CHAPTER 3

RESEARCH METHODOLOGY

This chapter presents the research methodology employed in this study. It consists of four parts:

    3.1 Subjects of the Study

    3.2 Research Instruments

    3.3 Data Collection

    3.4 Data Analysis

The details of the methodology are described as follows.

3.1 Subjects of the Study

The population of the study was 95 fourth-year PSU Thai students in the Faculty of Management Sciences (Hat Yai Campus) in the second semester of the 2005 academic year, who took the official TOEIC examination at Prince of Songkla University (PSU), Hat Yai Campus, from January 30th to February 1st, 2006.

The Management Sciences students were purposively chosen as the subjects of this study because their majors are in areas of business study; for instance, marketing, finance, business computing, and management. Most of today's prospective careers for these graduates require TOEIC scores, particularly in most positions in the Thai workforce where English proficiency is required (See Table 1.2, page 3). Furthermore, with reference to the 2005 statistical data of highly-demanding careers in the Thai workforce (THAIPOST, August 15, 2005), it was found that eight out of the top ten careers representing 72.85% of those which were applied for via the Internet, were those positions for graduates in the fields related to the Faculty of Management Sciences as shown in Table 3.1 on the next page. In other words, the subjects' fields of study correspond to the most highly-demanding positions in both domestic and multinational firms where English is used.

Table 3.1 Top Ten Online-applied Careers Requiring English Proficiency in
Thai Workforce

Top Ten Careers	Proportion (%)
1. Engineering	22.10
2. *Marketing / Public Relations*	*17.74*
3. *Information Technology (IT)*	*11.60*
4. *Banking / Finance / Securities*	*9.79*
5. *Administration / Secretarial*	*9.32*
6. *Sales*	*8.76*
7. *Customer Relations*	*6.26*
8. Industry	5.05
9. *General Management*	*4.80*
10. *Business Development*	*4.58*
Total	100

Table 3.1 shows that in the Thai workforce, the largest proportion (72.85%) among the top ten careers that are mostly applied for via the Internet are relevant to graduates in the field of Management Sciences, made up of 17.74% in Marketing/Public relations, 11.60% in international technology, 9.79% in banking/ finance/securities, 9.32% in administration/secretarial, 8.76% in sales, 6.26% in customer relations, 4.80% in general management, and 4.58% in business development careers, while the other 27.15% are relevant to graduates from the Faculty of Engineering and Industry.

All the 90 voluntary students were asked to respond to a questionnaire. However, only 80 subjects returned their validly-completed questionnaire copies, representing 88.89% of the voluntary subjects, and 84.21% of the population of the study. Thus, a total of 80 subjects were used in this main study. The subjects of the study were also divided into two groups: high proficiency and low proficiency groups based on their TOEIC scores using the 27% technique (Hughes, 1989).

3.2 Research Instruments

Two research instruments were used to collect data for this study: the standardized TOEIC examination and a questionnaire. They are described below.

3.2.1 The Standardized TOEIC Examination

The standardized TOEIC examination (ETS, 2006), in this study, was administered by the Bangkok Educational Testing Service (ETS) representative, Center for Professional Assessment (Thailand) from January 30th to February 1st, 2006 at Prince of Songkla University (PSU), Hat Yai Campus.

The Standardized TOEIC Scores

TOEIC scores are used as an international standard for evaluating non-native English test takers' general language proficiency. The scores represent how well the TOEIC applicants can communicate in English, particularly in an international working environment. The maximum TOEIC score of 990 is derived from the 200 multiple-choice items (100 listening items and 100 reading items).

The TOEIC scores of all the subjects obtained from the actual TOEIC examination conducted at the TOEIC Test Center in PSU were gathered from the total 7 sessions of the exam; that is, January 30 (morning and afternoon sessions), January 31 (morning, afternoon, and evening sessions), and February 1 (morning and afternoon sessions), 2006.

3.2.2 Questionnaire

The 38-item questionnaire developed by the researcher to elicit the data on the students' motivation and motivational variables in English language learning was used as the main research instrument of this study. In this study, the categories of motivation on language learning are derived from Brown (2000) and

those of the prominent motivational variables are derived from Oxford and Shearin (1994), and Williams and Burden (1997, cited in Dörnyei, 2002).

The questionnaire consisted of 2 parts. Part 1 contained 13 items asking about the subjects' general background (gender, major fields of study, and future plans after graduation) and their English language learning background (English-language learning experience and experience on TOEIC including their obtained TOEIC scores). Part 2 consisted of 25 items based on a five-point Likert's scale, asking about motivation and motivational variables (attitudes and anxiety) in English language learning. In Part 2, the subjects were asked to rank statements based on the rating scale from 5 "Strongly agree" to 1 "Strongly disagree" according to their opinions (See Appendix C, page 108).

The specifications of the questionnaire are presented in Table 3.2 on the next page.

Table 3.2 Questionnaire Specification

Part I: **Students' General and English Language Learning Background**	**Part II: Motivation and Motivational Variables in English Language Learning**		
	Motivation	**Motivational Variables**	
		Attitudes toward English	**Anxiety toward English**
13 items	*25 items*		
Section 1: **General Background** (*4 items*) *Item 1-4:* name, gender, major fields of study, and future plans after graduation **Section 2:** **English Language Learning Background** (*9 items*) *Item 5-10:* length of time spent on formal English language learning, achievement on compulsory English courses, number of the elective English courses taken, experience in an English speaking country and out-of-class English learning activities *Item 11-13:* Learners' previous experience on TOEIC and their obtained TOEIC scores	*Item 15 and 28:* Intrinsic motivation *Item 14, 22, and 37-38:* Extrinsic motivation *Item 18-21:* Instrumental motivation *Item 24-27:* Integrative motivation	*Item 16-17, 23, and 30*	*Item 29, and 31-36*

To assure the content validity of the questionnaire, the drafted questionnaire was rechecked by three experienced University teachers and revised as suggested. Before its actual use, the questionnaire was piloted to test its content reliability. The questionnaire was tried out with 30 fourth-year Management Sciences PSU students who were not included in the group of the subjects of the main study.

After the pilot study, all the items in the questionnaire in both part 1 and 2 were revised in accordance with the purposes of the main study, and used in the main study to collect data. Furthermore, the responses to the items of the questionnaire in Part 2 were statistically analyzed using the formula for the Cronbach alpha coefficient (α-coefficient). Its reliability index was .85, which means that the reliability of the questionnaire designed for this study was high (See Appendix E, page 118).

3.3 Data Collection

The data collecting procedures of the study were carried out as follows.

First, a letter of permission to collect data, particularly the TOEIC scores of the fourth-year Management Sciences PSU students, was sent to the Director of the PSU Student Affairs. The letter of permission was written to ask for the right to distribute the student questionnaires on the dates when the target students come to collect their TOEIC scores at the Student Affairs Office. With the permission of the Director, the total number of the fourth-year Management Sciences students who were going to take the official TOEIC examination from January 30th to February 1st, 2006 was obtained.

Next, on the dates of the TOEIC result announcement about one week after the test dates, the students came to collect their TOEIC results at the Student Affairs Office. The target students were asked to volunteer and participate in the main study through the researcher's invitation letter. Each voluntary student was asked to sign a prepared consent form, which included the researcher's confirmatory undertaking to keep the subjects' personal information strictly confidential as well as the statement of permission to use the subjects' recent TOEIC scores in the study. Most questionnaires were collected on the date of the distribution while some were

collected on later days. In total, 80 questionnaires were returned and used for data analysis.

Finally, data from these questionnaires were then coded and analyzed.

3.4 Data Analysis

The data from the 80 returned questionnaires were analyzed. All of them were completely responded to. The analysis of data in this study was carried out in four steps to answer the four research questions.

Research question 1: What is the English language proficiency of the subjects?

To answer the first research question, the TOEIC scores were analyzed in two ways: the English proficiency of all the subjects and the proficiency of the high and low proficiency subjects. To obtain the TOEIC scores, the subjects were asked to identify the scores they gained in the questionnaire (item 13). To examine the overall English language proficiency of the subjects, the arithmetic means and standard deviations of the recent TOEIC scores of all 80 subjects were calculated using the Statistical Package for Social Science (SPSS) programme.

In addition to establishing the students' overall proficiency, 2 groups of high and low proficiency learners were identified. To establish whether the subjects of this study were of high or low proficiency level, the 27% technique (Hughes, 1989) was used. All the 80 subjects of the study were systematically ranked from the highest to the lowest based on their recently assessed TOEIC score. The subjects falling in the top 27% were considered to be the high proficiency group and those in the bottom 27% to be the low proficiency group, respectively. There were altogether 42 subjects, 21 in each group. In order to find out the English language proficiency of the high and low proficiency subjects, the means and standard deviations of the recent TOEIC scores of the high and low proficiency subjects were also calculated using the SPSS programme.

To supplement the data about the subjects' English proficiency, the subjects' responses to the questionnaire provided data about the subjects' general background and English language learning background which made up part 1 of the questionnaire. The responses to part 1 of the questionnaire were coded and percentages, frequency distributions, arithmetic means, an independent sample *t*-test, and a one-way analysis of variance (ANOVA) were calculated through the SPSS programme. The results in part 1 of the questionnaire were also used to support those in part 2.

Research question 2: What are the relationships among motivation, motivational variables, and English language proficiency of the subjects?

To answer the second research question, the 80 subjects' responses based on the five-point Likert's scale, to the statements indicating motivation and motivational variables in part 2 of the questionnaire were also coded and the means and standard deviations were calculated using the SPSS programme. However, to answer research question 2, two steps were needed.

First, to determine whether the motivation and motivational variables were related to the subjects' English language learning, the five-point rating scales were ranged from 'Strongly agree' to 'Strongly disagree'. As all items in part 2 of the questionnaire related to motivation and motivational variables on English language learning, the means and standard deviations of all, together with the high and low proficiency subjects' responses to the items in part 2 were separately calculated to establish the average rating scores. To facilitate the analysis of data, the following levels of the average mean scores and their interpretation as presented below were utilised.

Levels of the Average Mean Scores	Interpretation
4.21-5.00	Strongly agree
3.40-4.20	Agree
2.61-3.40	Neutral
1.81-2.60	Disagree
1.00-1.80	Strongly disagree

The interpretation of the average rating scores above refers to a measure of the subjects' attitudes ranging from very positive to very negative designed to allow the subjects to indicate how strongly they agreed or disagreed with the statements relating to their motivation and motivational variables on English language learning.

Second, to investigate whether and how the subjects' motivation and motivational variables on English language learning are related to their English proficiency, the means and standard deviations, of all motivation and motivational variables were calculated and compared with those relating to the subjects' English proficiency using Pearson correlation coefficients.

Research question 3: Are there any differences in motivation and motivational variables between the high and low proficiency subjects?

To answer the third research question, the means of the responses to each item of the questionnaire in part 2 of the high and low proficiency subjects were compared by using an independent sample *t*-test to determine whether there were any significant differences between high and low proficiency groups on their motivation and motivational variables.

Research question 4: What are the relationships among motivation, motivational variables, and English language proficiency of the high and low proficiency subjects?

To answer the fourth research question, Pearson correlation coefficient was used to examine the relationships among motivation, motivational variables on English language learning and English proficiency of the high and low proficiency subjects. The high and low proficiency groups' TOEIC test scores and the means of their responses to the part 2 of the questionnaire were separately computed so as to find out if there was a correlation among motivation, motivational variables, and English proficiency of the high proficiency group, and that of the low proficiency group. Pearson correlation coefficient was also employed to examine the relative degree of the relationship among motivation, motivational variables, and English language proficiency in each of the high and low proficiency group.