design	estimate	hence
despite	ethic	hierarchy
detect	ethnic	highlight
deviate	evaluate	hypothesis
device	eventual	identical
devote	evident	identify
differentiate	evolve	ideology
dimension	exceed	ignorance
diminish	exclude	illustrate
discrete	exhibit	image
discriminate	expand	immigrate
displace	expert	impact
display	explicit	implement
dispose	exploit	implicate
distinct	export	implicit
imply	label	objective
impose	labour	obtain

incentive	layer	obvious
incidence	lecture	occupy
incline	legal	occur
income	legislate	odd
incorporate	levy	offset
index	liberal	ongoing
indicate	licence	option
individual	likewise	orient
induce	link	outcome
inevitable	locate	output
infer	logic	overall
infrastructure	maintain	overlap
inherent	major	overseas
inhibit	manipulate	panel
initial	manual	paradigm
initiate	margin	paragraph
injure	mature	parallel
innovate	maximise	parameter
input	mechanism	participate
insert	media	partner
insight	mediate	passive
inspect	medical	perceive
instance	medium	percent
institute	mental	period
instruct	method	persist
integral	migrate	perspective
integrate	military	phase
integrity	minimal	phenomenon
intelligence	minimise	philosophy
intense	minimum	physical
interact	ministry	plus
intermediate	minor	policy
internal	mode	portion
interpret	modify	pose
interval	monitor	positive
intervene	motive	potential
intrinsic	mutual	practitioner
invest	negate	precede
investigate	network	precise
invoke	neutral	predict
involve	nevertheless	predominant
isolate	nonetheless	preliminary
issue	norm	presume
item	normal	previous
job	notion	primary
journal	notwithstanding	prime
justify	nuclear	principal
principle	reveal	supplement
prior	revenue	survey

priority	reverse	survive
proceed	revise	suspend
process	revolution	sustain
professional	rigid	symbol
prohibit	role	tape
project	route	target
promote	scenario	task
proportion	schedule	team
prospect	scheme	technical
protocol	scope	technique
psychology	section	technology
publication	sector	temporary
publish	secure	tense
purchase	seek	terminate
pursue	select	text
qualitative	sequence	theme
quote	series	theory
radical	sex	thereby
random	shift	thesis
range	significant	topic
ratio	similar	trace
rational	simulate	tradition
react	site	transfer
recover	so-called	transform
refine	sole	transit
regime	somewhat	transmit
region	source	transport
register	specific	trend
regulate	specify	trigger
reinforce	sphere	ultimate
reject	stable	undergo
relax	statistic	underlie
release	status	undertake
relevant	straightforward	uniform
reluctance	strategy	unify
rely	stress	unique
remove	structure	utilise
require	style	valid
research	submit	vary
reside	subordinate	vehicle
resolve	subsequent	version
resource	subsidy	via
respond	substitute	violate
restore	successor	virtual
restrain	sufficient	visible
restrict	sum	vision
retain	summary	visual
volume	voluntary	welfare
whereas	whereby	widespread

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