# AN INVESTIGATION OF VOCABULARY LEARNING STRATEGIES EMPLOYED BY HIGH AND LOW ENGLISH PROFICIENCY STUDENTS BASED ON SELECTED VOCABULARY FROM A BUSINESS CORPUS 

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#### Abstract

The purposes of this study were: 1) to compile a corpus of business English in order to examine high frequency of technical vocabulary as a resource for designing a test of technical vocabulary in context and 2) to explore vocabulary learning strategies which were employed by high and low English proficiency students. The participants included 40 undergraduate students, who enrolled in the English for business course in the academic year of 2011. All of them were selected by the purposive sampling technique and were then classified into two groups: high and low English proficiency students (based on the scores obtained from the technical vocabulary test).


To collect quantitative data, questionnaires were used to identify the participants' vocabulary learning strategies. The Cronbach's alpha reliability coefficient of the questionnaires was 0.92 . The quantitative data was analyzed by percentage, mean, and standard deviation. Additionally, semi-structured interviews were employed to gain more in-depth information focusing on perceptions towards teaching and learning technical vocabulary. The interviews were tape-recorded and transcribed verbatim on the same day in order to increase validity of the data. Then the transcriptions were analyzed by using open-axial coding procedures.

The main results of this research showed as follows. 1) There were 209 technical vocabulary items found in the business corpus and the most frequent words are marketing, company, product, business, and firm. 2) High English proficiency students used various vocabulary learning strategies and more highly frequent than low proficiency students. Furthermore, it was suggested that the students should be trained to use appropriate vocabulary learning strategies which can assist them to learn technical vocabulary more successfully.

Keywords: Vocabulary Learning Strategies (VLS), Corpus Linguistics, Technical Vocabulary, English for Specific Purposes (ESP)

## INTRODUCTION

Specialized or technical vocabulary has always been a key issue in the teaching of ESP (Nation, 2001). As stated by Robinson (1991: 4) "It may often be thought that a characteristic of ESP is that a course should involve specialist language and content." Therefore, it is essential to prepare ESP learners to familiarize technical vocabulary in their text since each field of study has its own characteristics and specialized vocabulary. Nation (2001: 18-19) mentions the characteristics of technical vocabulary that these words covered about $5 \%$ of the running words in specialized texts, and were made up of words that occurred frequently in a specialized text or subject area but did not occur or were of very low frequency in other field. In order to identify technical vocabulary, corpus-based approach has often been used by many scholars. This approach involves using automatic term extraction software to compare the number of word frequencies in a technical corpus with the number of word occurrences in a reference corpus by using chi-square or log-likelihood statistics (Baker, 1988; Chujo \& Utiyama, 2006). The software will list outstanding words regarding to their keyness values. In this sense, positive keyness value refers to vocabulary items which occur much more frequent in a technical corpus rather than a reference corpus. These words are considered as technical terms (Romer \& Wulff, 2010).

According to Sutarsyah, Nation and Kennedy (1994: 47), technical vocabulary consists of the terms that occur more frequently in a specialized text than in texts outside the area and it is commonly found that learners have difficulty with this vocabulary while reading texts. The examples of such research in Thai context is the work of Kaewphanngam (2002), who investigated psychology students' comprehension of technical and sub-technical vocabulary as a basis for the development of teaching materials in English for academic purposes. The data shows that both first year and third year students performed better in sub-technical vocabulary than technical vocabulary. Moreover, scores achieved by two groups of the students were less than $50 \%$ of the total scores. It might be assumed that the students may not have relevant and adequate experience in both technical and sub-technical vocabulary in psychology texts.

The results of the above studies raise interesting questions about teaching and learning ESP in Thailand. What technical vocabulary should be learned? How should it be taught to the students? What strategies do students use to acquire technical vocabulary? Considering the large numbers of technical vocabulary that occurred in specialized texts, language teachers need to prepare learners to deal with them. In order to help learners learn vocabulary and use those words in communication, vocabulary learning strategies (VLS) have been proved to be positively correlated to language acquisition (Rubin, 1981; O’Malley \& Chamot, 1990; Schmitt, 1997). According to LessardClouston, (2008) strategies which learners use in approaching vocabulary learning may thus influence both their acquisition and their academic socialization. It corresponds to Lawson and Hogben's statement:

[^0]during this period are probably retained; these strategies should be apparent in the behavior of students as they undertake a vocabulary learning task (1996, p. 104).

From this statement, course designers and teachers should pay special attention on vocabulary learning strategies employed by students in order to assist students as well as teachers to develop more effective learning and teaching of English vocabulary respectively.

In Thai context, some studies, however, have explored strategies for learning vocabulary in secondary level (e.g., Waemusa, 1993; Mingsakoon, 2002; Sixiang, 2009), yet there are no study have been investigated on vocabulary learning strategies in an ESP context. For this reason, it is worthwhile to study what strategies do ESP students employ to learn technical vocabulary in a business field in order to encourage them to learn ESP more efficiently. Thus, this study aims to answer the following questions:

1. What are the most frequent technical vocabulary items in the business corpus?
2. What sort of vocabulary learning strategies does high English proficiency students employ to develop their technical vocabulary acquisition? And to what extent do they use these strategies?
3. What sort of vocabulary learning strategies does low English proficiency students employ to develop their technical vocabulary acquisition? And to what extent do they use these strategies?

## SIGNIFICANT OF THE STUDY

The study was conducted to explore strategies for learning vocabulary employed by "high" and "low" English proficiency university students in an ESP context. Moreover, the degree to which the students use specific vocabulary learning strategies was examined. The researcher expects that the findings obtained from this study may provide some fundamental and practical input for both teachers and learners of ESP. The outcome can be beneficial in assisting and promoting students to apply appropriate vocabulary learning strategies in their specific field of learning. Additionally, it enables ESP teachers to develop more effective teaching materials in order to assist students to efficiently improve their vocabulary learning. Lastly, the results can be an information base for further research in related fields.

## SCOPE AND LIMITATIONS OF THE STUDY

1. The study focuses on the investigation of strategies for learning vocabulary employed by high and low proficiency students. The participants of the study are university students who enrolling in English for Business Course at the Viridian University (pseudonym) in the academic year 2011. As a result, possible generalization will be only to those students who are in the same level and background.
2. In the present study, the business corpus consists of texts from three main areas: Accounting, Banking, and Marketing, according to the suggestion of the instructor who teaches in the English for Business course. Therefore, the findings of this study will be applied only to these selected areas of the analysis.

## PARTICIPANTS

The participants of this study were 40 undergraduate students who are majoring in English at the Department of Teaching English as a Foreign Language (TEFL), Faculty of Education, Viridian University (Pseudonym). They were male and female non-native speakers of English who enrolled in English for business course in the academic year 2011. All of them were selected by purposive sampling method. The participants were asked to take a technical vocabulary test in context developed by the researcher in order to separate them into two groups: high and low English proficiency students. Then the participants were asked to answer the questionnaires about vocabulary leaning strategies. Furthermore, they were also interviewed and signed a consent form allowing the researcher to use their answers in this study.

## METHOD

The following procedures were carried out in order to attain the objectives.


Figure1 Conceptual Framework
Step 1: There were two main corpora used in the present study: the Business Corpus compiled by the researcher (as a specialized corpus) and British Academic Written English Corpus compiled by the University of Warwick (as a comparison corpus).

Step 2: In order to create a technical vocabulary, "Keyword List Tool" of the AntConc software was employed to calculate the degree of word frequency of the Business Corpus with the word frequency of the BAWE Corpus.

Step 3: After receiving a list of technical vocabulary, these words needed to be checked against the glossary in the book; namely, "Key Words in Business," (Mascull, 2002) in order to guarantee the appropriateness to the level of this group of students. Then, the Technical Vocabulary Test in Context (TVTC) was designed based on the deriving
vocabulary list from corpus analysis. The particular items included in the test were extracted from the results obtained from concordance lines in the business corpus.

Step 4: The TVTC test was administered to the students. It allowed the researcher divide the students into high and low English proficiency students.

Step 5: The questionnaires used in this study were adapted from taxonomy recommended by Schmitt (1997). It asks about vocabulary learning strategies that participants use to gain lexical knowledge.

Step 6: Semi- structured interviews were also used as a supplementary instrument in this study. It aims to obtain in-depth information about participant's vocabulary learning strategies as well as to classify the information gathered from the questionnaire. This research instrument focuses on different opinions of the high and low English proficiency students toward the vocabulary learning strategies that they use to gain lexical knowledge.

Step 7: Lastly, the data in the questionnaires was analyzed using SPSS program and the information from the interviews was analyzed by using open-axial coding method (Strauss \& Corbin, 1990).

## FINDINGS

## 1. Corpus Analysis

Table 1 The 20 Most Frequent Technical Vocabulary Items in the Business Corpus

| Rank | Technical <br> Vocabulary | Positive <br> Keyness | Fre- <br> quency | Rank | Technical <br> Vocabulary | Positive <br> Keyness | Fre- <br> quency |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | marketing | 5144.034 | 1382 | 11 | customers | 737.631 | 465 |
| 2 | company | 2365.882 | 1121 | 12 | consumer | 682.970 | 332 |
| 3 | product | 2313.506 | 1066 | 13 | investment | 681.464 | 352 |
| 4 | business | 2025.343 | 1018 | 14 | investor | 651.791 | 202 |
| 5 | banking | 1738.409 | 374 | 15 | buyer | 611.346 | 168 |
| 6 | firm | 1638.495 | 544 | 16 | growth | 582.030 | 472 |
| 7 | accounting | 1255.663 | 346 | 17 | management | 581.904 | 528 |
| 8 | sale | 1239.300 | 508 | 18 | loan | 577.002 | 169 |
| 9 | price | 994.433 | 571 | 19 | brand | 563.942 | 260 |
| 10 | competitor | 754.110 | 271 | 20 | financial | 560.246 | 392 |

From the corpus analysis, there were 209 technical vocabulary found in the business corpus. As it is illustrated in the table 1 , these technical vocabulary items were highly topic-related and directly reflected by the corpus of business such as the words, "marketing", "business", "accounting", "investment", "consumer", "commercial", "firm", and "financial".

## 2. Vocabulary Learning Strategies Employed by High Proficiency Students

Table 2 Vocabulary Learning Strategies Used by High Proficiency Students

| Vocabulary Learning <br> Strategies | No. of <br> Items | M | SD | Cronbach's <br> Alpha | Average Frequency <br> of Use of Strategies |
| :--- | :---: | :---: | :---: | :---: | :--- |
| Determination Strategies | 8 | 4.58 | 0.98 | 0.92 | Usually Used |
| Metacognitive Strategies | 8 | 4.51 | 1.05 | 0.92 | Usually Used |
| Cognitive Strategies | 7 | 4.21 | 1.14 | 0.92 | Often Used |
| Memory Strategies | 14 | 4.16 | 1.02 | 0.92 | Often Used |
| Social Strategies | 8 | 3.87 | 1.12 | 0.92 | Often Used |

( $\mathrm{N}=24$ )
Table 2 shows descriptive statistics for the frequency of use of vocabulary learning strategies by high proficiency students ( $\mathrm{N}=24$ ). It shows that the overall reliability of the questionnaires for this group of students, using Cronbach's alpha, was relatively high at 0.92 . The most frequently used strategy category were determination and metacognitive; whereas, the other three categories: social, memory, and cognitive were often used. The mean score for determination strategies ( $M=4.58$ ) was in the highest level; while, the mean score for social strategies $(M=3.83)$ was in the lowest level. However, social strategies were still rated at often used, not occasionally or seldom used.

In addition, the interviews indicated that various kinds of determination and meta cognitive strategies such as using English language media (news and movie), using surrounding words, using affixes and roots to guess the meaning of a word, and using English-English dictionary were usually employed by high proficiency students. However, social strategies including asking the teacher to give the example of a word in the sentence, interacting with native speakers, and having the teacher check their wordlists for accuracy are the least frequently used strategies.

## 3. Vocabulary Learning Strategies Employed by Low Proficiency Students

Table 3 Vocabulary Learning Strategies Used by Low Proficiency Students

| Vocabulary <br> Learning Strategies | No. of <br> Items | M | SD | Cronbach's <br> Alpha | Average Frequency <br> of Use of Strategies |
| :--- | :---: | :---: | :---: | :---: | :--- |
| Cognitive Strategies | 7 | 4.57 | 1.25 | 0.92 | Usually Used |
| Determination Strateg | 8 | 4.04 | 1.21 | 0.92 | Often Used |
| Metacognitive Strateg | 8 | 4.00 | 1.37 | 0.92 | Often Used |
| Memory Strategies | 14 | 3.61 | 1.04 | 0.92 | Often Used |
| Social Strategies | 8 | 3.37 | 1.13 | 0.92 | Occasionally Used |

( $\mathrm{N}=16$ )
Table 3 shows descriptive statistics for the frequency of use of vocabulary learning strategies by low proficiency students ( $\mathrm{N}=16$ ). It shows that the overall reliability of the questionnaires for this group of students, using Cronbach's alpha, was relatively high at 0.92 . The most usually used strategy was cognitive; whereas, the other three categories: determination, metacognitive, and memory were often used. The mean score for
cognitive strategies ( $\mathrm{M}=4.57$ ) was in the highest level; while, the mean score for social strategies ( $\mathrm{M}=3.37$ ) was in the lowest level and it was rated as occasionally used.

Additionally, the interviews revealed that the low proficiency students felt that various kinds of cognitive strategies such as learning the word through written repetition, learning the word through verbal repetition, and making note of the word and its meaning when listening to the teacher could help them. Nevertheless, social strategies such as having the teacher check their word lists for accuracy and asking the teacher to give the example of the word in the sentence are the least frequently used strategies by low proficiency students.

## CONCLUSIONS AND IMPLICATIONS

Based on the questionnaires and interviews data, it was indicated that the high proficiency students generally used the vocabulary learning strategies more frequently than the low proficiency students did. The high proficiency students prefer determination and metacognitive strategies such as using English language media (news, movie, and newscast), using surrounding words, using affixes and roots to guess the meaning of a word, and using English-English dictionary. However, the low proficiency students identified that they prefer cognitive strategies such as learning the word through verbal and written repetition, and making note of the word and its meaning when listening to the teacher.

Based on the research findings, various vocabulary learning activities should be suitably organized in response to the different levels of students. Furthermore, students should be trained to use effective strategies such as using context clues, using monolingual dictionaries, or even using English language media, in order to assist and promote them to learn technical vocabulary in their specific field of learning successfully.

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[^0]:    "In the early stages of language learning, when the tasks being undertaken by the students are more novel; this processing activity is more deliberate than automatic. The deliberate procedures, or strategies, developed

