# EST Students and Out-of-Class Strategy Use

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## ABSTRACT

Language learning strategies have been defined, specifically for this present investigation, as *any set of techniques or learning behaviours, whether observable or unobservable, which language learners reported employing for the purpose of enhancing their language improvement and acquiring their knowledge of English outside the classroom setting.*

The present investigation is descriptive-interpretative in nature. It has been designed a) to investigate an overall strategy use of students learning English for Science and Technology (EST) at Suranaree University of Technology (SUT); and b) to examine the relationships as well as patterns of variations in frequency of students' reported out-of-class strategy use with reference to their perceptions of English language ability levels (good/very good; fair; and poor), gender (male; and female), and field of study (Engineering; Agricultural Technology; Public health; and Information Technology). The subjects of this study were 488 students learning English at Suranaree University of Technology, Nakhon Ratchasima in term 2/2002. They were sampled on the basis of convenience and availability. A written strategy questionnaire based on the language learning strategy inventory developed by the researcher in the year 2000 was used as the main instrument for the data collection. The Alpha Coefficient ($\alpha$) or Cronbach alpha was used to check the internal consistency of the strategy questionnaire. The reliability estimate based on a 488-student sample is .92 which is high when compared with the acceptable reliability coefficients of .70, a useful rule of thumb for research purposes. The simple descriptive statistics were used to describe level of frequency of strategy use, while an Analysis of Variance (ANOVA), the Chi-square tests and Factor Analysis were used as the main statistical methods in data analysis to seek the relationship between the frequency of strategy use and the above-mentioned three variables.

The research report comprises six chapters. Chapter one is an introduction to the research report. It provides both a background and a context to the present investigation. Chapter two presents the review of related literature and materials on language learning strategies in order to locate the present investigation in the context of previous research and authors' opinions. Chapter three reviews research methodology in language learning strategies, and the conceptual framework for the present investigation. Chapter four examines frequency of strategy use, ranked in terms of high, medium, and low, reported by 488 language learners, ranging from overall strategy use to use of strategies at the individual level. Simple descriptive statistical methods such as mean of frequency, standard deviation, and percentage are used to help interpret the data. Chapter five examines the relationships between frequency of students' reported use of strategies and the three variables. In doing so, an Analysis of Variance (ANOVA), the chi-square tests, and the factor analysis are used as the main statistical methods. Chapter six summarises the findings of the investigation and discusses the limitations of the present investigation and proposals for future research. In addition, the Chapter discusses contributions and the implications for the teaching and learning of English for language learners learning English at Suranaree University of Technology.

The findings of the research show that these language learners, on the whole, reported medium frequency of use of out-of-class language learning strategies. The results of the data analysis also demonstrate that frequency of students' overall reported use of individual out-of-class language learning strategies varied significantly in terms of perceptions of English language ability levels. Four extracted factors were also found to be strongly related to this variable. Regarding 'gender', and 'field of study', these two variables were found to be slightly related to students' choices of strategy use.

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# CHAPTER ONE
# BACKROUND TO STUDY

## 1.1. Introduction and Purpose of the Chapter

This chapter is an introduction to the present investigation and provides both a background and a context for the research work. The ensuing sections cover the terms used in the context for the present investigation; research objectives; and finally the expected outcomes. The chapter concludes with an outline of the research.

In the past two decades, much research in the field of language learning and teaching has looked at the relationships between characteristics of language learners and their language performance. The priority of the investigation, especially in the 1980's, seemed to focus on how language learners dealt with their target language learning. Very often, these language learners have been classified as 'good/poor' or 'successful/unsuccessful' language learners. Many researchers have investigated a series of factors which are basically hypothesised to have a relationship with how these language learners go about language learning, especially a foreign language. These factors include learner's foreign language experience, gender, field of study, status of the target language, or ethnicity. These early investigations inspired some researchers in the field to attempt to identify what language learners, especially 'good' or 'successful' language learners actually do when they learn a foreign language. The first attempts to scrutinise such good learner behaviours which were empirically evidenced, were carried out by Stern (1975), and Rubin (1975). Shortly after the lists of characteristics of good language learners had been proposed by both Rubin and Stern, more researchers started to turn their attention to investigate learning strategies of good language learners. Examples are Politzer (1983), Chesterfield and Chesterfield (1985), O'Malley et al (1985); Ramirez (1986), Chamot

(1987), Oxford (1989), and more recently Campbell (1990), Embi (1996), Ely (1998), Halbach (2000), Davis-Wiley (2000), Intaraprasert (2000), and Markham (2001).

An initial review of available literature and other research materials appear to reveal that much of the research into language learning strategies has been carried out with native speakers of English learning a foreign language, or non-native speakers of English learning English as a second language (ESL). A small amount of research has been carried out with language learners learning English as a foreign language (EFL), such as in the context of Thailand. To date, a few research works have been carried out with Thai students in terms of their language learning strategies, and a small amount of research has been carried out to investigate language learning strategy use by Thai students studying at the tertiary level. It also appears that the majority of the subjects of these few investigations were students majoring in English. Examples are Sarawit (1986), Mullins (1992), Torut (1994), and Lappayawichit (1998). The use of language learning strategies by English major students or other successful language learners were the focal point of these studies. However, the latest available research carried out with Thai students whose major subject is not English, has been conducted by Intaraprasert (2002). This investigation has been the only empirical research carried out exclusively to investigate how unsuccessful language learners employ classroom-related language learning strategies so far. Up to present, no empirical research has been carried out exclusively to investigate how students employ out-of-class language learning strategies in order to improve their language skills in general. These out-of-class language learning strategies are referred to as 'classroom-independent strategies' as well. Hence, the researcher will use these two terms interchangeably throughout. The present investigation aims to fill this gap. The researcher decided to undertake an investigation which has been designed to examine the use of classroom-independent strategies based on the inventory generated by Intaraprasert

(2000). This investigation is descriptive-interpretative in nature rather than confirmatory, hypothesis-testing, or as termed by Skehan (1989) and Larsen-Freeman and Long (1991), it employs the 'research-then-theory' rather than the 'theory-then-research' format (cf. Graham, 1997). To put it simply, this investigation is not intended to reconfirm any theories or hypothesis about students' use of language learning strategies. Rather, it has been designed to examine the relationships between three variables (two learner-related, and one language performance) and frequency of use of out-of-class language learning strategies.

In summary, there are many variables or factors which researchers believe to affect or relate to students' choice of language learning strategies. The researcher, for the present investigation realises that it is by no means possible to investigate all of the factors mentioned above in relation to choice of out-of-class language learning strategy use of language learners at Suranaree University of Technology (SUT), where the researcher is currently working. Consequently, the researcher has chosen carefully to investigate those variables that appear to be likely neglected by most researchers (gender of students, and field of study). The theoretical framework and rationale for selecting/rejecting variables for the present investigation will be discussed in more detail in Chapter 3.

### 1.2. Terms Used in the Context of the Present Investigation

The following terms are those most frequently used in this investigation together with explanatory notes.

- **Language Learners**

'Language learners' for the present investigation refers to students studying English for Science and technology at Suranaree University of Technology, Academic Year 2002. These language learners may or may not be taking any English modules when the data collection was taking place

- **Field of Study**

This variable refers to the major field of study of the samples. The students' fields of study include Engineering, Information Technology, Public Health, and Agricultural Technology.

- **'Perceived' English Language Ability**

To determine the levels of language ability of the samples, the researcher asked the students to rate their own English language ability. As a result, students have rated their ability as 'good/very good'; 'fair'; or 'poor'.

### 1.3 English at the Tertiary Level

At the tertiary level, English may be part of the Faculties of Arts, Humanities, Science, or Social Science depending on the organisational arrangements in each institution. Although all universities are different in their organisational structure, they offer at least six credits of foreign languages as part of the general education required by the Ministry of University Affairs (Sukwiwat, 1985). English is one of the foreign languages offered and is chosen by the majority of Thai university students. The English courses offered at each institution differ in content and skill areas. However, these English courses can be classified as one of the following categories:

- General English skills courses dealing with general content of English in everyday use for non-science oriented students, for example, education, or social sciences.
- Advanced English skills courses emphasising those specialising in English for Academic Purposes (EAP) or English for Specific Purposes (ESP) for science-oriented students, for example, medicine, pharmacy, and engineering students.

As offered at Suranaree University of Technology, most English courses fall in the second category, which is English for academic purposes or English for Science and

Technology (EST). However, the new curricula for English have been reconsidered and changed by School of English in line with those designated by the Ministry of the University Affairs (MUA). The new curricula have yet to be implemented in 2003 henceforth.

### 1.4. Research Objectives

The present investigation aims at understanding how language learners learning English at Suranaree University of Technology outside the classroom setting improve their language skills in general, through an investigation of language learning strategies (see Chapter 2, Section 2.2, for the definition of language learning strategies for the present investigation). It is intended to examine the frequency of out-of-class or classroom-independent strategy use as well as the relationship between strategy use and students' perceptions of their language ability levels; students' gender; and their field of study, i.e. Engineering, Information Technology, Public Health, and Agricultural Technology. The specific aims of the present investigation are:

1.4.1. To examine the frequency of classroom-independent language learning strategies which language learners reported employing;

1.4.2. To examine the relationships between frequency of students' reported use of out-of-class language learning strategies and the three independent variables, namely perceptions of the usefulness of language learning strategies; gender; and field of study

### 1.5. The Expected Outcome

As this is the first known research to investigate out-of-class language learning strategies employed by language learners learning English at Suranaree University of Technology, one outcome will be to identify and describe the frequency of use of classroom-independent language learning strategies reported to be employed by these language learners outside the classroom settings. The expected outcomes will correspond

to the research questions. The findings will reveal the relationship between these language learning strategies and the three variables, creating a clear picture of the variation patterns of strategy use of the research population for the present investigation.

### 1.6. Outline of the Research Report

In order to achieve the research objectives, the researcher first reviews the past research on, and related materials about, language learning strategies, and research methodology which contributes to the present investigation. This can be seen in Chapter 2 which includes a literature review on the work of different researchers, e.g. Rubin (1975; 1981), Stern (1975; 1983), and Carver (1984). The chapter summarises how language learning strategies are defined and classified by different researchers. Some language learning strategy characteristics are also discussed as well as the classification systems put forward by the eight researchers. Some research works on language learning strategies carried out with foreigners as well as with Thai students which contribute to the present investigation are presented.

Chapter 3 discusses some general principles of a research design which applies to the present investigation. It discusses main research methods in language learning strategies, the theoretical framework of the research, rationale for selecting and rejecting variables, as well as the research questions for the present investigation. This is followed by the discussion about sampling and the rationales behind the choice of subjects for the investigation and the characteristics of the research population. The last part of this chapter deals with the data collection procedures and how the data obtained are reported, analysed, and interpreted.

Chapters 4 and 5 describe and discuss the results of the research findings of the present investigation in terms of students' overall strategy use, use of out-of-class strategies to achieve classroom-independent purposes and use of 20 individual language

learning strategies. In this chapter, significant variations in use of language learning strategies are also taken into consideration in terms of relationship of language learning strategy use to their perception of language ability, gender, and field of study. As a result, comparisons of use of different language learning strategy categories by 488 language learners based on the holistic mean scores of frequency use are made. The chapter describes and discusses the results of the analysis obtained from the data by different statistical methods which include the descriptive statistics, the ANOVA, the post hoc Scheffe test, chi-square tests and factor analysis.

Finally, Chapter 6 summarises the main findings of the present investigation in response to the research questions, including discussions of the research findings and implications for the teaching and learning of English for language learners at Suranaree University of Technology. The contributions of the present investigation to the related areas are preceded by the presentation of the limitations of the present investigations and proposals for future research.

## 1.7. Summary

In this chapter, the researcher has given a description of the background of the investigation in an attempt to put the study in context. This was followed by a brief overview of the instruction of English at the Tertiary Level. Then, the research objectives, and the expected outcomes of the present investigation are briefly discussed. Lastly, the outline of the research report is concluded.

# CHAPTER TWO

# REVIEW OF RELATED LITERATURE AND RESEARCH ON LANGUAGE LEARNING STRATEGIES

## 2.1. Introduction and Purpose of the Chapter

In recent years, research on language learning strategies has experienced tremendous growth and many researchers of the field have come to the most enduring conclusion that a variety of language learning strategies have the potential to facilitate language learning (Oxford, Lavine and Crookall, 1989; Nyikos and Oxford, 1993; MacIntyre and Noels, 1996). According to Carroll (1977), learning a foreign or a second language requires considerable effort. It can be a struggle for learners to find ways which are suitable and effective for themselves. Learning a foreign language can therefore be difficult and frustrating. MacIntyre and Noels (1996) suggest that the effort in finding such ways may help learners to comprehend, and retain knowledge of the target language, whether they are learning inside or outside a classroom setting. Concluding from the language learning research, Pearson (1988) suggests that individual learners must be consciously prepared to invest a great deal of their own time and energy in second language learning, and that learners must want to become responsible for their own learning.

As can be seen in this chapter, many of the initial studies of language learning strategies were directed at defining learning strategies and developing taxonomies that could be used to classify them. Examples are Stern (1975), Rubin (1981), Carver (1984), Ellis and Sinclair (1989), Oxford (1990), O'Malley and Chamot (1990), and Coleman (1991). Recently, interest in language learning strategies has been focused on the relationships between learner characteristics and success in language learning (Bialystok, 1981; Ehrman and Oxford, 1989; and Gradman and Hanania, 1991). The learner characteristics which relate to the success of

second or foreign language learning include language learning aptitude, attitude and motivation, personality variables, socio-cultural variables, language practice and learning strategies. Besides the learner characteristics mentioned above, successful language learning may also relate to the characteristics of the learning situation such as length of exposure to the target language or the teaching methods. Further, another major area of second or foreign language learning research is on the complex relationship between the learner specific language learning behaviours or strategies, and the ultimate success of these behaviours or strategies in language learning (Bacon and Finnemann, 1990). That means, many researchers who are interested in language learning strategies tend to pay more attention to identifying the strategy use of successful language learners (e.g. Rubin, 1975; Bialystok, 1981; and O'Malley et al,1985b).

A number of researchers have examined language learning strategies employed by language learners learning a foreign language, mainly English, in different contexts in different parts of the world, whether learning English is regarded as a foreign language (EFL), or as a second language (ESL). Some researchers have also examined language learning strategies employed by native speakers of English learning a foreign language such as French, German, or Russian. Consequently, many of these researchers have come up with different findings which they have used to define and classify language learning strategies.

As this chapter is the beginning of an investigation of language learning strategies, the researcher attempts to locate the present investigation in the context of previous research and authors' opinions. In other words, the researcher attempts to present to the reader the knowledge base upon which the present study is built. The purpose is to examine how language learning strategies are defined and classified by different researchers. In reviewing

the research work on language learning strategies, the researcher will start with a brief discussion of definitions of language learning strategies by different researchers, as well as some characteristics of language learning strategies. This is followed by a brief discussion of classification systems put forward by eight researchers. Finally, some research work on language learning strategies which contributes to the present investigation is presented.

## 2.2. Definition and Characteristics of Language Learning Strategies

The term 'learning strategies' is used in a variety of ways by different researchers and its precise meaning is sometimes difficult to ascertain (Stern, 1983; and Smith, 1994). Consistent with these comments, Ellis (1994) states that different researchers have defined learning strategies differently according to their personal perception and belief and that definitions of learning strategies have tended to be ad hoc and atheoretical. In addition, one of the best approaches to defining language learning strategies is to list the main characteristics of the language learning strategies defined and used in the studies by different researchers. Stevick (1990), however, suggests that no matter how different the definitions, they tend to share two common characteristics, the first to do with general characteristics of learners and the second to do with techniques.

What follow are the definitions produced by different researchers in the field of language learning strategies:

- Rubin (1975: 43) defines learning strategies as 'the techniques or devices which a learner may use to acquire knowledge.'
- Stern (1983: 405) defines learning strategies as 'particular forms of observable learning behaviour, more or less consciously employed by the learner.'
- Bialystok (1985: 258) sees learning strategies as 'activities undertaken by learners whether consciously or not, that have the effect of promoting the learner's ability either to analyse the linguistic knowledge relevant to the language under study, or to improve the control of procedures for selecting and applying the knowledge under specific contextual conditions.'

- Weinstein and Mayer (1986: 315) define language learning strategies as 'behaviours and thoughts that a learner engages in during learning that are intended to influence the learner's encoding process.'
- Wenden (1987: 6-7) defines learning strategies as 'actions or techniques, whether observable or unobservable, which can be learned and changed and which contribute either directly or indirectly to learning. Learners take these actions or employ these techniques either consciously or automatically in response to needs.'
- Oxford (1989: 8) defines learning strategies as 'specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations.'.
- O'Malley and Chamot (1990: 1) define learning strategies as 'the special thoughts or behaviours that individuals use to help them comprehend, learn, or retain new information.'
- MacIntyre (1994: 185) sees learning strategies as 'the techniques and tricks that learners use to make the language easier to master.'
- Ellis (1997: 76-77) offers a definition of learning strategies as 'particular approaches or techniques that learners employ to try to learn L2. They can be behavioural (for example, repeating new words aloud to help you remember them) or they can be mental (for example, using the linguistic or situational context to infer the meaning of a new word).'
- Graham (1997:174) defines learning strategies as 'thoughts or behaviours that help students to understand, learn or retain new information.'
- Cohen (1998: 4) defines learning strategies as 'learning processes which are consciously selected by the learner. The element of choice is important here because this is what gives a strategy its special character. These are also moves which the learner is at least partially aware of, even if full attention is not being given to them.'

A sample of definitions of language learning strategies above apparently show that no two researchers have defined language learning strategies in exactly the same way. As observed by Baker and Derwing (1982), pursuing the term 'strategy' in the literature will present a range of impressions with the possibility of controversial issues with regard to the terminology ensuing. The researcher for the present investigation is therefore left with the question of how language learning strategies should be defined as a working definition. However, it is not the purpose of this section to attempt to judge or determine which definition by which researcher is more perfect or better than another. Rather, it is to

demonstrate that defining language learning strategies is subjective and problematic. Williams and Burden, (1997) make it clear that this has also proved difficult partly because terms which are referred to as 'strategies' are used differently by different people. These different terms are evidenced in the sample of definitions presented earlier, as well as later in this section. What follow are some difficulties and subjectivity in defining the term 'learning strategies' as observed by the researcher for the present investigation based upon the eleven definitions presented above. These include:1) observable behaviours, unobservable mental processes, or as both; 2) conscious and intentional, or subconscious and automatic; and 3) terms referred to 'learning strategies'

Lastly, as pointed out by Ellis (1994), there are differences in opinions about what motivates students in their use of language learning strategies. Though some differences have been pointed out, these definitions share some common characteristics, i.e. language learning strategies may contribute either directly or indirectly to language learning. All the definitions shown above recognise that language learners expend much effort to learn or master the target language. Additionally, Oxford (1989) suggests that the use of language learning strategies can have an affective purpose, i.e. to make their language learning more enjoyable.

In conclusion, the main characteristics of language learning strategies as observed from the definitions by different researchers can be summarised as follows:

Language learning strategies:

- are either general approaches, or specific actions, behaviours, or techniques
- are problem-orientated
- are employed either consciously and intentionally, or unconsciously and automatically
- have either direct or indirect contributions to language learning
- are either observable, or unobservable
- are amenable to change or modification through strategy training or teaching or through students' language learning experiences

- are influenced by a variety of factors
  - involve many aspects of learners such as cognitive, metacognitive, or social and affective

To sum up, a language learner has to struggle and expend much effort to cope with the difficulties of learning a foreign language. To achieve success in the target language the individual learner is learning, a suitable and effective choice of learning strategies must be made. Each definition proposed by different researchers mainly emerges from what they have focused on, in what context their research has been carried out, and the parameters imposed by the research population.

Having studied the ideas of different researchers, the researcher has proposed to define language learning strategies in order to suit the context of the present investigation. Language learning strategies have been defined, specifically for this present investigation, *as*

***any set of techniques or learning behaviours, whether observable or unobservable, which language learners reported employing for the purpose of enhancing their language improvement outside the classroom setting.***

Furthermore, the researcher recognises that different learners can make their own choices of learning strategies to facilitate the improvement of the target language. It is also recognised that language learning strategies will never be effective or useful unless the learners know and use them appropriately in order to help facilitate their language improvement.

## 2.3. Language Learning Strategy Classification System

In classifying language learning strategies by different researchers, various strategy names are used, rather than a standard and consistent set of terminology. Oxford and Crookall (1989) comment that it is impossible to provide a complete glossary of technical terms used in all studies. This makes it difficult in many cases to compare strategies reported in one study with those reported in another (Chamot, 1987; Ellis and Sinclair, 1989). Hence, the researcher

for the present investigation will not attempt to make comparisons of any of the strategy classifications proposed by different researchers in terms of comprehensiveness or coverage.

Ellis (1994) notes that language learning strategies differ in a number of ways, reflecting the particular subjects that the researchers worked with, the setting, and the particular interests of the researchers. As can be seen below, different researchers have different ways of classifying learning strategies. This strategy classification may be based on their own experience as language learners, or language teachers (e.g. Stern, 1983), their own language learning strategy investigation (e.g. Rubin, 1981; O'Malley and Chamot,1990; Oxford, 1990; Cohen, 1990; Coleman. 1991; and Intaraprasert, 2000), or their reviews of other researchers' work (e.g. Rubin, 1981; Stern, 1983; Carver, 1984; and Ellis and Sinclair, 1989).

What follows is a consideration of the language learning strategy classification systems which have been identified as the result of research on language learning strategies in different contexts by different researchers. These have made an important contribution to the knowledge of language learning strategies. The following section summarises, as well as discusses briefly strategy classification systems proposed by eight researchers. These include the works of Stern (1975; 1983); Rubin (1975; 1981); Carver (1984); Ellis and Sinclair (1989); Oxford (1990); O'Malley and Chamot (1990); Coleman (1991b) and Intaraprasert (2000).

### 2.3.1. Language Learning Strategy Classification by Stern

**Stern (1975; 1983)** **A) 'Strategies for good language learners'**

1. Planning strategies
2. Active strategies
3. Emphatic strategies
4. Formal strategies
5. Experimental strategies
6. Semantic strategies
7. Practice strategies
8. Communication strategies
9. Monitoring strategies
10. Internalisation strategies

**B) 'Basic Strategies for good language learners'**

**1. Active planning strategy**

- Select goals/sub-goals, recognise stages, and participate actively

in the learning process

2. **Explicit learning strategy**
   - Pay attention to linguistic features of the target language, conscious learning, practice, memorisation, and progress monitoring
3. **Social learning strategy**
   - Seek communication with target language users and language community, develop communication strategies, become involved as participants in authentic language use
4. **Affective strategy**
   - Approach task with positive frame of mind, develop necessary energy to overcome frustrations, and cope with emotional and motivational problems

Stern (1975; 1983) has drawn up a list of ten strategies of good language learners. Historically, this list of learning strategies appears to have been influential for other researchers in their classification of language learning strategies. These strategies are derived from three main sources which are: (1) his own interpretation of language competence and the three main areas of language acquisition which are (a) the disparity- the condition or fact of being unequal as in age difference- between the inevitable and deep-seated presence of the first language and other languages previously learned as a reference system and the inadequate development of the new language as a new reference system; (b) the code communication dilemma, that is, the learner has to find a way of dealing with both the linguistic forms and message to be conveyed; and (c) the choice between rational and intuitive learning; (2) his experience as a teacher and a learner, and (3) his literature review on language learning of Nida (1957); Gudschinsky (1967); Larson and Smalley (1972); and Rubin (1975). Apart from the ten learning strategies on the list, Stern has also derived the four basic sets of learning strategies which good language learners are likely to employ while less successful learners employ them only weakly, fail to maintain them concurrently, or fail to develop them altogether. In his view, the four basic sets of learning strategies are required for effective language learning. It is not necessary that all learners employ all four strategies equally and at all times (Stern, 1983).

## 2.3.2. Language Learning Strategy Classification by Rubin

**Rubin (1975; 1981)** **1. The strategies which may contribute directly to language learning:**

**1.1. Clarification/verification**
- Asking for an example of how to use a particular word or expression

**1.2. Guessing/inductive inferencing**
- Using clues from other items in the sentence/phrase, or key words in a sentence to guess

**1.3. Deductive reasoning**
-Inferring grammatical rules by analogy, or grouping words according to similarity of endings

**1.4. Practice**
-Experimenting with new words in isolation and in context, or using mirror for practice

**1.5. Memorisation**
-Taking notes of new items with or without texts

**1.6. Monitoring**
-Correcting errors in own/other's pronunciation, vocabulary, spelling, grammar and style

**2. The strategies which may contribute indirectly to language learning:**

**2.1. Create opportunity for practice**
- Initiating conversation with fellow student/teacher/native speaker, or creating situation with natives in order to verify/test/practise

**2.2. Production tricks**
-Related to communication focus/drive, probably related to motivation and opportunity for exposure such as using circumlocution and paraphrase to get to get message across, or repeating sentence to further understanding

Rubin (1975; 1981) began to pursue the idea of investigating language learning by studying the strategies of successful language learners (Stern, 1983). She presents a list of six general strategies which may contribute directly to language learning, and two strategies which may contribute indirectly to language learning. They are based on basic psychological characteristics such as risk-taking, tolerance for ambiguity and empathy among others. In the data collection, classroom observations and student interviews were conducted. Rubin has modified what she calls the 'Observation Schedule' through direct classroom observations or on videotape and through student self-reports and diaries. Apart from this, she also observed herself in language learning situations, and elicited observations from second language teachers (Stern, 1983). She has also modified it through consideration of the research on

language learning strategies of some researchers, e.g. Naiman, Fröhlich and Stern (1975); Fillmore (1976); Tarone (1977); and Cohen and Aphek (1978).

### 2.3.3. Language Learning Strategy Classification by Carver

**Carver (1984)**

**1. Strategies for coping with target language rules**
- Generalisation, or simplification

**2. Strategies for receiving performance**
- Inferring from probability ,or from knowledge of the world

**3. Strategies for producing performance**
- Repeating oneself, or rehearsing before production

**4. Strategies for organising learning**
- Contacting with teachers or peers

Carver (1984) has proposed that learner strategies can be subdivided into four categories. This classification system is based on the research of Selinker (1978) and of Tarone (1978; 1980). Carver also suggests that learner strategies are either overt or covert behaviour, conscious or unconscious, arising directly from learning styles and work habit. In addition, learner strategies tend to be adventitious and unplanned. When learning styles and work habits are mediated through conscious plans, the outcome or learner strategies may be more effective and more satisfying for the learner.

### 2.3.4. Language Learning Strategy Classification by Ellis and Sinclair

**Ellis and Sinclair (1989)**

**1. Metacognitive strategies**
- Advance preparation, or directing attention

**2. Cognitive strategies**
- Audio-recording such as recording themselves for the purpose of self-assessment

**3. Social strategies**
-Discussing or sharing ideas and experiences with other students or teachers

**4. Communication strategies**
- Asking a speaker to speak more slowly or clearly

Ellis and Sinclair (1989) have made a list of learning strategies under four categories which are Metacognitive, Cognitive, Social and Communication strategies. These learning strategies are based on the work of O'Malley et al (1985), and the studies described in Faerch and Kasper (1983) and Riley (1985). They also extended these categories and adapted descriptions where they found necessary.

### 2.3.5. Language Learning Strategy Classification System by Oxford

**Oxford (1990)**

**1. Direct Strategies**

**1.1. Memory strategies**

- Creating mental linkages such as grouping, associating, or placing new words into a context

**1.2. Cognitive strategies**

-Practising such as repeating, formally practising with sounds and writing systems, or recombining

**1.3. Compensation strategies**

- Guessing intelligently such as using linguistic clues, or using other clues

**2. Indirect Strategies**

**2.1. Metacognitive strategies**

- Centering your learning such as overviewing and linking with already known material, or paying attention

**2.2. Affective strategies**

- Lowering your anxiety such as using progressive relaxation, deep breathing, or meditation

**2.3. Social strategies**

-Asking questions such as asking for clarification or verification

Oxford (1990) has classified language learning strategies into two main categories: direct and indirect strategies. Each has three sub-categories i.e. the direct strategy category consists of memory, cognitive and compensation strategies; and the indirect strategy category consists of metacognitive, social, and affective strategies. Within the category of direct strategies, there are memory strategies, which help learners to store and retrieve new information; cognitive strategies, which learners use to understand and to produce the new language; and compensation strategies, which learners use when they encounter a gap in their knowledge of the target language and which enable them to deal with this deficiency. Within the indirect strategies, they include metacognitive strategies, which relate to the organisation of the learning process; affective strategies, by which learners regulate their emotions, motivations and attitudes; and social strategies, which direct learners' interaction with other people for the purpose of language learning. Learners can have an interaction with teacher, fellow friends, proficient target language speakers or native speakers of the target language. Both direct and indirect strategies do not work separately and clear-cut. In other words, one category of learning strategies may use strategies under another category to help, e.g. the direct strategies

under the category of metacognitive strategies "centering your learning" or "overviewing and linking with already known material". This strategy seems to involve the use of a number of direct strategies such as one or more strategies under the category of memory strategies e.g. semantic mapping; cognitive strategies e.g. practising (recognising formulas and patterns); analysing and reasoning, e.g. analysing expressions or "creating structure for input and output", e.g. highlighting. Therefore, there is an interaction among the various categories. However compensation strategies may be regarded as communication strategies by other researchers as it seems to serve the learners' communication purpose when they have a problem in using the target language. Still it serves to promote language learning.

### 2.3.6. Language Learning Strategy Classification System by O'Malley and Chamot

| | |
|---|---|
| **O'Malley and Chamot (1990)** | **1. Metacognitive strategies** |
| | - Planning such as previewing the organising concept or principle of an anticipated learning task (advance organisation) |
| | **2. Cognitive strategies** |
| | - Repetition such as repeating a chunk of language-a word, or a phrase- in the course of performing a task |
| | **3. Social/Affective strategies** |
| | - Questioning for clarification such as asking for explanations, verification, or posing questions to self |

O'Malley and Chamot (1990) classify learning strategies into three general categories which are (1) metacognitive strategies, which learners make use of their knowledge about cognitive processes and constitute an attempt to regulate language learning by means of planning, monitoring and evaluating; (2) cognitive strategies, which refer to the steps or operations used in problem-solving that require direct analysis, transformation or synthesis of learning; and (3) social-affective strategies, which concern the ways in which learners select to interact with other learners and native speakers. The classification system of the learning strategies is based on research on the use of learning strategies in second language acquisition and learning and is in accordance with the information-processing model as appeared in the

main categories i.e. cognitive, metacognitive, and social and affective. They also examine some studies of learning strategies for learning tasks in a first language. According to Chamot (1987), a valuable insight gained from reviewing the studies was identification of a classification scheme that was capable of subsuming the various types of learning strategies identified by second language researchers.

### 2.3.7. Language Learning Strategy Classification by Coleman

**Coleman (1991b)**

**1. The strategies which are related to the taught programme**

**1.1. Before the class**
- Preparing the lesson before coming to class

**1.2. In the class**
- Asking questions, or paying attention

**1.3. After class**
- Contacting the teacher and asking questions, or contacting friends

**2. The strategies which are extra to the class**
- Mixing with English speakers, or using libraries or media

**3. The strategies which are termed as 'bucking the system'**
- Finding privileged information, or sitting near bright students

Apart from the previously shown language learning strategies classification system of some recognised researchers in the field, Coleman (1991b) has another interesting and practical way of classifying learning strategies, especially learning language in the setting of large classes. He proposes in "Strategies in the large class" in addition to the learning strategies such as cognitive, metacognitive, affective and social strategies, that it may be necessary to consider a new category of language learning strategies; he proposes an "environmental" or "contextual" strategy. In this category, some features of both the social and metacognitive strategies would be shared, but it would enable researchers to explore how successful and unsuccessful language learners manage themselves in the context of a large class. The list of the strategies under his classification was given by overseas participants in some of the in-service teacher development programmes at School of Education, the

University of Leeds, and all of whom have had experience of studying in large classes in their respective home countries. Further, he has identified language learning strategies of university students based on the preliminary data provided by approximately 40 Thai teachers, most of who work as university teachers. These teachers are believed to represent good language learners due to their high accomplishment in language learning. They produced a list of 77 language learning strategies altogether and the obtained data were classified under 18 strategy types. These 18 strategy types were further grouped into three broad categories as elaborately developed by the investigator.

### 2.3.8. Language Learning Strategy Classification by Intaraprasert

**Intaraprasert (2000)**

**1. Classroom-Related Category**

**CRP 1: To be well-prepared for the lessons**
- SCRP1.1. Study the lessons beforehand such as the subject content or the objective of each lesson
- SCRP1.2. Try some exercises in advance
- SCRP1.3. Prepare oneself physically
- SCRP1.4. Do the revision of the previous lessons

**CRP 2:To keep up with the teacher while studying in class**
- SCRP 2.1. Listen to the teacher attentively
- SCRP 2.2. Attend the class
- SCRP 2.3. Take notes while studying in class with the teacher
- SCRP 2.4. Think to oneself along the line with the teacher

**CRP 3: To get the teacher's attention in the classroom**
- SCRP 3.1. Try to have an interaction with the teacher by asking or answering questions while studying in class
- SCRP 3.2. Take part in classroom activities other than asking or answering questions
- SCRP 3.3. Try to have an interaction with the teacher outside the class time so that the teacher will pay attention to one in the class

**CRP 4: To learn new vocabulary for the classroom lessons**
- SCRP 4.1. Memorise new vocabulary items with or without the vocabulary lists
- SCRP 4.2. Use a dictionary to check the meaning of a new vocabulary item either in Thai or in English
- SCRP 4.3 Guess the meaning of a new vocabulary item from the contexts
- SCRP 4.4. Look at the root or the form of a new vocabulary item
- SCRP 4.5. Group new vocabulary items according to their similarity in meanings or spellings
- SCRP 4.6. Use new vocabulary items to converse with peers

**CRP 5: To avoid being distracted while studying**
- SCRP 5.1. Try to get a seat in the front row
- SCRP 5.2. Try not to talk with other students while studying
- SCRP 5.3. Sit next to a bright or quiet student
- SCRP 5.4. Try not to pay attention to what other students are doing while studying

**CRP 6: To solve problems encountered in the classroom lessons**

SCRP 6.1. Ask the teacher in class either immediately or when appropriate
SCRP 6.2. Ask the teacher after class
SCRP 6.3. Ask a classmate or classmates either in class or outside class
SCRP 6.4. Ask people other than one's regular teacher or classmates
SCRP 6.5. Discover the answer by oneself

**CRP 7: To pass the English tests**

SCRP 7.1. Do the revision of the lessons only for the examination
SCRP 7.2. Practise tests from different sources
SCRP 7.3. Join a tutoring group
SCRP 7.4. Attend extra-classes

**2. Classroom-Independent Category**

**CIP1: To expand one's knowledge of English vocabulary and expressions**

SCIP1.1. Read printed materials in English such as billboards, leaflets, newspapers and magazines
SCIP1.2. Play games in English such as crosswords and computer games
SCIP1.3. Watch an English-speaking film
SCIP1.4. Listen to English songs
SCIP1.5. Have a conversation with foreigners especially native speakers of English
SCIP1.6. Use the Internet

**CIP2: To improve one's listening skill**

SCIP2.1 Watch an English-speaking film
SCIP2.2. Listen to English songs or cassette tapes of English conversations
SCIP2.3. Listen to a radio programme in English
SCIP2.4. Watch TV programmes in English

**CIP3: To improve one's speaking skill**

SCIP3.1. Talk to oneself
SCIP3.2. Try to imitate a native speaker from media such as films or cassette tapes
SCIP3.3. Converse in English with peers, siblings, or foreigners
SCIP3.4. Use a computer programme like a 'chat' programme
SCIP3.5. Go to a language school

**CIP4: To improve one's writing skill**

SCIP4.1. Correspond in English by electronic mail (e-mail) or a letter
SCIP4.2. Practise writing sentences or essays in English
SCIP4.3 Practise translating from Thai into English

**CIP5: To acquire one's general knowledge in English**

SCIP5.1. Seek an opportunity to be exposed to English
SCIP5.2. Go to a language school
SCIP5.3. Read printed materials such as books, textbooks or magazines in English
SCIP5.4. Surf the Internet

Intaraprasert (2000) has another way of classifying language learning strategies. A total of 52 individual language learning strategies were generated based on the information obtained through student interviews conducted with Thai engineering students in 1998. These 52 language learning strategies were primarily classified according to the purposes for which they were employed. As a result, 12 purposes of strategy use emerged and these purposes were further grouped into two main categories, which are Category 1: Classroom-Related

Category (CR), comprising seven purposes (CRP) and thirty individual learning strategies (SCRP); and Category 2: Classroom-Independent Category (CI) comprising five purposes (CIP) and twenty-two individual learning strategies (SCIP). The inventory has been improved from time to time since the first classification in 1999.

In conclusion, as shown above, different researchers have different ways of classifying language learning strategies. Their distinction seems to overlap, but is not identical (Larsen-Freeman and Long, 1991). The most common or outstanding strategy categories are cognitive, metacognitive, social and affective.

## 2.4. Research on Language Learning Strategies

As mentioned earlier, many of the initial studies of language learning strategies were directed at defining learning strategies and developing taxonomies that could be used to classify them. The primary purpose of this section is to describe a survey of research on language learning strategies carried out by different researchers in different contexts.

The research findings presented show that although many variables have been investigated, e.g. level of proficiency, the gender of students, and 'perceived' class size, there are other aspects which should be taken into consideration. With this in mind, the researcher attempts to present some analysis of past research including the purpose of study, the status of the target language in the context where the research has been conducted or the native language of the learners, the educational level of the participants, the main instrument(s) used in the study, and investigated factors or variables. Table 2.1. below shows the structure of the analysis.

**Table 2.1 : Research on Language Learning Strategies Analysis**

| Researcher | Language Learner (LL) | Focus of Study | Educational Level | Method of Data Collection | Investigated Variable |
|---|---|---|---|---|---|
| **1)Politzer 1983** | NSE learning FL | Good LL's learning behaviours | Tertiary | Questionnaire | Students'grade -Language being learned course level - Gender |
| **2)Chesterfield &Chesterfield 1985** | NNSE learning ESL | Overall Strategy Use | Primary | Observation | Level of Language Proficiency (LLP) |
| **3) Politzer & McGroarty 1985** | NNSE learning ESL | - Overall Strategy Use - Strategy use by good and poor LL's | Adult | - Interview - Questionnaire | - LLP - Students' cultural background - Field of specialisation |
| **4) Ramirez 1986** | NSE learning FL | - Strategy use by good LL | Secondary | Questionnaire | LLP |
| **5) Huang& vanNaerssen 1987** | NNSE learning EFL | Strategy use by good and poor LL's | Tertiary | - Interview - Questionnaire | LLP |
| **6) Pearson 1988** | NNSE learning EFL | Strategy use by good and poor LL's | Adult | Interview | LLP |
| **7) Porte 1988** | NNSE learning EFL | Strategy use by poor LL | Adult | Interview | - LLP - Language learning experience |
| **8) Tran 1988** | NNSE learning ESL | -English language acculturation and strategy use | Adult | -Interview - Questionnaire | -Age -Gender |

* **NSE** stands for Native Speakers of English; **NNSE**: Non-native Speakers of English; **EFL**: English as a Foreign Language; **ESL**: English as a Second Language; **FL**: Foreign language; **LL**: Language Learner

**Table 2.1 (cont) : Research on Language Learning Strategies Analysis**

| Researcher | Language Learner (LL) | Focus of Study | Educational Level | Method of Data Collection | Investigated Variable |
|---|---|---|---|---|---|
| **9) Prokop 1989** | NSE learning FL | -Patterns of strategy use | Tertiary | Questionnaire | -Level of instruction -Achievement -Gender -Motivation |
| **10) Oxford & Nyikos 1989** | NSE learning FL | Overall Strategy Use | Tertiary | Questionnaire | - LLP -Gender of learner -Major field of study - Course status |
| **11) Ehrman & Oxford 1989** | NSE learning FL | Overall Strategy Use | Adult | Questionnaire | - LLP -Gender -Aptitude - Learning style -Motivation -Personality type - Anxiety -Teacher perceptions |
| **12) Nyikos 1990** | NSE learning FL | Overall Strategy Use | Tertiary | Experiment | -Gender |
| **13) Khaldi 1990** | NNSE learning EFL | - Strategy use by good and poor LL's | Tertiary | -Interview - Questionnaire | -Previous learning experience -Teacher's background and teaching practice |
| **14) Vann and Abraham 1990** | NNSE learning ESL | Strategy use by poor LL | Adult | Think-aloud | Level of language proficiency |
| **15) Coleman 1991b** | NNSE learning EFL | Strategy use by good LL | Adult | Questionnaire | Perceived Class Size |
| **16) Sarwar 1992** | NNSE learning ESL | Overall strategy use | Tertiary | Questionnaire | -LLP - Perceived Class Size |
| **17) Nyikos & Oxford 1993** | NSE learning FL | Overall strategy use | Tertiary | Questionnaire | -LLP -Motivation -University major |
| **18) Green & Oxford 1995** | NNSE learning ESL | - Overall strategy use - Strategy use by good and poor LL's | Tertiary | Questionnaire | - LLP -Gender |

**NSE** stands for Native Speakers of English; **NNSE**: Non-native Speakers of English; **EFL**: English as a Foreign Language; **ESL**: English as a Second Language; **FL**: Foreign language; **LL**: Language Learner

**Table 2.1 (cont) : Research on Language Learning Strategies Analysis**

| Researcher | Language Learner (LL) | Focus of Study | Educational Level | Method of Data Collection | Investigated Variable |
|---|---|---|---|---|---|
| **19) Mebo 1995** | NNSE learning EFL | Overall strategy use | Tertiary | -Observation - Interview Questionnaire | -LLP -Perceived Class Size |
| **20)MacIntyre & Noels 1996** | NSE learning FL | Overall strategy use | Tertiary | Questionnaire | -LLP - Motivation -Language anxiety |
| **21) Embi 1996** | NNSE learning EFL | -Overall strategy use - Strategy use by good and poor LL's | Secondary | -Observation - Interview - Questionnaire | -LLP -Gender -Perceived Class Size -Ethnic group -Language use outside class |
| **22) Young 1996** | NNSE learning ESL | Strategy use by good and poor LL's | Tertiary | Think-aloud | -Achievement -Gender - Self-rating ability etc. |
| **23) Kayaoglu 1997** | NNSE learning EFL/ESL | Strategy use by good and by poor LL's | Adult | -Observation -Interview -Questionnaire | -Learner beliefs -Assumptions about language learning |
| **24) Gatbonton (1997)** | NNSE learning ESL | Strategy use by good and by poor LL's | Primary | -Interview -Questionnaire (SILL) | -LLP |
| **25) Ely (1998)** | NNSE learning EFL | Strategy use and tolerance of ambiguity | -Tertiary | -Questionnaire (SILL) | -Motivation -Attitude -tolerance of ambiguity |
| **25) Le Thanh 1999** | NNSE learning EFL | -Overall strategy use | -Secondary -Tertiary | -Questionnaire | -Field of study -Level of education |
| **26) Wharton 2000** | NNSE learning French and Japanese | -Overall strategy use - Strategy use by good and poor LL's | -Tertiary | -Questionnaire (SILL) | -LLP -Gender |
| **27)Halbach 2000** | NNSE learning EFL | -Overall strategy use - Strategy use by good and poor LL's | -Tertiary | -Diaries | -LLP |
| **28)Davis-Wiley (2000)** | NNSE learning ESL | -Overall strategy use | -Tertiary | -Questionnaire | -Gender -Field of study |
| **28) Markham (2001)** | NNSE learning EFL | -Overall strategy use | -Secondary | -Questionnaire | -LLP -Gender |

Table 2.1. above summarises the research work on language learning strategies from the early 1980's towards the early 2000's. Through an extensive review of research on language learning strategies, the researcher attempts to show how different variables have been taken into consideration in relation to students' use of language learning strategies. In this regard, the focus will be on two of the three variables, which are to be investigated for the present investigation, i.e. levels of 'perceived' language ability, and gender. Unfortunately, no but one empirical research in the field has been carried out to examine students' use of strategies in relation to the other variable for the present investigation, i.e. field of study. They are now commented as below.

### 2.4.1. Language Learning Strategies and Levels of Language Proficiency

Learners' language proficiency levels, sometimes implied by course level and number of years of language study (Oxford, 1989), has been the variable most studied by researchers in the field of language learning strategies. Generally, researchers classify language learners as one of these dichotomies: successful / unsuccessful; high / low proficiency level; effective / ineffective; or good / poor. A few researchers classify learners' proficiency levels into more categories as high, moderate, and low. No matter how language learners are classified, most research results to date reveal that language learners with a higher proficiency level tend to employ language learning strategies significantly more frequently or have greater range of language learning strategies than those with a lower proficiency level. There are certain learning strategies which were reported to relate to success in language learning. Researchers in the field have examined strategy use in relation to language proficiency levels of different learners in association with their educational levels, i.e. primary, secondary, tertiary, and adults.

The strategy use of primary school children was studied by Chesterfield and Chesterfield (1985). They observed strategy use of 14 Mexican-American bilingual pre-school, and year one children through school experiences. The results of the study revealed some strategies commonly used by these children. These strategies include, for example, repetition, memorisation, talk to self, and appeal for assistance. In 1997, Gatbonton examined the strategy use of beginning ESL learners at the primary level. It was found that those young learners reported employing more concrete cognitive strategies such as practice and repetition. The use of language learning strategies in relation to level of language proficiency levels of secondary school students were examined by a few researchers. For example, Embi (1996) investigated language learning strategies employed by 515 secondary students learning English as a foreign language in Malaysia. The research results revealed that students with a higher level of language proficiency reported employing language learning strategies significantly more frequently than those with a lower level of language proficiency.

Language learning strategies employed by university students have been examined by many researchers to date. Green and Oxford (1995), for example, examined the use of language learning strategies by 374 students learning English at the University of Puerto Rico at Mayagüez. Students were classified as Prebasic, Basic, and Intermediate. The results of the research revealed that the students who were in Basic and Intermediate courses reported employing language learning strategies significantly more frequently than those in the Prebasic courses. However, the results of the study by Khaldi (1990) are different. Khaldi investigated language learning strategies by 171 English major students in Algeria; 99 students were classified as intermediate learners and 72 were advanced learners. These students had at least six years' experience of English at the secondary school level. The

findings showed that learning strategies were inherent to the learning process itself and were used by all learners, irrespective of their proficiency in the foreign language. Some strategies were used more frequently than others with the acquisition of a particular area of the language.

With adult language learners, Pearson (1988), for example, examined the use of language strategies by 5 Japanese adults working in Singapore where English is extensively used at work. Two of the five were then selected for study. Of these, one was classified as a successful language learner and the other one as unsuccessful. The results of the research revealed that the successful language learner reported using strategies significantly more frequently than the unsuccessful one. Another study of adults' strategy use was conducted by Vann and Abraham (1990). They investigated the use of language learning strategies of two Saudi Arabian students taking an intensive English programme (IEP) at an American university through think-aloud protocols. The results revealed that these two unsuccessful learners appeared to be active strategy users, though sometimes they applied strategies inappropriately.

In conclusion, most, if not all, of the studies which take learners' proficiency levels into consideration, suggest a relationship between this variable and students' use of language learning strategies. In general terms, higher-proficiency learners or learners with more years of study differ from lower-proficiency learners or those with fewer years of language study in terms of range and frequency of their use of learning strategies. However, as observed by the researcher for the present investigation, many researchers who examined learners' proficiency levels in relation to their strategy use seem to fail to recognise that the relationship between

strategy use and levels of language proficiency is still complex. That is to say, strategy use may be as much a result of proficiency levels as a cause.

### 2.4.2. Language Learning Strategies and Gender of Students

According to Oxford (1989) most researchers have not investigated gender differences in language learning strategy use. In other words, most researchers have ignored the possibility of different approaches being taken by gender of the learner as an important variable in their investigation. However, gender differences in strategy use may be more important than previously thought. To date, only a small amount of research work has been carried out in this area. One of the studies carried out by Politzer (1983) revealed that variations in use of language learning strategies due to the gender of language learners seemed to be relatively minor, but it showed that female language learners used social learning strategies significantly more frequently than did males.

In a study of adult language learners, Ehrman and Oxford (1989) examined relationships among learner characteristics on language learning strategies in relation to gender differences. The findings of the investigation revealed that female language learners reported using four language learning strategies in four categories significantly more frequently than their male counterparts. These four strategy categories include: general study strategies, authentic language use, strategies for searching for and communicating meaning and self-management strategies. The results of strategy use by 327 Vietnamese adult refugees in America (196 males and 131 females) reported in Tran (1988) are not consistent with most studies. In this study, males were found to use more learning strategies to improve their English language skills than did females. These strategies include taking ESL classes, living in American

neighbourhoods, practising with American friends, having an English tutor, practising with families and Vietnamese friends, and watching television or listening to the radio.

Oxford and Nyikos (1989) examined variables which affected choice of language learning strategies of slightly more than 1,200 American university students learning a foreign language. It was found that female students reported using three out of five learning strategy factors significantly more frequently than did male students. These three strategy factors were: formal rule-based practice strategies, general study strategies, and conversational/input elicitation strategies. Nyikos (1990) discovered another interesting gender difference in her training study of the use of mnemonic strategies for German vocabulary learning among 135 beginning level university foreign language students in the United States of America. These students had no previous experience in learning German. After the training, male students outperformed female students in the colour-plus-picture mnemonic combination, which was explained as potentially relating to males' greater visual-spatial acuity, while female students outperformed their male counterparts in the colour-only condition, which was explained by females' documented interest in colour as an attractor. Embi (1996) reported from his investigation carried out with secondary school students in Malaysia that female students generally reported using language learning strategies significantly more frequently than their male counterparts.

Prokop (1989) conducted a study of the learning strategies employed by 98 Canadian university students learning German. Instead of relying merely on a statistical comparison, he attempted to explore the patterns of students' accepting and rejecting certain learning strategies. The results of the study revealed that male students reported employing risk-taking and creative approach to the learning tasks more frequently than their female counterparts did.

Male students tried to be original in oral and written expressions regardless of correctness of their language. On the other hand, female students tried to get correct responses rather than wanting to be creative in their responses. They more frequently checked the correctness of their pronunciation and grammar. Females also expressed their opinion that they tried to associate new words with actual situations.

From the research findings above, it appears that females were generally reported to use certain learning strategies, i.e. social strategies, significantly more frequently than did their male counterparts. Ehrman and Oxford (1989) and Oxford and Nyikos (1989) reported in their studies that these gender differences might be accounted for by women's greater social orientation, stronger verbal skills and greater conformity to norms both linguistically and academically. However, there is also a special case which other factors such as the male-dominant cultural backgrounds or socio-economic status which is a good predictor for exposure in the target language, may affect learners' strategy use.

In summary, the gender difference findings demonstrate that in most cases of the language learning situations, female language learners use certain strategies significantly more frequently than male language learners. However, after strategy training, males and females both show distinct strengths in using certain types of strategies.

### 2.4.3. Research on Language Learning Strategies Carried Out with Thai Students

As seen earlier in this chapter, there are relatively few research works carried out elsewhere outside the United States. Having looked into what has been done with Thai students in respect of language learning strategies to date, the researcher for the present investigation has found that a few researchers have examined the use of strategies by Thai

students in a more narrowly focused aspect, where only few factors have been taken into consideration. Table 2.2 outlines the research conducted with Thai students.

**Table 2.2 : Research on Language Learning Strategies Conducted with Thai Students**

| Researcher | Language Learner (LL) | Focus of Study | Educational Level | Method of Data Collection | Investigated Variable |
|---|---|---|---|---|---|
| **1) Sarawit 1986** | NNSE learning EFL | - Overall Strategy Use<br>- Strategy use by good LL | Tertiary | Questionnaire | LLP |
| **2) Ratchada-wisitkul 1986** | NNSE learning EFL | - Strategy use by good and poor LL's | Secondary | Questionnaire | LLP |
| **3) Potjasan 1988** | NNSE learning EFL | - Strategy use by good and poor LL's | Secondary | Questionnaire | LLP |
| **4) Rattana-prucks 1990** | NNSE learning EFL | Strategy use by good LL | Tertiary | -Interview<br>-Questionnaire | LLP |
| **5) Mullins 1992** | NNSE learning EFL | Overall strategy use | Tertiary | Questionnaire | LLP |
| **6) Torut 1994** | NNSE learning EFL | - Strategy use by good and poor LL's | Tertiary | Questionnaire | -LLP<br>-University major |
| **7) Lappaya-wichit 1998** | NNSE learning EFL | Strategy use by good and by poor LL's | Tertiary | Questionnaire | LLP |
| **8) Intaraprasert (2000)** | NNSE learning EFL | - Overall strategy use<br>Strategy use by good and poor LL's | -Tertiary | -Interview<br>-Questionnaire | -LLP<br>-Gender<br>-Class size<br>-Type of institution<br>-Location of institution |
| **9) Intaraprasert 2002** | NNSE learning EFL | - Overall strategy use<br>-Strategy use by poor LL's | -Tertiary | -Questionnaire | -Gender<br>-Perception of language learning strategies<br>-Field of study |

The first research work on language learning strategies in Thailand was carried out by Sarawit (1986). It was a very small scale of study. She examined language learning strategies

employed by 31 English major students, also referred to as successful language learners, at Naresuan University, then Sri Nakharinwirot University at Phitsanulok. The Behaviour Questionnaire developed by Politzer and McGroarty (1985) was adapted as the research instrument. The results of the study revealed that these successful language learners did not consistently use language learning strategies that have been identified as successful language learners by Stern (1975). In the same year as Sarawit, Ratchadawisitkul (1986) examined language learning strategies employed by Matthayomsuksa six students in Bangkok Metropolis. The research instrument used was the researcher-developed strategy questionnaire asking students in the aspects of the strategy use to understand the language, the practice of English, and the monitoring of the language learning. The use of language learning strategies between high and low achievers was also compared. It was found that there was a significant difference in strategy use between high and low achievers. Unfortunately, the researcher failed to demonstrate how the strategy questionnaire was developed.

Potjasan (1988) examined the use of learning strategies by 326 high school students in Phitsanulok province in relation to their language achievement levels. The behaviour questionnaire adapted from Politzer and McGroarty (1985) was used as the instrument for data collection. It was found that high achievers reported using 7 learning strategies significantly more frequently than medium and low achievers. These strategies include three strategies in the 'Interaction outside the classroom' category, i.e. ask the speaker to repeat if you do not understand him/her; correct yourself when you notice that you have made a mistake; and 'use gestures to communicate what you want to say'. In 1990, Rattanaprucks looked into the use of language learning strategies by 3 outstanding medical students at Chulalongkorn University. The strategy questionnaire developed by the researcher was used

as the research instrument. The findings revealed that these students generally reported a high frequency of use of certain strategies, for example, ask teacher immediately or when appropriate, ask classmates to solve the problems encountered in the classroom lessons; guess the meaning of a new word from the context; and check the answers against the ones provided by the teacher. Mullins (1992) examined language learning strategies employed by 110 students majoring in English at Chulalongkorn University in Bangkok. The instrument used was the strategy questionnaire developed by Oxford (1990). The findings also revealed that higher-proficiency students reported using strategies significantly more frequently than did lower-proficiency students. Torut (1994) examined language learning strategies employed by 611 university students studying in three different disciplines at three different universities. The strategy questionnaire by Oxford (1990) was used to collect data. The findings revealed that students studying different major subjects employed strategies differently. Unfortunately, the researcher failed to make a clear distinction in terms of frequency of strategy use. Lappayawichit (1998) examined the use of learning strategies by 140 English major students, the Faculty of Arts, Chulalongkorn University. It was found that higher-proficiency students reported employing learning strategies at a high level. The available most recent research in this field conducted with Thai students were carried out by Intaraprasert (2000; 2002). In the former investigation, he examined the use of language learning strategies of 570 engineering students studying in three different types of institutions offering a degree in engineering. The researcher developed the strategy inventory and later generated it to be the strategy questionnaire used for the investigation. The principal findings seemed to confirm the findings of the past research in terms of level of proficiency, and gender. Regarding the latter, 193 unsuccessful language learners learning English at Suranaree University of Technology

were the subjects of his study. Three different variables were taken into account, i.e. students' perception of the usefulness of language learning strategies, gender and field of study. The existing strategy questionnaire developed by the researcher in 2000 as well as the perceptions questionnaire based on the strategy questionnaire were used as the main instruments for data collection. The findings of the research show that these unsuccessful language learners, on the whole, reported low frequency of strategy use even though they reported perceiving language learning strategies very useful for their classroom learning. The results of the data analysis also demonstrate that students' overall reported use of strategies was highly related to their perceptions of the usefulness of language learning strategies. Regarding 'gender', and 'field of study', these two variables were not found to have much relationship to students' choices of strategy use.

It can be seen that the research involving language learning strategies employed by Thai students has been carried out mainly with university students, particularly those majoring in English. Levels of language proficiency or language achievement has been taken as one of the variables relating to students' use of strategy. The research instrument used for data collection was a strategy questionnaire, either researcher-developed, or other researcher's work. The latter researcher-developed instruments were those of Politzer and McGroarty (1985), and Oxford (1990). The researcher who have developed their own strategy inventories include Ratchadawisitkul (1986), Rattana prucks (1990), and Intaraprasert (2000;2002).

**2.5. Summary**

The term 'learning strategy' has been used on a number of occasions by different researchers to refer to the purposeful actions learners engage in more or less consciously with the goal of promoting their understanding of or ability in the target language. However,

defining language learning strategies is still very subjective. This means that different researchers have defined language learning strategies differently. Some researchers see language learning strategies as mental processes which are unobservable; some see them as observable behaviours; and others see them as both. The researcher has defined learning strategies, specifically for the present investigation, as any set of techniques including learning behaviours whether observable or unobservable reported being employed by students in order to improve their language skills in general outside a classroom setting.

In respect of language learning strategy classification, it also appears that researchers have used different classification systems. Researchers may have derived their classification from their personal experience as language learners or language teachers; on other researchers' work, or on their own research work. This may be concluded that defining and classifying language learning strategies depends on an individual researcher regarding their research population, the context where a research work has been carried out, and personal interests. However, as shown earlier, there are a few fundamental categories which a few researchers have applied in their classification schemes, i.e. cognitive, metacognitive, and social/affective. Tudor (1996) suggests that more detailed breakdown of learning strategies is still required. There is no single perfect definition that can apply to every situation. As Oxford (1990) points out, it is important to remember that any current understanding of language learning strategies is necessarily in its infancy, and any existing system of strategies is only a proposal to be tested through practical classroom use and through research. It is still important to recognise the limits of the current understanding of this area of language learning. At this stage in the review of language learning strategy research, there is no complete agreement on exactly what language learning strategies are; how many language learning strategies exist;

how they should be defined, demarcated, and classified; and whether it is - or ever will be- possible to create a real, scientifically validated hierarchy of strategies. Above all, it has enabled the researcher to locate the present investigation in the context of the reviewed research, as well as authors' opinions.

Past research has been carried out in a variety of settings, target populations, methods of data collection, focal points of the investigation, and other factors taken into consideration when looking into learners' choice of strategy use. Chapter 3 deals with how the present investigation has been carried out.

# CHAPTER THREE

## RESEARCH METHODOLOGY AND THEORETICAL FRAMEWORK IN LANGUAGE LEARNING STRATEGIES

### 3.1. Introduction and Purpose of the Chapter

The purpose of this chapter is to discuss the conceptual framework of the research, as well as some general principles of research design which apply to the present investigation. It discusses research methods which have been used in the field of language learning strategies, the research questions and the conceptual framework for the present investigation. This is followed by a discussion of the data collection procedures and how the data obtained are reported, analysed, and interpreted. The last part of this chapter deals with sampling and the rationales behind the choice of subjects for the investigation and the characteristics of the research population.

Robson (1993) suggests that any research work can be classified in terms of its purpose, and the research strategy used. The purpose of any research work can be explanatory, descriptive, or exploratory. It can possibly be a combination of two or all of these purposes, but often one will predominate. The purpose may also change as the investigation proceeds. The purpose of the research work can be classified by looking at what the researcher wants to find out. Robson explains his classification of the purposes of research work as follows:

*1. Explanatory* : a researcher seeks an explanation of a situation or problem, usually in the form of causal relationships. This type of research may be qualitative and/or quantitative.

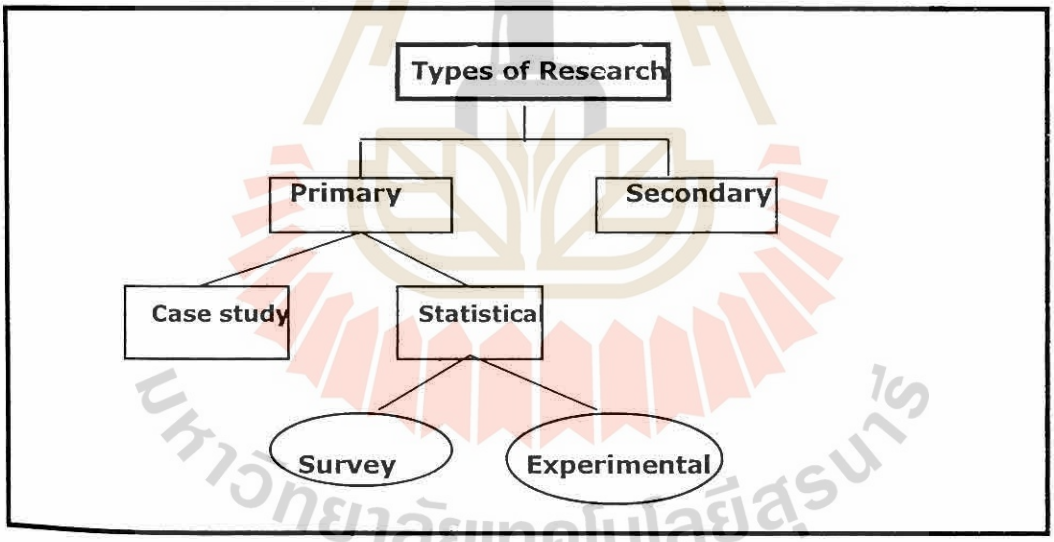
*2. Descriptive* : a researcher tries to portray an accurate profile of persons, events or situations. It requires extensive knowledge of the situation to be researched or described so that a researcher knows appropriate aspects on which to gather information. This type of research may be qualitative and/or quantitative.

*3. Exploratory* : a researcher tries to find out what is happening; to seek new insights; to ask questions; or to assess phenomena in a new light. This type of research is usually, but not necessarily, qualitative.

In addition to research purposes, it is also worth looking at a research design which is concerned with the planning of the study. Johnson (1977) proposes that the research design describes the purposes of the study, how subjects of the study are to be selected, methods or procedures to be followed, measurements to be collected and comparisons or other analyses to be made. Further, Robson (1993) suggests that whatever research strategy a researcher chooses or feels appropriate, the research questions must be the primary consideration as they have a strong influence on the strategy to be chosen.

In order to provide an overall picture of research design, Figure 3.1 below shows types of research as developed by Brown (1988 cf. Nunan 1992: 9).

**Figure 3.1 : Types of Research**




In Figure 3.1, Brown (1988) classifies types of research as primary and secondary. The distinction between primary and secondary research is based on how the information or data is obtained. In the primary research model, data is obtained from primary sources, e.g. a group of students who are learning a foreign language. In the secondary research

model, data is obtained through reviewing literature in a given area and synthesising the work carried out by other researchers. Primary research is subdivided into two categories: case studies and statistical studies. The latter are further subdivided into survey studies and experimental studies.

When constructing an investigation, the researcher must consider which of the types of primary research is most appropriate given the purpose of the work, i.e. explanatory, descriptive, or exploratory. Robson (1993) has suggested the appropriate use of these three types of research as follows:

1. *Case studies* are appropriate with the 'how' and 'why' research type of questions. The focus of the research is on current events. The case studies are used for developing detailed, intensive knowledge about a single case or of a small number of related cases.

2. *Survey studies* are appropriate with the 'who, what, where, how many and how much' research type of question. They are used for collecting information in standardised form from groups of people, usually employing questionnaires or interviews.

3. *Experimental studies* are appropriate with the 'how and why' research type of question. Unlike case studies or survey studies, the control of variables and events is necessary. Hypothesis testing is always involved.

The purpose of the present investigation is to look into out-of-class language learning strategies reported as being employed by students learning English at Suranaree University of Technology. Taking into account the purposes of research outlined above, the present investigation can be classified as exploratory and descriptive. The research is basically quantitative.

### 3.2. Methods in Language Learning Strategy Research

Johnson (1977: 9) states that "research methods are procedures a researcher follows in attempting to achieve the goals of a study". Hence, the research methods used to

investigate language learning strategies are procedures a researcher follows in attempting to achieve the goals of a study of language learning strategies, i.e. to elicit information about language learning strategies employed by students or language learners when they learn a language, especially the target language.

Oxford and Crookall (1989) suggest that language learning strategy research involves a range of procedures from simple lists of strategies to much more sophisticated investigations. However, Cohen and Scott (1996) have argued that at the present time, no single research method prevails in the field; certain research methods are well established but imperfect. Since there are many methods which a researcher can use to investigate how learning strategies are employed by students or language learners in order to cope with language problems, or to enhance their language learning, each method has both weak and strong points, but whatever method a researcher employs, he or she must take the main purpose of the study into consideration (Robson, 1993).

In this section, the main research methods or procedures used to gather data on language learning strategies will be discussed. This is followed by the framework of methods for data collection for the present investigation. The main research methods for language learning strategies include: 1) Classroom Observations; 2) Oral Interviews; 3) Written Questionnaires; 4) Think-Aloud; and 5) Diary Studies

### 3.2.1. Classroom Observations

Attempts have been made to identify different language learning strategies by observing language learners performing a variety of tasks, usually in classroom settings (Ellis, 1994). Observations are easy to use in the classroom and they can be conducted either formally or informally (Oxford and Burry-Stock, 1995). Meaningful classroom observations of language learning strategy use are possible for certain kinds of observable strategies, e.g. co-operating with peers, asking questions for clarification or verification,

and gesturing to convey meaning, but they are not possible for other unobservable or invisible language learning strategies such as associating/elaborating, or using imagery (Oxford and Crookall, 1989). Consequently, some researchers (Rubin,1981 for example), found that this method was not very productive, as it reveals nothing about the mental strategies that learners are likely to use and because frequently classroom teachers afford little opportunity for learners to exercise behavioural language learning strategies. Naiman et al. (1978), Cohen and Aphek (1981), and Graham (1997) also found that this method singly is inadequate to provide much information about language learning strategies that learners employ. However, this method is still fruitful and workable as Chesterfield and Chesterfield (1985) reported in a study that revealed a number of language learning strategies used in a bilingual classroom by young learners. As evidenced in the Chesterfields' study, we may be able to take it that classroom observation works better with young children whose behaviour may serve as a good indicator of their mental activity (Ellis, 1994).

### 3.2.2. Oral Interviews

Apart from classroom observations, in investigating a student's language learning strategies, a researcher can ask the student to describe what language learning strategies he or she uses and how they are used to deal with aspects of language learning. One way to do this is to interview students. A student interview calls for retrospective accounts of language learning strategies he or she has employed (Ellis, 1994).

Interviews can be characterised in terms of their degree of formality and can be placed on a continuum ranging from unstructured through semi-structured to structured (Nunan, 1992). Whether they are structured or unstructured, student interviews provide personalised information on many types of language learning strategies which would not be available through classroom observations (Oxford and Burry-Stock, 1995). An

unstructured interview is guided by the responses of the interviewee and the interviewer exercises little or no control over the interview. This makes the direction of the interview relatively unpredictable. In a semi-structured interview, the interviewer has a general idea of where he or she wants the interview to go, and what should come out of it. However, the interviewer does not enter the interview with a list of predetermined questions. On the other hand, in a structured interview, the agenda is totally predetermined by the interviewer. Whatever type of interview a researcher wants to use as a method for data collection, he or she should consider the nature of the research and the degree of control he or she wishes to exert. Of the three types of interview mentioned above, the semi-structured interview seems to be popular among researchers. The reason for its popularity is its flexibility as supported by Nunan (1992: 149) "...because of its flexibility, the semi-structured interview has found favour with many researchers, particularly those working within an interpretative research tradition". Besides the flexibility it gives to the interviewer, the semi-structured interview also gives the interviewee a degree of power and control over the course of the interview. However, Robson (1993) has made a comment in this regard that to make profitable use of its flexibility calls for skill and experience in the interviewer. The lack of standardisation raises concerns about reliability. Biases are difficult to rule out, and the interview may be time-consuming.

### 3.2.3. Written Questionnaires

Like oral interviews, written questionnaires are used to elicit learner responses to a set of questions, and they require the researcher to make choices regarding question format and research procedures (Cohen and Scott, 1996). In addition, Oxford and Crookall, (1989) suggest that written questionnaires typically cover a range of language learning strategies and are usually structured and objective (closed) in nature. In other words, informants have little or no freedom in providing their own responses to the questions as

choices for responses are normally provided. Question items in written questionnaires can range from those asking for 'yes' or 'no' responses or indications of frequency (e.g. Likert Scales) to less structured items asking respondents to describe or discuss language learning strategies they employ in detail. In this scenario, the respondents have more control over the information included in their responses. The responses to structured questionnaires may be simplistic or contain only brief information about any one language learning strategy. The questionnaires that require the respondents to indicate frequency of use of language learning strategies, like Likert Scales, are easy and quick to give, provide a general assessment of each respondent's typical strategies, and may be the most cost-effective mode of strategy assessment. They are also almost non-threatening when administered using paper and pencil under conditions of confidentiality (Oxford and Burry-Stock, 1995). Further, written questionnaires enable the researcher to collect data in field settings and the data obtained are more amenable to quantification than those collected through free-form field notes, participant observing journals or the transcripts of oral language (Nunan, 1992). However, there are a few weak points with this kind of questionnaire. The data may be superficial. There is little or no check on honesty or seriousness of responses. This may be seen as a challenge for a novice researcher with regard to his or her own ability to deal with such limitations. More importantly, while analysis may be easy, but time-consuming, interpretation can be problematic (Robson, 1993; and Walker, 1985).

### 3.2.4. Think Aloud

Gerloff (1987:137) defines a think-aloud protocol as "a moment-by-moment description which an individual gives of his or her own thoughts and behaviours during the performance of a particular task". Methods of thinking aloud have been used mainly to investigate the processes of translation and communication in a foreign language

(Feldmann and Stemmer, 1987). In the literature regarding language learning strategies, the use of verbal protocols which require the subjects to think aloud while tackling a task was unusual (Cavalcanti, 1987). However, some researchers have used this method to investigate language learning strategies of students. That is to say, the researcher listens to learners as they think aloud. In doing this, Oxford and Burry-Stock (1989) note that 'think aloud' protocols offer the most detailed information of all because the student describes strategies while doing a language task, but these protocols are usually used only on a one-to-one basis. They also take a great deal of time, reflect strategies related only to the task at hand and are not summative across students for group information. To put it simply, this method provides a researcher with individual information rather than as a group. The procedure may also interfere with the task which the learner is carrying out.

### 3.2.5. Diary Studies

In an effort to collect data on language learning strategies employed by students over a period of time, some researchers have turned to diaries as a research tool (Cohen and Scott, 1996). Bailey (1990 :215) defines the diary study as "a first-person account of a language learning or teaching experience, documented through regular, candid entries in a personal journal". Since diaries are learner-generated and usually unstructured, the entries may cover a wide range of themes and issues. They may include learners' written reports of the cognitive, metacognitive, and social strategies they use daily in language learning (Cohen and Scott, 1996). Further, diaries are usually subjective or open-ended, requiring a student's constructed responses, and free-form although they can be guided by teacher suggestions (Oxford and Crookall, 1989). Bailey and Ochsner (1983 cf. Nunan 1992: 120) suggest ways to shape diary studies in order to make them suitable as research documents. For example, the data collection should be as candid as possible despite the potential embarrassment of some of the entries. The initial database can be revised for public

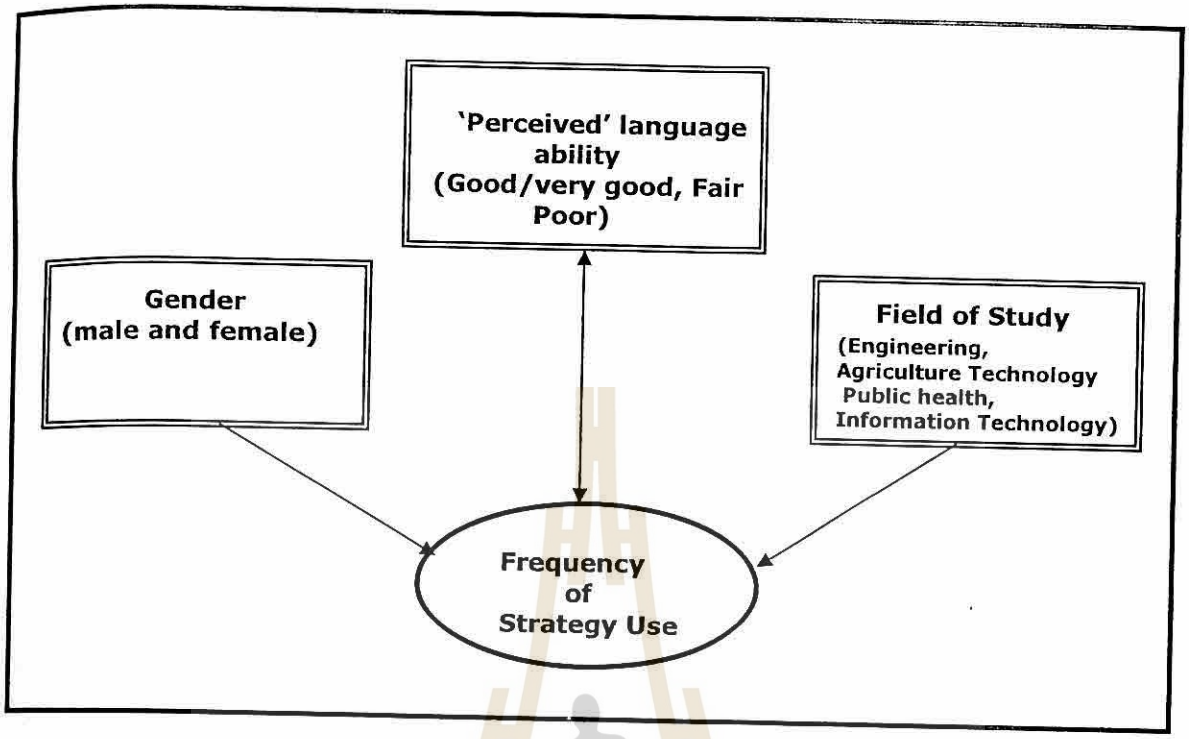
consumption. Patterns and significant events are identified and the factors which appeared to be important in language learning are discussed and interpreted. Nunan (1992) suggests that it is probably a good idea to avoid analysing and interpreting the data until a substantial amount of material has been collected. This can help the researcher avoid coming to premature conclusions which may be inaccurate or incorrect. Diary studies may be highly problematic for a researcher because:

1. learners may be unfamiliar with diaries
2. researcher and learners may not share the same language, so there is a problem which language should be used
3. learners may want a 'reward' for the effort, e.g. feedback from the researcher.

### 3.3. Theoretical Framework and Rationale for Selecting and Rejecting Variables for the Present Investigation

The main purpose of carrying out an extensive review of available related literature and other materials on language learning strategies in Chapter 2 was to find evidence which would aid the researcher in developing a theoretical framework, locating the present investigation in the context of past research and other authors' opinions, and creating the rationale for selecting and rejecting variables for the present study. Figure 3.2 below demonstrates the theoretical framework for examining language learning strategies reported being employed by students learning English at Suranaree University of Technology.

**Figure 3.2. : Theoretical Framework for the Present Investigation**




The proposed theoretical framework, which essentially is based on the related literature on language learning strategy research, demonstrates that types of language learning strategies and learner's frequency of language learning strategy use have conventionally been hypothesised to have a one-directional relationship with gender (male and female), and students' field of study (Engineering; Agricultural Technology; Public Health; and Information Technology). With regard to 'perceived' English language ability (good/very good; fair; and poor), the relationship between learner's strategy use and this variable is 'two-directional' or 'mutual'. The relationship between learner's 'perceived' English language ability, and learner's strategy use is still complex. That is to say, 'perceived' language performance could be a result of language learning strategy use as much as a cause.

Through an extensive review of research on language learning strategies in Chapter 2, we can see that a number of variables, which are believed to be related to students' use of strategies, have been taken into account for investigation by researchers in the field. Some

variables have been reported to have a strong relationship, while others have little or no relationship with students' use of strategies. This largely depends on the context of an investigation, for example, the subjects of the investigation. There are still some variables which seem to be neglected by past researchers. As the present investigation has been designed to examine strategy use of students learning English at Suranaree University of Technology, the researcher has to look at the university context in order to determine the variables to be investigated. One of the major motivations for carrying out this study has been the hope that it will be possible to make use of the research findings to help improve language learning and teaching to students at this university. Initially, the philosophy of foreign language instruction suggested by Cohen (1998) was reviewed. Cohen suggests that at present foreign language instruction has changed to be more interactive and less teacher-centred, and this particular investigation has been intended to find an appropriate way to encourage students learning English at Suranaree University of Technology to take responsibility for their own learning and to become more self-reliant. Therefore, students' gender, their perception of language ability levels and their field of study have been the focal points of interest for the researcher for the present investigation. The theoretical framework illustrates that three main types of variables could be investigated. However, it is impossible for the researcher to investigate most, if not all, of the variables found in the related literature. In this respect, it is recognised that previous researchers have investigated some learner-related variables more extensively (e.g. previous language learning experience, and motivation), than other variables in relation to learner's strategy use. A few variables have been neglected by most researchers (e.g. gender and field of study).

To be practical and realistic, the researcher for the present study will explore the variables that have been neglected by most researchers in order to build up a new

perspective in the area of language learning strategies. These variables include two learner-related variables (gender and field of study); and one language performance variable, i.e. 'perceived' language ability levels. One may argue that the language performance variable has been the focus of most researchers for their investigation. However, a closer look at this variable has revealed that most, if not all, researchers have classified language performance in either one of two categories, i.e. good and poor language learners, or more successful and less successful language learners. Examples of the studies examining strategy use of either good language learners or poor language learners are those carried out by a few researchers, for example, Ramirez (1986); Sarawit, (1986); Porte (1988); Vann and Abraham (1990); Rattanaprucks (1990); and Coleman (1991). Examples of the previous studies which were carried out to explore strategy use by good and poor language learners are those carried out by Politzer and McGroarty (1985); Huang and van Naerssen (1987); Pearson (1988); Khaldi (1990); Green and Oxford (1995); Embi (1996); Young (1996); Ratchadawisitkul (1996); Kayaoglu (1997); and Intaraprasert (2000). In this study, the researcher will simultaneously look into three different levels of 'perceived' language ability, i.e. good/very good; fair; and poor. It is noted that students who perceived or rated their English language ability in this study can equate either good or effective language learners in the past research. Similarly, those who perceived their ability as 'poor' can be compared to either poor or ineffective language learners as classified in previous investigations. Besides strategy use of these two groups (good/very good; and poor), the present study will also explore how students rating their ability as 'fair', who are not classified as either good or poor language learners, report employing language learning strategies. What follows is a discussion of basic assumptions about the relationships between learner's strategy use and the three variables, based upon the theoretical framework, related literature and other authors' opinions.

### 3.3.1. Students' Use of Language Learning Strategies and their Gender

Male and female students are believed to display some differences in using language learning strategies. In other words, males and females have their own ways, though not totally different, of dealing with the target language, be it a foreign or second language. Past research work on language learning strategies, in which the gender of students has been taken into account (e.g. Ehrman and Oxford, 1989; Oxford and Nyikos, 1989; Oxford and Ehrman, 1995; Oxford and Green, 1995; Embi, 1996; Intaraprasert, 2000; 2002), provided empirical evidence with regard to the relationship of this variable with students' use of language learning strategies. In this regard, female students were generally reported to use a greater range of learning strategies than did their male counterparts. However, the studies of Prokop (1989), Nyikos (1990), and Young (1996) revealed that males and females demonstrated different strengths in strategy use. Prokop, for example, reported that male students employed strategies involving risk-taking, and creative approach to learning tasks, while females employed strategies involving getting correct responses rather than being creative. In this study, one of our purposes is to examine whether or not gender differences among these students will associate with their choice of strategy use.

### 3.3.2. Students' Strategy Use and Levels of 'Perceived' Language Ability

Through an extensive review of related literature, the researcher has found that the language ability factor has been one of the most frequently studied by researchers. The results of several recent researches have revealed that students of a higher level of language proficiency tend to report using a greater range of language learning strategies than those of a lower level of language and that the low-proficiency students not only report using fewer learning strategies, but also using them inappropriately. Examples are Pearson, (1988); Khaldi (1990); Vann and Abraham, (1990); Green and Oxford, (1995); and Intaraprasert (2000). Obviously, most studies have concentrated on the study of

language learning strategies at one particular level of language proficiency, either intermediate or advanced level. Alternatively, a number of researchers have classified language learners as successful and unsuccessful, or good and poor language learners. The present investigation will simultaneously explore three distinct levels of 'perceived' language ability, i.e. good/very good; fair; and poor, to see whether or not this difference has an effect on students' use of language learning strategies.

### 3.3.3. Students' Use of Language Learning Strategies and Field of Study

Through the extensive review of literature, only few past empirical studies have been conducted in order to examine the relationship between this variable and students' use of strategies (Ely, 1998; Davis-wiley,2000; and Intaraprasert, 2002). The 2002 study by Intarapraset was carried out with 193 unsuccessful language learners learning English at Suranaree University of Technology and these students were classified as engineering and non-engineering. It was found that there was no relationship between students' field of study and their employment of reported classroom-related language learning strategies. The present investigation, however, aims at exploring such a relationship to see whether or not this difference will affect students' use of out-of-class language learning strategies.

## 3.4. Research Questions

Based on the proposed relationship of learners' use of language learning strategies and the three independent variables (see 3.3 above), and the extensive review of literature, the research questions can be formed. The present investigation attempts to describe the language learning strategies employed by students learning English at Suranaree University of Technology. In order to establish some empirical data on the context of language learning of students at this university, the present investigation is designed to answer the following specific questions:

1. What is the overall frequency of classroom-independent language learning strategies which SUT students reported employing?

2. What is the level of the students' reported use of the individual classroom-independent language learning strategies?

3. Do students' choices of language learning strategies vary significantly with their perceptions of their English language ability? If they do, what are the main patterns of variation?

4. Do students' choices of language learning strategies vary significantly with their gender? If they do, what are the main patterns of variation?

5. Do students' choices of language learning strategies vary significantly according to their field of study? If they do, what are the main patterns of variation?

6. What are the implications of these research findings for the teaching and learning of English for students at Suranaree University of Technology?

### 3.5. Sampling and Rationales for Choice of Subjects

Kane (1983) defines a sample as:

> 'a portion of the universe and, ideally, it reflects with reasonable accuracy the opinions, attitudes or behaviour of the entire group. Further, the result from a sample cannot be expected to be precisely the same as the result obtained from studying the universe. The sample has to be similar to the universe or the population. If not, the results of the study are useless'. (p 90)

In addition to this respect, Cohen and Manion (1994: 89) note that 'the correct sample size depends on the purpose of the study and the nature of the population under scrutiny'.

Since it is doubtful that the entire population can be tested, a sample will have to be used. The sample should provide results similar to those that would have been obtained had the entire population been studied. In selecting the subjects for an investigation, several questions arise (Drew, 1980), for example, whether or not the subjects are appropriate for the research question, whether or not the subjects are representative, and

how many subjects should be used. The first two questions pose no problems, but the third one is more difficult to answer. According to Drew, a sample size presents a problematic question because no set answer or rule may be given. If the sample does not accurately represent the population, interpretations of the results may not be accurate for individuals other than those actually used as subjects. If the researcher is unaware that the sample is unrepresentative, incorrect inferences may be drawn concerning the population in general.

This investigation is broadly exploratory and it is the intention of the researcher to go for a sample size sufficient to serve the purpose of the investigation. The researcher has to keep in mind that the sample size should not be too big to be manageable. In this regard, Locke et al (1998) suggest that the adequacy of the sample is important because it determines whether or not it is reasonable to believe that the results of the research would hold for any other situation or group of people. That is, the subjects should represent students learning English at Suranaree University of Technology. In any event, the researcher must attempt to address some issues when selecting the sample by taking some crucial factors dealing with the variables for the present investigations into consideration as already discussed in Section 3.4. above.

Altogether 488 students studying at four different institutes, i.e. Engineering, Agricultural Technology, Public Health, and Social Technology, participated in this investigation. Principally, the students were selected on the basis of convenience and availability. Having taken the crucial factors in sampling, the researcher was confident that these 488 students would provide the researcher with enough information to serve the purpose of the present investigation and they at least covered three variables for the investigation, i.e. these 488 students: 1) had different levels of English language ability determined by their own perception; 2) represented both male and female students; and 3) were studying in four different institutes.

### 3.6. Characteristics of the Research Population

Tables 3.1 presents the breakdown of the number of participating students related to each variable in the data collection in order to give a context for the results obtained through the data analysis for the present investigation. This breakdown has been described in terms of number and percentage for each of the three variables.

**Table 3.1 : Number of Students by 'Perceived' English Language Ability; Gender; and Field of Study**

| 'Perceived' Language Ability | Poor | Fair | Good/very Good | Total | |
|---|---|---|---|---|---|
| | n=232 (47.5%) | n=245 (50.2%) | n=11 (2.3%) | 488 (100%) | |
| Gender | Female | Male | Total | | |
| | n = 239 (49.0%) | n = 249 (49.0%) | 488 (100%) | | |
| Field of Study | Engineering | Agricultural Technology | Public Health | Information Technology | Total |
| | n=243 (49.8%) | n=51 (10.5%) | n=80 (16.4%) | n=114 (23.4%) | 488 (100%) |

The characteristics of the research population can be summarised as follows:

- The number of students perceiving or rating their English language ability as 'good/very good' is smaller than those perceiving their language ability levels as either 'fair' or 'poor'.
- The number of male students is slightly larger the number of their female counterparts
- The number of engineering students is larger than those studying in the other major fields of study while the number of Agricultural Technology students is the smallest.

The characteristics of the subject distribution are generally satisfactory, though the distribution itself is not perfectly well-balanced or proportioned as planned due to a few

extraneous factors or obligations which were beyond the manageability of the researcher. These factors or obligations can be briefly summarised as follows:

1. The students selection (field of study proportion)

Since Suranaree University of Technology is a specialised university for science and technology and the majority of students are doing engineering, so it is impossible for the researcher to get an ideally well-balanced proportion of the four fields of study. As a result, the number of the participating Engineering students for the present investigation is relatively large when compared with the other three fields of study. However, the students studying the other three majors had provided the researcher with very useful information for the investigation.

2. The students' 'perceived' language ability levels

It is unforeseeable how many students studying at this university would rate their English language ability as 'good/very good'; 'fair'; or 'poor'. As a result of the test for the present investigation, the much larger percentages of students rated their language ability as 'fair' and 'poor' as shown in the Table 3.1 above.

### 3.7. Data Collection Methods for the Present Investigation

In collecting data to answer the research questions for the present investigation, an existing written strategy questionnaire based on Intaraprasert (2000) was used as the main instrument. The purpose of the questionnaire analysis is to answer the research questions in relation to use of language learning strategies of language learners learning English at Suranaree University of Technology with reference to the three variables investigated.

The existing strategy questionnaire used to collect the data was in Thai in order to obtain the maximal results of students' frequency of strategy use of language learning strategies in enhancing their language improvement, as it is the main purpose of the present investigation. It also helped maximise ease of administration and ensured greater

accuracy of results, especially with the language learners who may rate their language ability as 'poor'. The strategy questionnaire has been divided into five sections according to the purpose to be achieved as mentioned earlier in this report. Each section of the strategy questionnaire started with an introductory question asking whether students tried to achieve the stated purpose when carrying out language activities outside their classroom setting. If the response was '**no**', the student was requested to move to the next section. On the other hand, if the response was '**yes**', the student was requested to look at the strategies which he or she had employed and then to choose the appropriate frequency of strategy use from the range '**never**', '**sometimes**', '**often**', or '**always or almost always**'. The researcher recognised that the language learning strategy inventory for the present investigation may not have been comprehensive. Some students in this data collection may report employing a strategy or strategies other than the strategy items provided in the questionnaire in order to achieve the stated purpose of each section. Thus an open-ended choice was provided at the end of each section in the form of '**other (please specify)**'. This form of questionnaire served the purpose of the present investigation, revealing the frequency of actually 'self-reported strategy use' by allowing each language learner to express their own judgement. The researcher did not presume that every student would employ every language learning strategy listed in the questionnaire. Rather, students had the freedom to indicate whether or not they actually employed any of those strategies in order to achieve each purpose. It was also possible that some students did not employ any language learning strategies at all. The advantages of this type of instrument include the fact that it can easily be administered to a large group of students, scoring and data compilation are relatively simple and, more importantly, precise quantitative measures can be derived (Bialystok, 1981). (See the Appendix for the strategy questionnaire). The Alpha Coefficient ($\alpha$) or Cronbach alpha was used to check the internal consistency of the

strategy questionnaire. This coefficient (α) was appropriate for calculating the reliability of items that were not scored right versus wrong (Fraenkel and Wallen, 1993). The reliability estimate based on a 488-student sample is .92 which is high when compared with the acceptable reliability coefficients of .70, which is a useful rule of thumb for research purposes (Fraenkel and Wallen, 1993). Embi (1996) reported the reliability index of his Strategy Questionnaire for an investigation carried out in Malaysia at .93. Oxford and Burry-Stock (1995) reported the reliability coefficients of different SILL versions as a whole ranging from .85 to .95 and Intaraprasert (2000) reported the reliability estimate of .91 of this strategy questionnaire for an investigation carried out with Thai engineering students. Figure 3.1 demonstrates a sample of the questionnaire used as the instrument to elicit students' frequency of use of language learning strategies.

**Figure 3.3 : A Sample of the Language Learning Strategy Questionnaire**

1. Do you try to prepare yourself for the lessons?

□ Yes □ No

If 'No', proceed to 2. If 'Yes', how often do you .....?

| Language Learning Strategy | Always or almost always | Often | Sometimes | Never |
|---|---|---|---|---|
| 1A) study the lessons beforehand such as the content or the objective of each lesson | ---------- | ---------- | ---------- | ---------- |
| 1B) try some exercises in advance | ---------- | ---------- | ---------- | ---------- |
| 1C) prepare yourself physically | ---------- | ---------- | ---------- | ---------- |
| 1D) do the revision of the lessons | ---------- | ---------- | ---------- | ---------- |
| □ other (please specify)..... | ---------- | ---------- | ---------- | ---------- |
| ..... | | | | |
| ..... | | | | |

## 3.8. Methods for Data Generation

In collecting data to answer the research questions for the present investigation, a written strategy questionnaire was used as the main method. It was administered to SUT students who are the research population for this particular investigation between mid-November and early-December 2002. The researcher made every attempt to ensure the readiness of everything for when the data collection started. When meeting with students,

the researcher started the classroom process by briefing them on the purpose of the data collection and the use of the outcome of this investigation. The students were asked to look through the questionnaire and they were allowed to ask about any questions that they did not understand. They were also asked to complete the background questionnaire which was appended to the strategy questionnaire. Generally, most students spent about twenty minutes completing the questionnaire. The researcher was always at hand in case students had any questions while completing the questionnaire. Once the students had finished, they were asked to hand in the questionnaire in person because the researcher wanted to make sure that every part of the questionnaire was correctly completed. The researcher ensured this aspect by looking through page by page. If any incomplete part of the task was spotted, that particular student was asked to go back to complete that part again. A few students tended to leave blanks to indicate that they did not employ the stated strategy; in such cases they were asked to check the appropriate frequency column for that response. Going through the questionnaire page by page was very helpful though it was time-consuming. In this case, the researcher apologised to the students beforehand for any inconvenience caused by the process. As a result, only twelve of the strategy questionnaires were not completed as intended. The written strategy questionnaires were then processed and analysed with the assistance of the Statistical Package for the Social Sciences or SPSS programme in early January 2003. The full results of the analyses as well as a discussion of the findings are presented in Chapter 4 and Chapter 5.

### 3.9. Reporting, Analysing, and Interpreting Data

The data obtained through both phases of data collection were analysed with the assistance of the SPSS programme. The analysis procedures are presented as follows.

The purpose of the questionnaire analysis is to answer the research questions in relation to use of language learning strategies of students learning English at the Suranaree

University of Technology. The data obtained were quantified and the SPSS programme was used to analyse the data. The appropriate statistical methods were employed to analyse the obtained data in order to examine the relationship between students' use of strategies and each of the three variables, i.e 'perceived' English language ability levels; gender of students; and field of study. Further, the researcher sought to identify whether there are patterns of language learning strategy use in relation to each of the three variables, and if so to analyse them to see what kinds of significant variation patterns exist.

The following statistical methods were used through the assistance of the SPSS programme in order to achieve the research objectives regarding analysing and interpreting the data obtained through the written strategy questionnaire.

1. Frequency of Strategy Use

To compare the extent to which strategies were reported to be used frequently or infrequently by students in general, three levels of strategy use: 'high use', 'medium use', and 'low use' based on the holistic mean scores of frequency of strategy use by 488 SUT students are defined.

2. Analysis of Variance (ANOVA)

This statistical method was used to determine the relationship between learners' overall reported strategy use and 1) 'perceived' English language ability levels;2) gender of students; and 3) field of study

3. The post hoc Scheffe test

This test is used to determine the significant differences as the results of ANOVA where the variable has more than two groups. This test is used to indicate which pair of the groups under such a variable contributes to the overall differences.

4. Chi-square Tests

The chi-square tests are employed to determine the significant variation patterns in students' reported strategy use at the individual item level. These tests are employed to check all the strategy items for significant variations by 'perceived' English language ability levels; gender of students; and field of study. This test compares the actual frequencies with which students give different responses on the 4-point rating scale, a method of analysis closer to the raw data than comparisons based on average responses for each item. For the Chi-square tests, responses of 1 and 2 ('Never', and 'Sometimes') were consolidated into a single "low strategy use" category and responses of 3 and 4 ('Often' and 'Always or almost always') were combined into a single "high strategy use" category. The purpose of consolidating the four response levels into two categories of strategy use is to obtain cell sizes with expected values high enough to ensure a valid analysis (Green and Oxford, 1995: 271).

5. Factor Analysis

Factor analysis is a way of determining the nature of underlying patterns among a large number of variables (Cohen and Manion, 1994). For this particular investigation, the researcher seeks the underlying patterns of language learning strategies which emerged from such analysis and the variation patterns which are strongly related to each of the three independent variables.

**3.10. Summary**

In summary, the present investigation was conducted with 488 language learners learning English at Suranaree University of Technology, trimester 2/2002. The instrument used to collect was the language learning strategy questionnaire based on Intaraprasert (2000). The results of the data analyses for the student written strategy questionnaire are to be presented in the next chapters (Chapters 4 and 5).

# CHAPTER FOUR

## DATA ANALYSIS FOR LANGUAGE LEARNING STRATEGY USE I

### 4.1. Introduction and Purpose of the Chapter

The purpose of this chapter is to describe and discuss the research findings of the present investigation at different levels of data analysis. In this chapter, significant variations in frequency of students' reported use of learning strategies are not taken into consideration. Instead, comparisons of frequency of use of learning strategies reported by 488 SUT students based on the holistic mean scores obtained through the strategy questionnaire are determined.

Language learning strategies have been defined, specifically for this investigation, as any set of techniques or learning behaviours, whether observable or unobservable, which SUT students reported employing for the purpose of enhancing their language learning outside the classroom setting, including improving their language skills in general.

As evidenced in the review of literature in Chapter 2, there are many variables affecting the use of language learning strategies by language learners. These variables include language proficiency, gender of students, motivation, previous language learning experience, and course status. In addition to these variables, Cortazzi and Jin (1996) suggest that 'a culture of learning' can also affect learners' use of strategies. The relationship of language learning strategy use to variables such as gender of students, levels of language proficiency, and students' perception of their class sizes, has been one of the focuses of research on language learning strategies. Examples are Politzer and McGroarty (1985), Pearson (1988), Ehrman and Oxford (1989), Mebo (1995), Embi (1996), and Intaraprasert (2000; 2002). Oxford and Green (1995) make an interesting and relevant comment that most of the quantitative research on the comparison of use of

language learning strategies by different groups of students tends to pay more attention to students' overall strategy use or to the use of broad categories of strategy rather than to differences in the use of individual language learning strategies. Furthermore, as evidenced in the literature review in Chapter 2, with regard to variation in students' use of learning strategy in relation to an independent variable, students' language proficiency levels have tended to be the focal point of research more often than other variables such as the gender of students, students' fields of study, or students' foreign language learning experiences.

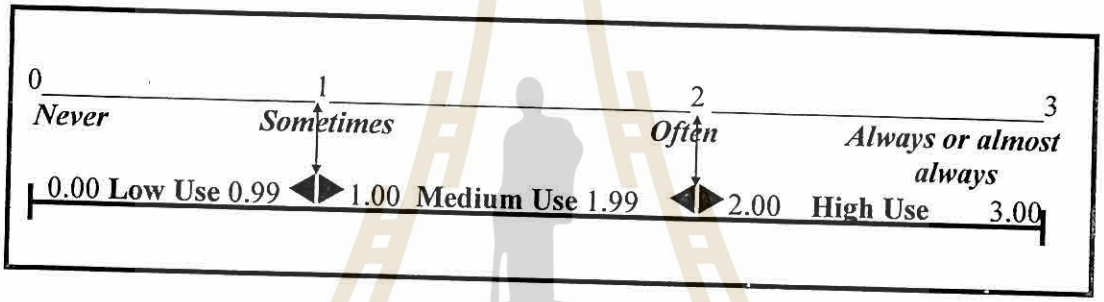
In this chapter, different levels of out-of-class or classroom-independent strategy use are taken into account in order to examine strategy use by the research population in a more detailed manner. Firstly, the frequency of overall strategy use reported by 488 students learning English at Suranaree University of Technology will be explored. This is followed by a more detailed analysis of frequency of use of strategies to achieve a range of classroom-independent purposes (CIP). It is worth noting that each of the five purposes of out-of-class strategy use, as we saw in Chapter 2, consists of between three to five individual language learning strategies. Finally, we will explore students' reported frequency of use of the 20 individual out-of-class language learning strategies (SCIP1.1-SCIP5.4)

## 4.2. Language Learning Strategy Use Reported by 488 Students Learning English at Suranaree University of Technology

As mentioned in the introductory section, simple statistical methods are employed in analysing the data in this chapter though no significant variation patterns are described or discussed at this stage. Rather, the comparisons of students' reported frequency of strategy use in different layers are the focal point of description and discussion. The frequency of students' strategy use has been categorised as 'high', 'medium', and 'low'. This is determined by responses to the strategy questionnaire, where frequency of strategy use is

indicated on a four-point rating scale, ranging from 'never' which is valued as 0, 'sometimes' valued as 1, 'often' valued as 2, and 'always or almost always' which is valued as 3. Therefore, the average value of frequency of strategy use can be valued from 0.00 to 3.00, with 1.50 being the mid-point of the minimum and maximum values. The mean frequency score of strategy use of any purposes or items valued from 0.00 to 0.99 is considered 'low use'; from 1.00 to 1.99 is considered 'medium use'; and from 2.00 to 3.00 'high use'. It is noted that this measure of strategy use frequency is applied to every layer of strategy use throughout the chapter. Figure 4.1 below demonstrates the applied measure.

**Figure 4.1 : The Measure of High, Medium, and Low Frequency of Strategy Use**




### 4.2.1. Frequency of Students' Overall Strategy Use

The result of the holistic mean frequency score across the language learning strategy questionnaire responded to by 488 students learning English at Suranaree University of Technology, Nakhon Ratchasima, Thailand is presented in Table 4.1 below.

**Table 4.1: Frequency of Students' Reported Overall Strategy Use**

| | Number of Students | Mean Frequency Score (Mean) | Standard Deviation (S.D.) | Frequency Category |
|---|---|---|---|---|
| Students' Reported Overall Strategy Use | 488 | 1.05 | .94 | Medium use |

The mean frequency score of 1.05 in Table 4.1 indicates that as a whole, these SUT students reported using out-of-class or classroom-independent language learning strategies with moderate frequency. However, as will be discovered later in this chapter, there are certain language learning strategies which were also reported by these students to fall into the 'high use' or 'low use' categories.

### 4.2.2. Frequency of Use of Language Learning Strategies to Achieve the Classroom-Independent Purposes (CIP)

The frequency of strategy use shown in the preceding section gives us an overall picture of students' use of out-of-class or classroom-independent language learning strategies. This section will offer information on students' reported strategy use in a more detailed manner, i.e. five classroom-independent purposes and are referred to as CIP 1-CIP5. These five purposes of strategy use are:

**CIP 1**: To expand one's knowledge of English vocabulary and expressions;
**CIP 2**: To improve one's listening skill;
**CIP 3**: To improve one's speaking skill;
**CIP 4**: To improve one's writing skill; and
**CIP 5**: To acquire general knowledge in English

The frequency of use of strategies to the classroom-independent purposes is shown in Table 4.2 below.

**Table 4.2 : Frequency of Use of out-of-class Strategies to Achieve Classroom-Independent Purposes (CIP)**

| Classroom-Independent Purpose | Mean Frequency Score (n=488) | Standard Deviation (S.D.) | Frequency Category |
|---|---|---|---|
| CIP 1 | 1.32 | .93 | Medium use |
| CIP 2 | 1.05 | .90 | Medium use |
| CIP 3 | 0.74 | .84 | Low use |
| CIP 4 | 1.00 | .90 | Medium use |
| CIP 5 | 1.21 | 1.01 | Medium use |

With regard to using out-of-class language learning strategies to achieve the five classroom-independent purposes as shown in Table 4.2 above, SUT students reported employing strategies to help to expand their knowledge of English vocabulary and expressions (CIP1) more frequently than the other purposes in the category. Apart from this, students reported medium frequency of use of strategies to improve their listening skill (CIP2), to improve their writing skill (CIP4), and to acquire general knowledge in English (CIP5), while they reported low frequency of use of strategies to improve their speaking skill (CIP3) respectively. In this respect, more investigation may be needed to find out why SUT students did not pay so much attention to improving their productive skills, i.e. speaking and writing, as they did to improving their receptive skills, i.e. listening and reading. The next section will help us explore in detail which individual language learning strategies have been reported more frequently than others by these SUT students.

### 4.2.3. Frequency of Use of Individual Learning Strategies

Sections 4.2.1. and 4.2.2 above showed the use of out-of-class or classroom-independent language learning strategies, and also demonstrated the use of strategies to achieve the range of classroom-independent purposes. In this section, we will explore further and examine the individual language learning strategies which students reported employing in order to enhance their language learning outside the classroom setting and their language improvement in general. The results of the 20 out-of-class language learning strategies to achieve the classroom-independent purposes are detailed below in Table 4.3. To make it easier to see the whole picture of students' reported frequency of use of each individual strategy, these learning strategies are presented in order of their mean frequency scores, ranging from the highest to the lowest. This will create a clearer picture of the out-of-class language learning strategies which have been reported most and least

frequently. The bigger mean frequency score of a strategy use implies that students claimed to employ that particular language learning strategy more frequently. In the same manner, if the mean frequency of a strategy use is small, we may take it that that particular language learning strategy has been reported being employed at a low level. Apart from the mean frequency score of each language learning strategy, the standard deviation (S.D), together with the frequency category for each individual strategy, i.e. high, medium, and low, is presented.

**Table 4.3: Individual Classroom-Independent Strategies and Frequency of Use**

| Individual Strategy for Classroom-Independent Purpose (SCIP) | Mean | S.D. | Frequency Category |
|---|---|---|---|
| **1: SCIP 5.4** Surf the Internet in order to acquire one's general knowledge in English | 1.82 | .97 | Medium Use |
| **2: SCIP 1.4** Listen to English songs in order to expand the knowledge of English vocabulary and expressions | 1.58 | .97 | Medium Use |
| **3: SCIP 2.1** Watch an English-speaking film in order to improve one's listening skill | 1.45 | .90 | Medium Use |
| **4: SCIP 2.2** Listen to English songs or cassette tapes of English conversations in order to improve one's listening skill | 1.42 | .92 | Medium Use |
| **5: SCIP 1.3** Watch an English-speaking film in order to expand the knowledge of English vocabulary and expressions | 1.41 | .92 | Medium Use |
| **6: SCIP 5.1** Seek an opportunity to be exposed to English in order to acquire one's general knowledge in English | 1.35 | .89 | Medium Use |
| **7: SCIP 5.3** Read printed materials such as books, textbooks or magazines in English in order to acquire one's general knowledge | 1.25 | .91 | Medium Use |
| **8: SCIP 4.3** Practise translating from Thai into English in order to improve one's writing skill | 1.24 | .94 | Low Use |
| **9: SCIP 1.2** Play games in English such as crosswords and computer games in order to expand the knowledge of English vocabulary and expressions | 1.20 | .99 | Medium Use |
| **10: SCIP 1.1** Read printed materials in English such as billboards, leaflets, newspapers and magazines in order to expand the knowledge of English vocabulary and expressions | 1.10 | .72 | Medium Use |
| **11: SCIP 3.2** Try to imitate a native speaker from media such as films or cassette tapes in order to improve one's speaking skill | 1.04 | .88 | Medium Use |
| **12: SCIP 4.2** Practise writing sentences or essays in English in order to improve one's writing skill | 0.95 | .82 | Low Use |
| **13: SCIP 3.1** Talk to oneself in order to improve one's speaking skill | 0.90 | .84 | Low Use |
| **14: SCIP 2.4** Watch TV programmes in English in order to improve one's listening skill | 0.85 | .73 | Low Use |
| **15: SCIP 4.1** Correspond in English by electronic mail (e-mail) or a letter in order to improve one's writing skill | 0.79 | .87 | Low Use |

**Table 4.3(cont): Individual Classroom-Independent Strategies and Frequency of Use**

| Individual Strategy for Classroom-Independent Purpose (SCIP) | Mean | S.D. | Frequency Category |
|---|---|---|---|
| **16: SCIP 3.3** Converse in English with your peers, siblings, or foreigners in order to improve one's speaking skill | **0.75** | **.88** | **Low Use** |
| **17: SCIP 3.4** Use a computer programme like a 'chat' programme in order to improve one's speaking skill | **0.74** | **.76** | **Low Use** |
| **18: SCIP 2.3** Listen to a radio programme in English in order to improve one's listening skill | **0.51** | **.66** | **Low Use** |
| **19: SCIP 5.2** Go to a language school in order to acquire one's general knowledge in English | **0.43** | **.70** | **Low Use** |
| **20: SCIP 3.5** Go to a language school in order to improve one's speaking skill | **0.28** | **.59** | **Low Use** |

The frequency of use of 20 individual out-of-class or classroom-independent language learning strategies in Table 4.3 above reveals that slightly over half of them (11 items) were reported at a 'medium use' level, while the other half were reported at a 'low use' level. None of the out-of class or classroom-independent strategies were reported at a 'high use' level. In terms of employing these language learning strategies, these SUT students reported making use of mass media in English, such as films, printed materials, or even computer programmes slightly more frequently than the other out-of-class or classroom-independent language learning strategies. Students also reported seeking an opportunity to be exposed to English as a way of acquiring their general knowledge in English. As shown in the previous section (Section 4.2.2), it was discovered that SUT students reported low frequency of use of out-of-class or classroom-independent language learning strategies to improve their speaking and writing skills. At this level of strategy use, we can see that students reported employing language learning strategies to improve such skills less frequently than improving the other skill areas.

The out-of-class or classroom-independent language learning strategies which students reported least frequently were attending extra-classes at a private language school or other private language institutes to improve their language speaking skill or to acquire their general knowledge in English. To put it simply, students reported attending extra

classes at a private language school less frequently than the other out-of-class or classroom-independent language learning strategies.

As reported in the open-ended question regarding their problems in learning English, it has been revealed that a number of students reported that one of the problems is that they did not have enough time for English, apart from their class time. They claimed that they had always been assigned to do projects for their major field of study. As a result, most of the out-of-class time was likely to be spent on such assigned projects. In this respect, students' time allocation for English, especially outside the classroom setting would be another interesting point which could be examined in future research.

### 4.3. Summary

The description of reported frequency of students' strategy use at different levels in this chapter has provided us with an overall picture of strategy use, reported by 488 SUT students. What follows is a summary of the highlights of the findings of the present investigation.

- SUT students reported medium frequency of use of language learning strategies in dealing with language learning outside a classroom setting.
- In terms of using out-of-class strategies to achieve classroom-independent purposes, SUT students reported employing language learning strategies to achieve CIP1, 'to expand their knowledge of English vocabulary and expressions' more frequently than to achieve the other CIPs, and the least frequently reported used were those to achieve CIP3, 'to improve their speaking skill'.
- In terms of using individual out-of-class or classroom-independent strategies, SUT students reported employing strategies which deal with making use of mass media in enhancing their language skills more frequently than the other out-of-class or classroom-independent strategies.

- Students reported improving their productive skills, i.e. speaking and writing, less frequently than improving their receptive skills, i.e. reading and listening.

In this chapter, students' reported use of language learning strategies as a whole, regardless of their gender, their field of study, or their 'perceived' language ability levels, has been described. Chapter 5 will present another perspective on the data dealing with the use of language learning strategies in relation to the three independent variables in this investigation, namely, gender of students, field of study i.e. Engineering, Agricultural Technology, Public Health, and Information Technology, and 'perceived' language ability levels. Lastly, a factor analysis has been conducted to seek underlying relationships among the individual learning strategies in the strategy inventory for the present investigation, as well as their strong relationships to the three variables; this is also discussed in the next chapter.

# CHAPTER FIVE

## DATA ANALYSIS FOR LANGUAGE LEARNING STRATEGY USE II

### 5.1. Introduction and Purpose of the Chapter

As seen in Chapter 4, the use of language learning strategies is divided into three different levels: overall strategy use; use of strategies to achieve classroom-independent purposes; and use of the twenty individual out-of-class or classroom-independent strategies. In this chapter, significant variation and patterns of variation in frequency of use of language learning strategies at each of these levels, analysed in terms of the three independent variables, are examined. Finally, the results of a factor analysis are presented.

The primary purposes of this chapter are thus to examine and factor-analyse the relationship between the out-of-class or classroom-independent language learning strategy use of 488 SUT students and three variables, namely:

1. The students' 'perceived' or 'self-rated' English language ability levels (good/ very good; fair; and poor)
2. The gender of students (male and female),
3. The students' fields of study (Engineering; Agricultural Technology; Public Health; and Information Technology)

In presenting the results of data analysis in this chapter, a top-down manner has been adopted. That is, variations in frequency of students' overall reported strategy use according to the three variables as mentioned above will be explored first. This is followed by use of out-of-class or classroom-independent language learning strategies which students reported employing to achieve classroom-independent purposes. Finally, use of individual out-of-class or classroom-independent language learning strategies by the three variables are examined. The main data analyses carried out for this chapter are an analysis of variance (ANOVA), and chi-square tests:

1. **Analysis of variance** (ANOVA)

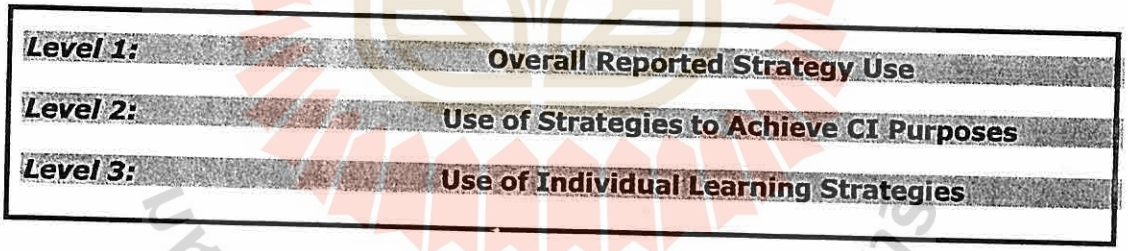
This statistical method was undertaken to determine patterns of variation in students' overall reported strategy use, and use of language learning strategies to achieve language improvement purposes, in terms of the three variables. If there is a significant overall difference occurring, as the result of ANOVA, among the students' fields of study and the students' 'perceived' or 'self-rated' English language ability levels, the Scheffe Test is used to help to pinpoint which of the differences between particular pairs of means are contributing to this overall difference.

2. **Chi-square tests**

These tests were employed to determine significant variations in frequency of students' reported use of the 20 individual English language learning strategies.

The researcher adopted a level of significance of .05. This means that the chances are 5 in 100, or less, that an observed difference could result when a variable is actually having no effect (Ferguson, 1976; Kinnear and Gray,2000). Figure 5.1 below illustrates the levels of data analysis for this chapter.

**Figure 5.1 : Analysis of Variations in Frequency of Different Levels of Strategy Use**




## 5.2. Variation in Students' Overall Reported Strategy Use

In the first level of the analysis of variance, students' overall reported strategy use shows significant variation according to their perception of levels of English language ability, but not according to their gender, or field of study. The ANOVA results are summarised in Table 5.1. below. Each table consists of the variable, mean frequency score

of strategy use (Mean), standard deviation (S.D.), Significance Level, and Pattern of Variation in frequency of strategy use (if a significant variation exists).

**Table 5.1 : A Summary of Variation in Frequency of Students' Overall Reported Strategy Use**

| 'Perceived' Language Ability | Poor (n=232) | | Fair (n=245) | | Good/very Good (n=11) | | Comments | |
|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Significance level | Pattern of Variation |
| Overall Strategy Use | 0.89 | 0.88 | 1.18 | .95 | 1.60 | 1.11 | p<.001 | Good>Poor Good>Fair |

| Gender | Female (n = 239) | | Male (n = 249) | | Comments | |
|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Significance level | Pattern of Variation |
| Overall Strategy Use | 1.04 | .91 | 1.06 | .96 | N.S. | — |

| Field of Study | Engineering (n=243) | | Agricultural Technology (n=51) | | Public Health (n=80) | | Information Technology (n=114) | | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Significance level |
| Overall Strategy Use | 1.09 | .94 | 0.90 | .92 | 0.97 | .89 | 1.10 | .93 | N.S. |

According to Table 5.1, the ANOVA results show that the frequency of students' overall strategy use varied significantly according to 'perceived' or 'self-rated' English language ability levels ($F\ [2,485] = 27.519$, $p<.001$). The post-hoc Scheffe Test shows significant differences between 'Good or very Good' language learners and 'Poor' language learners ($p<.001$). The mean frequency scores were 1.60 and 0.89 respectively. Significant differences are also found between 'Good or very Good' language learners and 'Fair' language learners ($p<.05$). The mean frequency scores were 1.60 and 1.18 respectively. This shows that SUT students who perceived or rated their English language ability as 'good/very good' reported employing overall language learning strategies significantly more frequently than those perceiving or rating their English language

abilities as either 'fair' or 'poor'. No significant difference for overall strategy use has been found between language learners who 'perceived' or 'self-rated' their English language ability levels as 'fair' and 'poor'. A similar pattern of variation in frequency of overall strategy use has been reported by other researchers, as was seen in the literature review in Chapter 2. Examples are Oxford and Nyikos (1989), Mullins (1992), Oxford and Green (1995), Embi (1996), and Intaraprasert (2000). Oxford and Green (1995) concluded from the studies of a number of researchers using the Strategy Inventory for Language Learning (SILL) that more successful or higher-proficiency students reported greater use of language learning strategies. However, it is important to recognise that different researchers have employed different measures to determine students' language proficiency levels. Examples include: proficiency as designated by teachers (Chamot, 1990), course levels, i.e. pre-basic, basic, and intermediate (Oxford and Green, 1995), language proficiency and TOEFL scores (Phillips, 1991 cf. Oxford and Burry-Stock, 1995), language proficiency and students' English results obtained through the national standard examination (Embi, 1996), and the scores obtained through the researcher-constructed proficiency test (Intaraprasert, 2000). However, in this particular investigation, the subjects were asked to rate their own language ability levels which were found that nearly 50% reported perceiving their language ability as 'poor' and the other half reported perceiving their ability as 'fair' and only about 3 per cent of the subjects reported perceiving their own language ability as 'good or very good' (See the subject distribution in Chapter 3).

### 5.3. Variation in Use of Strategies to Achieve the Five Classroom-Independent Purposes

As shown in Chapter 3, the strategy inventory for the present investigation was based on the strategy classification proposed by Intaraprasert (2000). The language learning strategies were classified according to the students' reported employment of strategies to

achieve language learning purposes. There are twelve purposes, which were classified under the two main categories, i.e. CR and CI, which students reported trying to achieve while learning English, either in class or outside class. Seven purposes were classified as classroom-related purposes (CRP), and five were classified as classroom-independent purposes (CIP). The latter purposes are:

**CIP 1:** To expand one's knowledge of English vocabulary and expressions;
**CIP 2:** To improve one's listening skill;
**CIP 3:** To improve one's speaking skill;
**CIP 4:** To improve one's writing skill; and
**CIP 5:** To acquire general knowledge in English

In this investigation, the ANOVA results for use of classroom-related strategies to achieve the classroom-related purposes have not been examined. Rather, those for use of out-of-class strategies to achieve the classroom-independent purposes by the three independent variables are presented in Tables 5.2-5.4.

### 5.3.1. Variation in Use of Strategies to Achieve Classroom-Independent Purposes According to 'Perceived' or 'Self-Rated' English Language Ability

The ANOVA results in Tables 5.2. below show significant variations by 'perceived' or 'self-rated' English language ability in frequency of use of strategies in order to achieve the five classroom-independent or out-of-class purposes (CIP). Both students who 'perceived' or 'self-rated' their English language ability levels as 'good/very good' and 'fair' reported use of classroom-independent or out-of-class strategies to achieve all of the five purposes significantly more frequently than did those rating their English language ability level as 'poor'.

**Table 5.2: Variation in Use of Strategies to Achieve Classroom-Independent Purposes According to 'Perceived' English Language Ability**

| Purpose to be Achieved | Poor (n = 232) | | Fair (n = 245) | | Good/Very good (n = 11) | | Comments | |
|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Significance level | Pattern of Variation |
| **CIP 1** | 1.16 | .71 | 1.46 | .66 | 1.80 | .77 | P<.001 | Good>Poor Fair>Poor |
| **CIP 2** | 0.93 | .57 | 1.16 | .61 | 1.52 | .85 | P<.001 | Good>Poor Fair>Poor |
| **CIP 3** | 0.57 | .53 | 0.88 | .61 | 1.29 | .99 | P<.001 | Good>Poor Fair>Poor |
| **CIP 4** | 0.79 | .65 | 1.16 | .76 | 1.64 | .86 | P<.001 | Good>Poor Fair>Poor |
| **CIP 5** | 1.04 | .59 | 1.35 | .62 | 1.84 | .88 | P<.001 | Good>Fai r>Poor |

The results of ANOVA in Table 5.2 above reveal significant variations in use of out-of-class or classroom-independent strategies to achieve 5 purposes in terms of students' 'perceived' or 'self-rated' English language ability levels, with those who perceived their English language ability levels as either 'good/very good' or 'fair' students reporting greater use of strategies to achieve 4 purposes (CIP1-CIP4) than those perceiving their English language ability level as 'poor' (CIP1, which is 'to expand their knowledge of English vocabulary and expressions' : $F[2,485]=14.245$, $p<.001$; CIP2 'to improve their listening skill' : $F[2,485]=12.154$, $p<.001$; CIP3 'to improve their speaking skill': $F[2,485]=2.235$, $p<.001$; and CIP4, which is 'to improve their writing skill' :$F[2,485]=21.209$, $p<.001$). As for CIP5, which is 'to acquire their general knowledge in English', those perceiving their ability as 'good/very good' reported greater use of strategies to achieve this purpose than those perceiving their ability levels as 'fair and 'poor', and those who perceived their ability as 'fair' reporting greater use of strategies to achieve this purpose than those perceiving their ability as 'poor' ($F[2,485]=20.667$, $p<.05$).

Based on the pattern of significant variations in strategy use, students who rated their English language ability levels as 'good/very good' and 'fair' may be consolidated into

one group as good language learners, and those rating their ability as 'poor' as poor language learners. This is because significant variations in frequency of strategy use tend to be found between 'good/very good' and 'poor' or between 'fair' and 'poor' in most cases. On the other hand, no but one significant variations in frequency of strategy use have been found between 'good/very good' and 'fair'.

In terms of students' employment of strategies to achieve classroom-independent purposes, the findings demonstrate that good language learners tend to spend more time dealing with their language learning outside the classroom setting than do poor language learners. The good language learners reported employing out-of-class or classroom-independent strategies to expand their knowledge of English vocabulary and expressions, to find ways to improve their language skills, i.e. speaking, listening, and writing. They also reported employing out-of-class strategies to acquire their general knowledge in English.

### 5.3.2. Variation in Use of Strategies to Achieve Classroom-Independent Purposes According to the Gender of Students

The ANOVA results in Table 5.3 below show that only the frequency with which students use out-of-class strategies aimed at expanding their knowledge of English vocabulary and expressions (CIP1) show significant variation with male students reported greater use of the strategies to achieve this purpose than their female counterparts ($F[1,486]=5.021$, $p<.05$). Though there is a significant variation, the ANOVA results show that both female and male students reported medium frequency of use of such strategies (mean frequency scores were 1.39 and 1.25).

**Table 5.3: Variation in Use of Strategies to Achieve Classroom-Related and Classroom-Independent Purposes According to the Gender of Students**

| Purpose to be Achieved | Male (n = 249) | | Female (n = 239) | | Comments | |
|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Significance level | Pattern of Variation |
| CIP 1 | 1.39 | .74 | 1.25 | .65 | P<.05 | Male>Female |
| CIP 2 | 1.05 | .63 | 1.06 | .59 | N.S. | -- |
| CIP 3 | 0.75 | .63 | 0.74 | .58 | N.S. | -- |
| CIP 4 | 0.93 | .74 | 1.06 | .73 | N.S. | -- |
| CIP 5 | 1.22 | .65 | 1.20 | .63 | N.S. | -- |

Taking a closer look at the mean frequency scores of use of these strategies, we can see that an overall picture of students' reported strategy use in order to achieve classroom-independent purposes by their gender reveals that both female and male students appeared to report a similar level of frequency of strategy use, i.e. medium, or low. male students reported slightly more frequent use of strategies in order to achieve almost every purpose. None of the purposes were reported being employed at the high use level.

### 5.3.3. Variation in Use of Strategies to Achieve Classroom-Independent Purposes According to the Students' Field of Study

In this investigation, the field of study has been classified as 'Engineering'; 'Agricultural Technology'; 'Public Health'; and 'Information Technology'. The ANOVA results in Table 5.4 below show no significant variations in strategy use in order to achieve classroom-independent purposes. This means that the field of the students' study did not seem to have any relationship with their use of strategies.

**Table 5.4 : Variation in Use of Strategies to Achieve Classroom-Independent Purposes According to Students' Field of Study**

| Field of Study → | Engineering (n=243) | | Agricultural Technology (n=51) | | Public Health (n=80) | | Information Technology (n=114) | | Comments |
|---|---|---|---|---|---|---|---|---|---|
| Purpose ↓ | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Significance level |
| CIP 1 | 1.42 | .70 | 1.23 | .70 | 1.09 | .70 | 1.30 | .68 | N.S. |
| CIP 2 | 1.11 | .64 | 0.93 | .55 | 0.97 | .58 | 1.06 | .59 | N.S. |
| CIP 3 | 0.76 | .70 | 0.55 | .44 | 0.66 | .56 | 0.85 | .65 | N.S. |
| CIP 4 | 0.98 | .74 | 0.84 | .55 | 1.06 | .76 | 1.06 | .80 | N.S. |
| CIP 5 | 1.24 | .60 | 1.00 | .75 | 1.17 | .66 | 1.28 | .65 | N.S. |

In summary, the analysis of variance at the 'purpose' of strategy use level is very useful in that it presents an overall picture as to how each variable affects or relates to students' use of strategies in order to achieve these classroom-independent purposes. Table 7.5 below summarises students' frequency of strategy use in order to achieve the CI purposes according to the three variables for the present investigation. It demonstrates that five purposes varied significantly according to 'perceived' or 'self-rated' English language ability levels, and one purpose according to gender. No significant variations in use of strategies in order to achieve any purposes were found according to students' field of study.

**Table 5.5: Summary of Significant Variations in Use of Strategies to Achieve the Classroom-Independent Purposes by the Three Variables**

| Independent Variable ⇒ | 'Perceived' English Language Ability | Gender | Field of Study |
|---|---|---|---|
| CIP 1 | Yes | Yes | N.S. |
| CIP 2 | Yes | N.S. | N.S. |
| CIP 3 | Yes | N.S. | N.S. |
| CIP 4 | Yes | N.S. | N.S. |
| CIP 5 | Yes | N.S. | N.S. |

*Note: A significant variation is specified with 'Yes' and non-significant is labelled with N.S.*

As mentioned earlier, the frequency of students' overall strategy use did not vary according to their gender, or their field of study. However, as will be discovered in the following section (Sections 5.4), some significant variation patterns in frequency of strategy use according to these variables have been found at the individual language learning strategy level. What follow are the chi-square results for the use of the 20 individual out-of-class language learning strategies.

## 5.4. Variation in Use of Individual Learning Strategies

Sections 5.2 and 5.3 discussed significant variations in frequency of students' overall strategy use across the entire survey as well as the classroom-independent purposes. What is presented next are the results of chi-square tests which were employed to determine patterns of the significant variations in students' reported strategy use at the individual strategy item level. These chi-square tests were used to check all of the individual strategy items for significant variations by the three independent variables. To demonstrate a significant variation, the percentage of students in terms of each variable reported high strategy use (3 and 4 in the strategy questionnaire), and the observed chi-square ($\chi^2$) value which shows the strength of variation in use of each individual strategy were identified. The individual language learning strategies are presented in the same order as they appear in the strategy questionnaire or inventory. This makes it easier to see an overall picture of the strategies which are reported to be frequently used, analysed in terms of each of the three variables. The percentage of students reported high frequency of use of strategies is demonstrated. The pattern(s) of significant variations of the particular strategy item are included in a brief discussion of each variable.

### 5.4.1. Variation in Students' Reported Use of Individual Learning Strategies According to 'Perceived' Language Ability

As mentioned before in Sections 5.2, and 5.3, significant variations in frequency of students' overall strategy use, use of strategies to achieve the five classroom-independent

purposes varied according to 'perceived' or 'self-rated' English language ability levels and students' gender. Here the individual language learning strategies are considered in terms of variations in frequency of use, as well as pattern of variation of use. The results of chi-square tests reveal that 90% of the learning strategies in this strategy inventory (18 out of 20) varied significantly according to this variable. It would be interesting to examine students' use of strategies in a more detailed manner at the individual strategy level. With this detailed examination, one could discern the variation in students' use of these individual language learning strategies and what pattern of variation emerges. As suggested in Oxford and Green (1995), it may be positive (used more by higher language ability students), negative (used more by lower-ability students), or mixed. Examples of stacked bar graphs illustrating the classification by stair-step patterns are provided later to give a clearer picture of these patterns of variation. The chi-square tests show that 18 out of 20 language learning strategies across the strategy questionnaire varied significantly according to students' perception of their language ability levels. When compared with the other three variables, this variable seems to have the strongest relationships with students' choices of strategy use, with a larger proportion of significant variations in students' use of individual strategies across the strategy inventory found to be related to their language proficiency levels. Of the 18 individual strategies showing significant variation, 17 are classified as positive, and the other one is classified as mixed. In this investigation, no individual strategies demonstrate a negative pattern of variation. However, what makes the patterns of variation 'mixed' is the inconsistency in reported use of strategies between 'fair' and 'good/very good' students. Table 5.6 presents the 18 individual language learning strategies which show significant variations according to students' 'perceived' language ability levels.

**Table 5.6 : Individual Strategies Showing Significant Variation According to 'Perceived' Language Ability**

| Individual Learning Strategy | % of high use (3 or 4) | | | Observed $\chi^2$ |
|---|---|---|---|---|
| (Used more by good/very good students – positive: 17 strategies) | Good/very good | Fair | Poor | P < .001* P<.05** |
| **SCIP5.4** Surf the Internet in order to acquire one's general knowledge in English | 81.8 | 77.1 | 59.9 | $\chi^2$ = 17.41* |
| **SCIP 5.1** Seek an opportunity to be exposed to English in order to acquire one's general knowledge in English | 72.7 | 53.1 | 31.5 | $\chi^2$ = 26.63* |
| **SCIP 2.2** Listen to English songs or cassette tapes of English conversations in order to improve one's listening skill | 63.6 | 51.8 | 34.9 | $\chi^2$ = 15.60* |
| **SCIP 4.3** Practise translating from Thai into English in order to improve one's writing skill | 63.6 | 51.8 | 30.6 | $\chi^2$ = 24.21* |
| **SCIP 1.1** Read printed materials in English such as billboards, leaflets, newspapers and magazines in order to expand the knowledge of English vocabulary and expressions | 54.5 | 37.6 | 15.9 | $\chi^2$ = 31.85* |
| **SCIP 2.1** Watch an English-speaking film in order to improve one's listening skill | 54.5 | 52.2 | 40.1 | $\chi^2$ = 7.37** |
| **SCIP 3.2** Try to imitate a native speaker from media such as films or cassette tapes in order to improve one's speaking skill | 54.5 | 35.5 | 19.8 | $\chi^2$ = 18.14* |
| **SCIP 3.1** Talk to oneself in order to improve one's speaking skill | 54.5 | 27.8 | 13.4 | $\chi^2$ = 21.88* |
| **SCIP 4.2** Practise writing sentences or essays in English in order to improve one's writing skill | 54.5 | 32.2 | 15.1 | $\chi^2$ = 24.37* |
| **SCIP 5.3** Read printed materials such as books, textbooks or magazines in English in order to acquire one's general knowledge | 54.5 | 42.4 | 19.8 | $\chi^2$ = 30.68* |
| **SCIP 3.4** Use a computer programme like a 'chat' programme in order to improve one's speaking skill | 54.5 | 23.3 | 10.3 | $\chi^2$ = 23.94* |
| **SCIP 2.4** Watch TV programmes in English in order to improve one's listening skill | 45.5 | 20.4 | 8.6 | $\chi^2$ = 20.56* |
| **SCIP 3.3** Converse in English with your peers, siblings, or foreigners in order to improve one's speaking skill | 36.4 | 17.1 | 8.6 | $\chi^2$ = 12.42** |
| **SCIP 4.1** Correspond in English by electronic mail (e-mail) or a letter in order to improve one's writing skill | 36.4 | 23.7 | 9.5 | $\chi^2$ = 19.74* |
| **SCIP 5.2** Go to a language school in order to acquire one's general knowledge in English | 36.4 | 11.8 | 3.4 | $\chi^2$ = 22.33* |

**Table 5.6 (cont): Individual Strategies Showing Significant Variation According to 'Perceived' Language Ability**

| Individual Learning Strategy | % of high use (3 or 4) | | | Observed $\chi^2$ |
|---|---|---|---|---|
| **(Used more by good/very good students – positive: 17 strategies)** | **Good/very good** | **Fair** | **Poor** | **P < .001* P<.05**** |
| SCIP 2.3 Listen to a radio programme in English in order to improve one's listening skill | **36.4** | **6.9** | **4.3** | **$\chi2$ = 18.42*** |
| SCIP 3.5 Go to a language school in order to improve one's speaking skill | **27.3** | **6.5** | **2.6** | **$\chi2$ = 15.17**** |
| **(Used more by 'Fair' ability students – mixed: 1 strategy)** | **Good/very good** | **Fair** | **Poor** | **P < .001* P<.05**** |
| SCIP 1.4 Listen to English songs in order to expand the knowledge of English vocabulary and expressions | **63.6** | **64.1** | **43.5** | **$\chi2$ = 20.67*** |

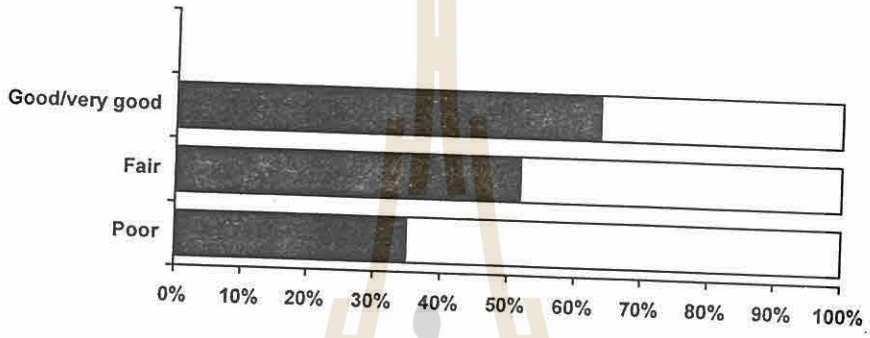
The results of the chi-square tests in Table 5.5 show significant variations in use of individual learning strategies in terms of 'perceived' or 'self-rated' English language ability levels, with a greater percentage of 'good/very good' students than 'fair' and 'poor' students reporting high use of 17 classroom-independent or out-of-class language learning strategies. A greater percentage of 'fair' students than 'good/very good' and 'poor' students reported high use of 1 strategy item, SCIP 1.4 'Listen to English songs in order to expand the knowledge of English vocabulary and expressions'. In all, of the 18 strategies for which significant differences were found according to this variable, eleven had a high reported frequency of use by more than fifty per cent of the students.

If we take a closer look at the employment of out-of-class or classroom-independent strategies, we can see that a greater percentage of good language learners tend to utilise mass media in English than poor language learners do. These mass media include English-speaking films, cassette tapes, radio programmes in English, and television programmes in English. Some good language learners are also keen on using computers (SCIP5.4), and seeking opportunities to expose themselves to English to help improve their language skill

(SCIP5.1). The stacked bar graph in Figure 5.2demonstrates an example of a positive pattern of variation, and Figure 5.3 demonstrate an example of a mixed one.

**Figure 5.2: Example of Variation Pattern Classified as Positive (Good/very good>Fair>Poor)**

**SCIP 2.2 Listen to English songs or cassette tapes of English conversations in order to improve one's listening skill**



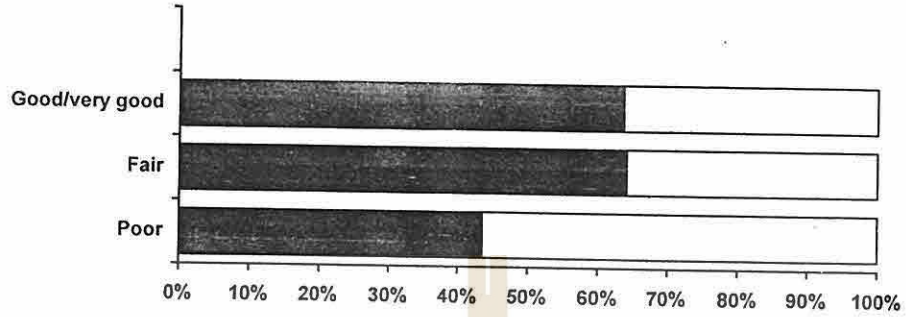

| | n | 'Often' or 'Always or almost always' Response | (%) | 'Never' or 'Sometimes' Response | (%) |
|---|---|---|---|---|---|
| Good/very good | 11 | 7 | 63.6 | 4 | 36.4 |
| Fair | 245 | 127 | 51.8 | 118 | 48.2 |
| Poor | 232 | 81 | 34.9 | 151 | 65.1 |

Note: $\chi 2 = 15.59$ (df = 2), $p < .001$

In Figure 5.2 above, 63.6 per cent of students rating their English language ability as 'good/very good' reported high frequency of use of SCIP2.2: listen to English songs or cassette tapes of English conversations in order to improve one's listening skill; whereas, 51.8 and 34.9 per cent of those perceiving their English language ability levels as 'fair' and 'poor' reported high frequency of use of this learning strategy.

**Figure 5.3 : Example of Variation Pattern Classified as Mixed (Fair>Good/very good>Fair)**

**SCIP 1.4 Listen to English songs in order to expand the knowledge of English vocabulary and expressions**




| | | (Darker areas) 'Often' or 'Always or almost always' Response | | (White areas) 'Never' or 'Sometimes' Response | |
|---|---|---|---|---|---|
| | n | | (%) | | (%) |
| Good/very good | 11 | 7 | 63.6 | 4 | 36.4 |
| Fair | 245 | 157 | 64.1 | 88 | 35.9 |
| Poor | 232 | 101 | 43.5 | 131 | 56.5 |

Note: $\chi 2 = 20.668$ (df = 2), $p < .001$

In Figure 5.3 above, 64.1 per cent of students rating their English language ability as 'fair' reported high frequency of use of SCIP 1.4 'listen to English songs in order to expand the knowledge of English vocabulary and expressions; whereas, 63.6 and 43.5 per cent of those perceiving their English language ability levels as 'good/very good' and 'poor' reported high frequency of use of this learning strategy.

### 5.4.2. Variation in Students' Reported Use of Individual Learning Strategies According to Gender

The results of ANOVA reported in the previous sections show no significant variations in frequency of students' overall strategy use, but slight significant variations in use of strategies to achieve the five CI purposes, according to gender of students. Furthermore, the results of chi-square tests show significant variation in use of three individual learning strategies by this variable.

**Table 5.7 : Individual Strategies Showing Significant Variation According to Gender**

| Individual Learning Strategy | % of high use (3 or 4) | | Observed $\chi^2$ |
|---|---|---|---|
| **(Used more by male students - 3 strategies)** | **Males** | **Females** | **P < .05** |
| SCIP1.2 Play games in English such as crosswords and computer games to expand their knowledge of English vocabulary and expressions | 49.4 | 17.6 | $\chi^2$ = 55.189 |
| SCIP3.4 Use a computer programme like a 'chat' programme in order to improve one's speaking skill | 21.7 | 13.8 | $\chi^2$ =5.168 |
| SCIP2.4 Watch TV programmes in English in order to improve one's listening skill | 20.1 | 10.5 | $\chi^2$ = 8.667 |

Table 5.7 shows that male students reported significantly higher use of three out-of-class or classroom-independent language learning strategies than their female counterparts. The chi-square results reveal that 49.4 per cent of male students reported high frequency of use of playing games in English such as crosswords and computer games to expand their knowledge of English vocabulary and expressions, while 17.6 per cent of female students did. Similarly, 21.7 per cent of males reported employing SCIP3.4 'use a computer programme like a 'chat' programme in order to improve their speaking skill', while 13.8 per cent of their female counterparts reported high frequency of use of such a strategy. With regard to SCIP2.4 'watch TV programmes in English in order to improve their listening skill', 20.1 per cent of males students and 10.5 per cent of female students reported high use of such strategy. The result of their employment of these three out-of-class language learning strategies shows that male students are likely to make use of computers or mass media, i.e. television, in order to improve their language skills. Based on the findings, female students did not report higher frequency of use of any out-of-class language learning strategies than male students did. As mentioned earlier, there is a minor but significant difference in strategy use between female and male students.

### 5.4.3. Variation in Students' Reported Use of Individual Learning Strategies According to Students' Field of Study

The students' field of study in this investigation has been classifies as 'Engineering'; 'Agricultural Technology'; 'Public Health'; and 'information Technology'. The results of ANOVA reported in the previous sections show no significant variations in frequency of students' overall strategy use, or in use of language learning strategies to achieve the five CI purposes, according to the students' field of study. However, the results of chi-square tests demonstrated in Table 5.8 below show significant variation in use of six individual language learning strategies by this variable.

**Table 5.8 : Individual Strategies Showing Significant Variation According to Students' Field of Study**

| **Individual Learning Strategy** | **% of high use (3 or 4)** | | | | **Observed $\chi^2$** |
|---|---|---|---|---|---|
| **(Used more by Engineering students : 3 strategies)** | Engineering | Agri-Tech | Public Health | Info-Tech | **P < .001* P<.05**** |
| SCIP1.2 Play games in English such as crosswords and computer games to expand their knowledge of English vocabulary and expressions | 49.8 | 21.6 | 11.3 | 21.1 | **$\chi^2$ = 57.642*** |
| SCIP 5.1 Seek an opportunity to be exposed to English in order to acquire one's general knowledge in English | 44.0 | 25.5 | 51.3 | 43.9 | **$\chi^2$ = 8.718**** |
| SCIP2.4 Watch TV programmes in English in order to improve one's listening skill | 21.0 | 11.8 | 8.8 | 9.6 | **$\chi^2$ = 11.969**** |
| **(Used more by Information Technology students : 3 strategies)** | Engineering | Agri-Tech | Public Health | Info-Tech | **P < .001* P<.05**** |
| SCIP5.4 Surf the Internet in order to acquire one's general knowledge in English | 70.0 | 54.9 | 63.8 | 77.7 | **$\chi^2$ = 9.461**** |
| SCIP 3.1 Talk to oneself in order to improve one's speaking skill | 23.0 | 5.9 | 18.8 | 27.2 | **$\chi^2$ = 10.256**** |
| SCIP 3.4 Use a computer programme like a 'chat' programme in order to improve one's speaking skill | 20.6 | 5.9 | 11.3 | 21.9 | **$\chi^2$ = 9.893**** |

Table 5.8 above shows that Engineering students reported significantly higher use of three out-of-class or classroom-independent language learning strategies than students studying the other three fields. The chi-square results reveal that 49.8 per cent of Engineering students reported high frequency of use of playing games in English such as crosswords and computer games to expand their knowledge of English vocabulary and expressions, while 21.6 per cent of Agricultural Technology, 21.1 per cent of IT students and 11.3 Public Health students did respectively. The other two out-of-class language learning strategies which Engineering students reported employing significant more frequently than did students studying the other three fields are seeking an opportunity to be exposed to English in order to acquire one's general knowledge in English (SCIP5.1), and watching TV programmes in English in order to improve one's listening skill (SCIP2.4).

With regard to Information Technology students (IT), the results of the chi-square reveal that IT students reported employing three out-of-class language learning strategies significantly more frequently than students studying the other three fields did are SCIP5.4 'Surf the Internet in order to acquire one's general knowledge in English'; SCIP 3.1 'Talk to oneself in order to improve one's speaking skill'; and SCIP 3.4 'Use a computer programme like a 'chat' programme in order to improve one's speaking skill'The percentages of IT students reported employing high frequency of use of these strategies are 77.7, 27.2, and 21.9 respectively. However, students studying Agricultural Technology and Public Health did not report employing any out-of-class language learning strategies significant more frequently than any other student.

As discovered in the previous sections, the results of ANOVA and chi-square tests provide us with a clear picture of significant variations in frequency of use of strategies ranging from students' overall strategy use to their use of individual out-of-class language

learning strategies in relation to the three variables. What follow are the results of a factor analysis which will give another perspective of the underlying structure of the out-of-class language learning strategies in the strategy inventory for the present investigation. They will also provide a strong relationship of each extracted factor to each of the three variables involved in the present investigation.

### 5.5. Factor Analysis Results

Factor analysis is another approach to allow a researcher to make sense of a large number of correlations between variables, or a complex set of variables, by reducing them to a smaller number of factors which account for many of the original variables (Seliger and Shohamy, 1990; Robson, 1993; Howitt and Cramer, 1997; 1999). It is particularly appropriate in exploratory research where the researcher aims to impose an orderly simplification upon a number of interrelated measures (Cohen and Manion, 1989). However, Howitt and Cramer, (1997) comment that factor analysis is more subjective and judgmental than most statistical techniques. This is not only because of the subjectivity of interpreting the meaning of factors, but also because there are many variants of factor analysis. For the present investigation, the factor analysis helps the researcher to seek the underlying structure of the whole set of out-of-class language learning strategies in the strategy inventory. It should be noted that the present factor analysis is intended to be exploratory rather than confirmatory. This is because the researcher does not have a clear idea or pre-assumption about what the factor structure might be.

In seeking the underlying structure of the out-of-class language learning strategies across the strategy inventory, a principal component factor analysis, and then varimax rotation was conducted on the correlations of the twenty out-of-class language learning strategies, which varied significantly in relation to the three independent variables. Initially, four factors were extracted with eigenvalues equal to or greater than 1.00. The

eigenvalues or the sums of the squared loadings of the extracted four factors are presented in Table 5.9 below.

**Table 5.9: The Sums of the Squared Factor Loadings of the Initial Four Factors**

| Factor | Extraction Sums of Squared Loadings (Eigenvalues) | | |
|---|---|---|---|
| | Total | % of Variance | Cumulative % |
| 1 | 7.924 | 39.621 | 39.62 |
| 2 | 1.606 | 8.031 | 47.65 |
| 3 | 1.461 | 7.306 | 54.66 |
| 4 | 1.057 | 5.285 | 60.24 |

When taken together, these four factors accounted for 60.24 % of the variability among 20 out-of-class language learning strategies which were found to vary significantly in relation to the four variables as mentioned above. In fact, there could be as many factors as variables, i.e. five, which a researcher started off with and this makes it difficult to interpret. Instead of making use of the initial four extracted factors right away, the researcher decided to explore further by reducing the number of factors to three. The results of the varimax rotation show slightly different groupings of strategies between four and three factors. Having also taken the factor interpretation into consideration, the researcher found that it would be more straightforward to interpret the extracted four factors rather than three factors. Both are slightly different in terms of internal relationship among the strategies emerging under the same factors. The percentage of variance in Table 5.9 suggests that more than 50 per cent of the total variation between the frequency of strategy use can be explained by the four principal components. In other words, the 60.24 per cent figure means that slightly less than half of the variability was not explained by the four factors, so other influences may also make a difference in strategy use. Then, the individual out-of-class language learning strategies were ordered or sorted according to their loading on the first factor. The factor loadings indicate the level of correlation between the factors and the different variables used in the analysis (Seliger and Shohamy,

1990). The out-of-class language learning strategies which have the highest loadings with the first factor, are used to define the factor, i.e. the language learning strategies which are highly loaded are grouped together in order of their loading on the first factor. According to Howitt and Cramer (1997), this grouping helps interpretation of the factor since the high loading strategy items are the ones which primarily help a researcher to decide what factor they might be. Further, with factor analysis, differences in interpretation may occur. This means different researchers may describe differently the factors which emerge. The out-of-class language learning strategies as identified in the strategy inventory and the four factors resulting from the factor analysis were not expected to be identical, but they were expected to be mutually supportive.

In this present investigation, each factor is described in terms of the content or the relationship of the majority of the language learning strategy items which appear under the same factor. The four extracted factors, the factor loadings on each strategy item, and the percentage of variance accounted for by each factor are presented in Table 5.10 below.

**Table 5.10 : List of the Four Extracted Factors**

| **Factor 1 : Strategies for production skills improvement** | **Factor Loading** | **% of variance** |
|---|---|---|
| **SCIP 4.2** Practise writing sentences or essays in English to improve their writing skill | **.771** | **20.16** |
| **SCIP 3.1** Talk to oneself in order to improve one's speaking skill | **.743** | |
| **SCIP 4.3** Practise translating from Thai into English to improve their writing skill | **.738** | |
| **SCIP 3.3** Converse in English with peers, siblings or foreigners to improve their speaking skill | **.661** | |
| **SCIP 3.2** Try to imitate a native speaker from media such as films or cassette tapes in order to improve one's speaking skill | **.624** | |
| **SCIP 5.1** Seek an opportunity to be exposed to English to acquire general knowledge in English | **.570** | |
| **SCIP 4.1** Correspond in English by electronic mail (e-mail) or a letter in order to improve one's writing skill | **.517** | |

**Table 5.10 (cont) : List of the Four Extracted Factors**

| Factor 2 : Utilisation of English media for general knowledge enhancement | Factor Loading | % of variance |
|---|---|---|
| **SCIP 1.2** Play games in English such as crosswords and computer games in order to expand the knowledge of English vocabulary and expressions | .698 | |
| **SCIP 5.3** Read printed materials such as books, textbooks or magazines in English to acquire general knowledge in English | .613 | |
| **SCIP 5.4** Surf the Internet to acquire general knowledge in English | .601 | 15.01 |
| **SCIP 1.3** Watch an English-speaking film in order to expand the knowledge of English vocabulary and expressions | .595 | |
| **SCIP 1.1** Read printed materials in English such as billboards, leaflets, newspapers and magazines to expand their knowledge of English vocabulary and expressions | .589 | |
| **SCIP 1.4** Listen to English songs in order to expand the knowledge of English vocabulary and expressions | .567 | |
| **Factor 3 : Utilisation of media for listening skill improvement** | | |
| **SCIP 2.1** Watch an English-speaking film in order to improve one's listening skill | .719 | |
| **SCIP 2.2** Listen to English songs or cassette tapes of English conversations in order to improve one's listening skill | .677 | |
| **SCIP 2.4** Watch TV programmes in English in order to improve one's listening skill | .650 | 13.94 |
| **SCIP 2.3** Listen to a radio programme in English in order to improve one's listening skill | .581 | |
| **Factor 4: Extra resources reliance for language improvement** | | |
| **SCIP 3.5** Go to a private language school to improve their speaking skill | .858 | |
| **SCIP 5.2** Go to a language school in order to acquire one's general knowledge in English | .850 | 11.13 |
| **SCIP 3.4** Use a computer programme like a 'chat' programme in order to improve one's speaking skill | .494 | |

Table 5.10 provides the detail of the four extracted factors as the results of a factor analysis, i.e. varimax rotation. It shows that:

- Factor 1, which is termed 'Strategies for production skills improvement' accounted for 20.16 per cent of the variance among the out-of-class language learning strategies in the strategy questionnaire for the present investigation. It comprises seven out-of-class or classroom-independent strategies which involve students' attempt to improving their production skills, i.e. speaking and writing. Factor 2, 'Utilisation of English media for enhancing general knowledge of English' accounted for 15.01 per cent of the whole strategy variance. It comprises six strategies which involve using English media such as English-speaking films, television or radio programmes in English, computer programmes, or printed materials in English.
- Factor 3, 'Utilisation of media for listening skill improvement', accounted for 13.94 per cent of the variance of the strategy items. This factor comprises four strategies which students reported employing in order to improve their listening skill.
- Factor 4 which is termed 'Extra resources reliance for language improvement', accounted for 11.13 per cent of the variance of the strategy items. This factor comprises three out-of-class or classroom-independent strategies which students reported going to a language school, taking private lessons or using a computer program for their language improvement.

As can be seen above, the underlying factors of the out-of-class language learning strategies, the percentage of variance of each factor, and the factor loading for each strategy item have been identified. The next task is to examine which of these factors are strongly related to each of the three variables in the present investigation.

In determining such a relationship, factors which are strongly related to a particular variable are emphasised. For the purpose of the discussions of the factor analysis results in the following section, the criteria for strong relation between the factors and each of the variables suggested by Seliger and Shohamy (1990) are adopted, i.e. a factor is said to be

strongly related to a variable if half or more of the out-of-class language learning strategies in that particular factor have a loading of .50 or more, showing a significant variation in relation to that variable. In the present investigation, the results of the varimax rotation show that four extracted factors were found to be strongly related to 'perceived' English language ability. No extracted factors were found to be strongly related to either students' field of study or to their gender. The factors which were found to be strongly related to 'perceived' or 'self-rated' English language ability are shown in Table 5.11 below.

**Table 5.11 : Factors Strongly Related to 'Perceived' Language Ability Levels**

| **Factor 1 : Strategies for production skills improvement** | **Factor Loading** | **Variation Pattern** |
|---|---|---|
| **SCIP 4.2** Practise writing sentences or essays in English to improve their writing skill | **.771** | **Positive** |
| **SCIP 3.1** Talk to oneself in order to improve one's speaking skill | **.743** | **Positive** |
| **SCIP 4.3** Practise translating from Thai into English to improve their writing skill | **.738** | **Positive** |
| **SCIP 3.3** Converse in English with peers, siblings or foreigners to improve their speaking skill | **.661** | **Positive** |
| **SCIP 3.2** Try to imitate a native speaker from media such as films or cassette tapes in order to improve one's speaking skill | **.624** | **Positive** |
| **SCIP 5.1** Seek an opportunity to be exposed to English to acquire general knowledge in English | **.570** | **Positive** |
| **SCIP 4.1** Correspond in English by electronic mail (e-mail) or a letter in order to improve one's writing skill | **.517** | **Positive** |
| **Factor 2 : Utilisation of English media for general knowledge enhancement** | **Factor Loading** | **Variation Pattern** |
| **SCIP 1.2** Play games in English such as crosswords and computer games in order to expand the knowledge of English vocabulary and expressions | **.698** | **N.S.** |
| **SCIP 5.3** Read printed materials such as books, textbooks or magazines in English to acquire general knowledge in English | **.613** | **Positive** |
| **SCIP 5.4** Surf the Internet to acquire general knowledge in English | **.601** | **Positive** |
| **SCIP 1.3** Watch an English-speaking film in order to expand the knowledge of English vocabulary and expressions | **.595** | **N.S.** |
| **SCIP 1.1** Read printed materials in English such as billboards, leaflets, newspapers and magazines to expand their knowledge of English vocabulary and expressions | **.589** | **Positive** |
| **SCIP 1.4** Listen to English songs in order to expand the knowledge of English vocabulary and expressions | **.567** | **Mixed** |

**Table 5.11(cont): Factors Strongly Related to 'Perceived' Language Ability Levels**

| Factor 3 : Utilisation of media for listening skill improvement | Factor Loading | Variation Pattern |
|---|---|---|
| **SCIP 2.1** Watch an English-speaking film in order to improve one's listening skill | .719 | Positive |
| **SCIP 2.2** Listen to English songs or cassette tapes of English conversations in order to improve one's listening skill | .677 | Positive |
| **SCIP 2.4** Watch TV programmes in English in order to improve one's listening skill | .650 | Positive |
| **SCIP 2.3** Listen to a radio programme in English in order to improve one's listening skill | .581 | Positive |
| **Factor 4: Extra resources reliance for language improvement** | **Factor Loading** | **Variation Pattern** |
| **SCIP 3.5** Go to a private language school to improve their speaking skill | .858 | Positive |
| **SCIP 5.2** Go to a language school in order to acquire one's general knowledge in English | .850 | Positive |
| **SCIP 3.4** Use a computer programme like a 'chat' programme in order to improve one's speaking skill | .494 | Positive |

As reported in the previous sections, the ANOVA results show significant variations in frequency of strategy use of out-of-class language learning strategies analysed according to this variable. Similarly, the results of the factor analysis reveal that all of the four factors were found to be strongly related to this variable. The results of the factor analysis have confirmed the ANOVA results in terms of variations in students' reported use of language learning strategies as presented earlier.

In conclusion, five factors were extracted as the results of a factor analysis. All of the four factors were found to be strongly related to students' perception of their language ability levels. No factors were found to be strongly related to gender of students or their field of study. Table 5.12 below summarises the strong relationship between the factors and the variables for the present investigation.

**Table 5.12 : Summary of Factors Strongly Related to Different Variables**

| Extracted Factor | English Language Ability | Gender | Field of Study |
|---|---|---|---|
| 1: Strategies to improve productive skills , i.e. speaking and writing | YES | NO | NO |
| 2: Using media for general knowledge enhancement | YES | NO | NO |
| 3: Listening skill improvement | YES | NO | NO |
| 4: Extra resources reliance for language improvement | YES | NO | NO |

## 5.6. Summary

In this chapter, the researcher has systematically examined variations in frequency of students' overall reported strategy use, use of learning strategies for classroom-independent purposes, and use of individual language learning strategies by three independent variables, namely, 'perceived' English language ability, gender of students, and students' field of study. Data were collected through the use of the language learning strategy questionnaire which investigates the five purposes of strategy use and a total of 20 individual language learning strategies. Analysis of variance, chi-square tests and a factor analysis were the three forms of analysis carried out on the data.

The research findings and discussions presented in this chapter have demonstrated or implied a number of points which are listed below. The researcher believes that each focal point of discussion will contribute to our understanding about language learning strategies in a new perspective, as well as the relationships between the use of language learning strategies at different levels and the factors which are the main focus for the present investigation. The main points can be summarised as follows.

- Significant variations in frequency of students' overall strategy use were found in relation to 'perceived' English language ability levels, with students rating their

language ability as either 'good/very good', or 'fair' reporting more frequent overall use of strategies than those perceiving their language ability level as 'poor'.

- In respect of purposes of strategy use, significant variations in frequency of use of learning strategies to achieve classroom-independent purposes were found in relation to 'perceived' language ability and gender of students.
- In respect of the gender of students, female and male students differ in using out-of-class strategies to expand their knowledge of English vocabulary and expressions and to improve their writing skill.
- Good and poor language learners reported using strategies to achieve all of the five classroom-independent purposes differently.
- No significant variations in frequency of use of out-of-class strategies to achieve any language learning purposes were found in relation to student's field of study.
- Among the three variables in the present investigation, gender of students and students' field of study do not appear to have much relationship to students' frequency of use of classroom-independent language learning strategies.
- Based on the results of ANOVA, Engineering and Information Technology students appear to be the more active strategy users, while Public Health and Agricultural Technology students are the less active strategy users.
- There is a minor but significant difference between female and male students in use of strategies, with male students reporting more frequent use of three learning strategies than female students. These individual strategies include SCIP1.2 Play games in English such as crosswords and computer games to expand their knowledge of English vocabulary and expressions; SCIP3.4 Use a computer programme like a 'chat' programme in order to improve one's speaking skill; and SCIP2.4 Watch TV programmes in English in order to improve one's listening skill

- Students rating their language ability levels as 'good/very good' and 'fair' reported more frequent use of out-of-class or classroom-independent strategies than those rating their language ability level as 'poor'. No significant differences of strategy use were found between the former two groups of students.
- Four factors (Factor 1-Factor 4) were extracted as the results of factor analysis. The results of the factor analysis provide parallel evidence to the findings obtained through the different levels of an analysis of variance. Generally speaking, the results of the factor analysis demonstrate that 'perceived' English language ability levels show greater relationship to students' use of learning strategies than do the gender of students, and their field of study.
- All of the four factors were found to be strongly related to students' perception of their language ability, but not to their gender or field of study.

The research findings for the present investigation have provided the researcher with useful information for another perspective of research into the field of language learning strategy. Chapter 6, which is the last chapter of the report, summarises the research findings in response to the research questions posed in Chapter 3, the contributions of the present investigation, the implications, as well as limitations of the present investigation and proposals for future research.

# CHAPTER SIX

## SUMMARY OF THE FINDINGS, AND IMPLICATIONS FOR TEACHING AND LEARNING ENGLISH AT SURANAREE UNIVERSITY OF TECHNOLOGY

### 6.1. Introduction and Purpose of the Chapter

The main purpose of this last chapter is to summarise the principal findings of the present investigation in response to research questions presented earlier in Chapter 3. This is followed by a discussion of the implications arising from the research for the teaching and learning of English at Suranaree University of Technology. Then, the contributions of the present investigation to related areas are considered. Finally, the limitations of the present investigation and proposals for future research are presented.

In Chapters 4 and 5, the researcher has systematically attempted to identify the reported frequency of use of classroom-independent language learning strategies by 488 language learners learning English at Suranaree University of Technology obtained through a strategy questionnaire. Chapter 5, the relationships between students' reported frequency of use of out-of-class language learning strategies and different independent variables, i.e. the perception of language ability, gender of students, and their field of study are considered. Factor analysis is also presented at the end of Chapter 5. Arising out of the language learning strategy questionnaire for the present investigation are significant findings in students' frequency of strategy use in relation to the perception of language ability; their gender; and their field of study. In addition, the findings reveal the strong relationship between the four factors as the result of the factor analysis and the perception of language ability. In order to help the reader to understand certain significant variations in out-of-class strategy use, as well as other apparent significant differences in association with each variable which were presented in

Chapter 5, the researcher will suggest reasons for them in the subsequent discussion section (Section 5.3).

## 6.2. Summary of the Research Findings

The present investigation has reported on the research findings of students' reported out-of-class language learning strategy use in three different levels, as well as use of these strategies in association with three independent variables. These findings also form responses to the research questions and are discussed further below.

### 6.2.1. What is the level of frequency of use of classroom-independent language learning strategies reported by SUT students? (Research Question 1)

In response to the first research question, the research findings reveal that the students' reported overall use of these language learning strategies based on the holistic mean score is of medium frequency according to the measure explained in Chapter 4 (Section 4.2). The mean frequency score was 1.05. When the reported frequency of use of strategies to achieve the classroom-independent purposes was determined, it was found that students reported medium frequency of use of out-of-class strategies to achieve classroom-independent purposes CIP1, which is to expand one's knowledge of English vocabulary and expressions; CIP2: to improve one's listening skill; CIP4 to improve one's writing skill; and CIP5 to acquire general knowledge in English. The frequency mean scores were 1.32, 1.05, 1.00' and 1.21 respectively. Students reported low frequency of use of strategies to achieve classroom-independent purpose CIP 3, which is to improve one's speaking skill and the frequency mean score was 0.74.

### 6.2.2. What is the level of the students' reported use of the classroom-Independent language learning strategies? (Research Question 2)

In response to this research question at the individual strategy level, it was found that students reported medium frequency of use of eleven and low of nine individual classroom-

independent strategies. The first four strategies which were reportedly employed more frequently than the other strategies are : SCIP5.4 'Surf the Internet in order to acquire one's general knowledge in English'; SCIP 1.4 Listen to English songs in order to expand the knowledge of English vocabulary and expressions; SCIP 2.1 Watch an English-speaking film in order to improve one's listening skill; and SCIP 2.2 Listen to English songs or cassette tapes of English conversations in order to improve one's listening skill. The frequency mean scores were 1.82, 1.58, 1.45, and 1.42 respectively. On contrary, the four individual strategies which were found to be reported less frequently than any other strategy are: SCIP 3.4 Use a computer programme like a 'chat' programme in order to improve one's speaking skill; SCIP 2.3 Listen to a radio programme in English in order to improve one's listening skill; SCIP 5.2 Go to a language school in order to acquire one's general knowledge in English; and SCIP 3.5 Go to a language school in order to improve one's speaking skill. The frequency mean scores were 0.74, 0.51, 0.43, and 0.28 respectively.

**6.2.3. Do students' choices of language learning strategies vary significantly with their 'perceived' English language ability? If they do, what are the main patterns of variation? (Research Question 3)**

In response to the third research question, the researcher has examined the different levels of students' reported frequency of use of out-of-class language learning strategies as well as patterns of variation, which were presented in Chapter 5. The findings at the three different levels of data analysis and the results of a factor analysis in relation to the students' 'perceived' language ability levels can be summarised as follows:

- **Overall Strategy Use**

The results of ANOVA showed that significant variations in students' reported frequency of overall strategy use were found in relation to students' 'perceived' language ability levels

($p<.001$). The results of the post hoc Scheffe Test showed that students perceiving their language ability levels as 'good/very good', and 'fair' reported greater overall strategy use than those perceiving their language ability level as 'poor'. No significant variations in the overall strategy use were found between self-rated 'good/very good' and 'fair' ability students.

- **Use of Strategies to Achieve Classroom-Independent Purposes**

The ANOVA results showed significant variations in use of out-of-class strategies to achieve all of the five classroom-independent purposes in relation to this variable. The five language improvement purposes are CIP1, which is to expand their knowledge of English vocabulary and expressions; CIP2: to improve their listening skill; CIP3: to improve their speaking skill; CIP4: to improve their writing skill; and CIP5: to acquire general knowledge in English. The main significant variations of strategy use in relation to this variable are as follows.

1. Self-rated 'good/very good', and 'fair' ability students reported more frequent use of out-of-class strategies to achieve classroom-independent purposes CIP1, CIP 2, CIP 3 and CIP 4 than self-rated 'poor' ability students.

2. Self-rated 'good/very good' students reported more frequent use of out-of-class strategies to achieve CIP5 -to acquire general knowledge in English- than those rating their language ability levels as 'fair', or 'poor'.

- **Use of Individual Out-of-Class Language Learning Strategies**

The Chi-square tests showed that use of 18 out of 20 individual out-of-class language learning strategies (90%) varied significantly according to students' 'perceived' language ability levels. The existing dominant variation pattern was considered positive, indicating that

self-rated 'good/very good' ability students reported more frequent use of the out-of-class strategies than did self-rated 'fair' or 'poor' ability students. Seventeen individual strategies exhibit a positive variation and one exhibits as mixed.

- **Factor Analysis Results**

The results of a factor analysis showed that all of the four extracted factors were found to have strong underlying relationship with the students' 'perceived' language ability levels. These factors are Factor 1 'Strategies for production skills improvement'; Factor 2 'Utilisation of English media for general knowledge enhancement'; Factor 3 'Utilisation of media for listening skill improvement'; and Factor 4 'Extra resources reliance for language improvement'.

### 6.2.4. Do students' choices of language learning strategies vary significantly with their gender? If they do, what are the main patterns of variation?(Research Question 4)

In response to the fourth research question, the results of the ANOVA showed no significant variations in relation to gender of students in students' reported overall strategy use. However, the same ANOVA result showed a significant variation of use of strategies to achieve one classroom-independent purpose CIP 1 'to expand one's knowledge of English vocabulary and expressions', ($p<.05$), and the chi-square tests showed that use of 3 out of 20 individual language learning strategies (15%) varied significantly according to this variable, with male students reporting more frequent use of these strategies than their female counterparts. These three individual strategies are: SCIP1.2 Play games in English such as crosswords and computer games to expand their knowledge of English vocabulary and expressions; SCIP3.4 Use a computer programme like a 'chat' programme in order to improve one's speaking skill; and SCIP2.4 Watch TV programmes in English in order to improve one's listening skill.

As mentioned earlier in Chapter 5, the results of a factor analysis showed that no extracted factors were found to be strongly related to this variable.

**6.2.5. Do students' choices of language learning strategies vary significantly according to their field of study? If they do, what are the main patterns of variation? (Research Question 5)**

In response to the fifth research question for the present investigation, the researcher has made an attempt to examine variation in students' reported frequency of use of out-of-class language learning strategies as well as patterns of variation, as presented in Chapter 5. The results of the ANOVA showed no significant variations in relation to student's field of study in students' reported overall strategy use, or use of strategies to achieve any classroom-independent purposes. However, the chi-square tests showed that use of 6 out of 20 individual out-of-class language learning strategies (30%) varied significantly according to this variable. The variation patterns were not consistent, with Engineering students or Information Technology students reporting more frequent use of certain strategies than those whose field of study is either Agricultural Technology or Public Health. Engineering students reported employing three strategies more frequently than students studying the other three major fields. These include SCIP1.2 Play games in English such as crosswords and computer games to expand their knowledge of English vocabulary and expressions; SCIP 5.1 Seek an opportunity to be exposed to English in order to acquire one's general knowledge in English; and SCIP2.4 Watch TV programmes in English in order to improve one's listening skill. The three strategies which IT students reported employing more frequently than those studying the other three fields include: SCIP5.4 Surf the Internet in order to acquire one's general knowledge in English; SCIP 3.1 Talk to oneself in order to improve one's speaking skill; and SCIP 3.4 Use a computer programme like a 'chat' programme in order to improve one's speaking skill.

As mentioned earlier in Chapter 5, the results of a factor analysis showed that no extracted factors were found to be strongly related to this variable

## 6.3. Discussions of the Research Findings

As seen above in response to the research questions, the relationships of classroom-independent language learning strategy use reported by 488 students to the three variables, i.e. students' perceptions of their language ability levels, students' gender, and their field of study, have been described. What follow in this section are discussions of the research findings in association with the variables investigated. This section will, therefore, offer possible reasons hypothesised by the researcher to where significant differences in strategy use with reference to each variable become apparent. It is worth pointing out that it may not be easy to relate strategy use reported by these language learners in the very detailed manner of this investigation to earlier studies. This is because the present study has a different way of classifying language learning strategies and the resulting analysis has to be performed with regard to the strategy classification. The difficulty in making comparisons of strategies reported in one study with those reported in another has been pointed out previously by Chamot (1987), and Ellis and Sinclair (1989). (See Chapter 2, Section 2.3 for the strategy classification systems proposed by eight researchers).

At this particular stage, the researcher has hypothesised what may be an explanation for significant differences in certain strategy with reference to each variable. However, it is worth noting that we are not certain that these hypotheses can be the definite explanation for what has been mentioned above. Consequently, proposals for future research are recommended.

### 6.3.1. Use of Language Learning Strategies and 'Perceived' Language Ability

Previous studies investigating the use of language learning strategies by students with different levels of language proficiency or ability have concluded that higher-proficiency or ability students generally reported employing learning strategies significantly more frequently than did lower-proficiency or ability students. Examples are Ramirez (1986); Oxford and Nyikos (1989); Pearson (1988); Green and Oxford (1995); Embi (1996), Halbach (2000) and Intarapasert (2000). This investigation also reveals the similar results as previously shown that higher-proficiency or ability students generally reported employing out-of-class language learning strategies significantly more frequently than did lower-proficiency or ability students.

Based on the findings of the present investigation, self-rated 'good/very good' and 'fair' ability students reported greater overall strategy use, use of strategies to achieve the purposes, and 18 individual strategies, than did those self-rating their language ability level as 'poor'. One possible explanation for the tentative conclusion that might be drawn from this study for the relationship between use of out-of-class or classroom-independent strategies and students' levels of 'perceived' language ability levels is students' motivation. Ellis (1994: 715) defines motivation as 'the effort which learners put into learning an L2 as a result of their need or desire to learn it'. Similarly, Gardner (1985:10) suggests that motivation refers to 'the combination of effort plus desire to achieve the goal of learning the language plus favourable attitudes toward learning the language.' In this regard, Yule (1996) comments that students who experience success in language learning are among those the highest motivated to learn and 'motivation may be as much a result of success as a cause,' (Yule, 1996 :195). The findings of this study suggest that higher-proficiency students may be highly motivated to seek opportunities to expose themselves to English outside the classroom setting. This is

evidenced in their reported high frequency of use of out-of-class strategies. The effort which higher-proficiency or ability students put into their language learning may enable them to employ a wider range of strategies. Equally, their employment of out-of-class or classroom-independent strategies may make them become high-ability learners. As discussed earlier, the complex relationship between students' levels of 'perceived' language ability levels and strategy use needs to be interpreted with caution. This conclusion may need to be reconsidered cautiously in terms of appropriateness in strategy use. As suggested in Chamot (1989), effective learners and ineffective learners are different in that the former are able to use strategies appropriately, while the latter also use a number of strategies but inappropriately. This is also reported in the study of Vann and Abraham (1990) that unsuccessful language learners appeared to be active strategy users, but sometimes they applied strategies inappropriately. In addition, the findings are consistent with what has been identified by Nunan (1988: 14) that 'the failure to use language outside the class' as one of the main reasons for learner-failure.

### 6.3.2. Use of Language Learning Strategies and the Gender of Students

The results of most of the previous studies in which the gender of the learner was taken into account have concluded that females employ certain strategies significantly more frequently than their male counterparts, especially social strategies. Emphasis on the significant differences in use of these learning strategies might be explained by the female's greater social orientation, and greater conformity to norms, both linguistic and academic as evidenced in Ehrman and Oxford (1989) and Oxford and Nyikos (1989).

The findings of the present investigation, however, showed no strong relation between the gender of students and their choices of strategy use, being consistent with the study by

McGraorty (1983), Tran (1988), Wharton (2000) and Intaraprasert (2000). The findings in this respect suggest that these language learners reported employing classroom-independent language learning strategies in more or less the same degree, irrespective of their gender. However, there is a minor significant difference in use of individual strategy items which male students reported using significantly more frequently than their female counterparts. This finding is consistent with the report of strategy use by Vietnamese adults in the United States of America with male learners reporting employing such strategies as watching television or listening to the radio (Tran, 1988) or the Prokop study (1989) which suggests that male students reported employing risk-taking and creative approach to the learning tasks more frequently than their female counterparts did. Male students tried to be original in oral and written expressions regardless of correctness of their language. The evidence shown might be counted as the strength of male students who may feel more comfortable when dealing with computers or other media.

**6.3.3. Use of Language Learning Strategies and the Students' Field of Study**

The field of study of these language learners at Suranaree University of Technology has been classified as: Engineering, Agricultural technology, Public Health, and Information Technology.

The finding of the present investigation in this regard reveals no relationship between use of language learning strategies and their field of study regarding overall strategy use, use of strategies to achieve classroom-independent purposes. However, the chi-square test results revealed that there is a minor significant difference in use of individual strategy items which Engineering students and Information Technology students reported using significantly more frequently than students studying Agricultural Technology or Public Health. When looking at

the strategies which students studying Engineering reported employing more frequently than those studying the other three major fields, it was found that two strategies were those to do with making use of computers or watch TV programme in English. This might be explained by the same reason as for gender since the majority of male students are Engineering students. With regard to Information Technology students where females formed the larger percentage, it was found that these students reported the strategies to do with their speaking improvement. This may be accounted for as the strong quality of female students as reported in Ehrman and Oxford (1989) and Oxford and Nyikos (1989) that these gender differences might be accounted for by women's greater social orientation, stronger verbal skills and greater conformity to norms both linguistically and academically.

In conclusion, the findings of the present investigation are generally consistent with the previous studies as shown in Chapter 2 in terms of students' 'perceived' language ability levels, where higher-ability students reported a higher frequency of strategy use than did lower-ability students. On the other hand, in respect of the gender of students, like the field of study, the findings of this study, being consistent with a few studies and being slightly different from some previous findings, suggest that there is a minor significant difference in strategy use between female and male students. There is also a minor significant difference in strategy use in relation to field of study

All in all, irrespective of degree of relationship between strategy use and the variables investigated, we may come to the conclusion that the relationship between students' choices of strategy use and 'perceived' language ability levels is still complex, while the relationship between students' choices of strategy use and the other two variables, i.e. gender, and

students' field of study seems to be more one directional as shown in the conceptual framework for investigating language learning strategies presented in Chapter 3, Section 3.3.

### 6.4. Implications of the Research Findings for the Teaching and Learning of English for Language Learners at Suranaree University of Technology (Research Question 6)

The research findings summarised earlier in response to the research questions demonstrate that there is a strong relationship between students' perceptions of English language ability levels and their employment of classroom-independent strategies. Further, a slight relationship has been found between use of out-of-class strategies and the students' gender as well as students' field of study. Some implications for the teaching and learning of English for language learners at Suranaree University of Technology may be drawn as follows:

1. Arising out of the research findings, students who self-rated their language ability levels as 'good/very good' and 'fair' reported utilising different types of media in English as input sources of the target language in order to improve their language in general. These media include the Internet, English-speaking films, and radio, television programmes, and cassette-tapes in English. It is recommended that language teachers provide these media in as many different forms as possible and encourage students to make maximum use of them as an alternative means of language learning. Further, some lessons may be combined with the web sites where students can visit and improve their language skills.
2. One of the significant findings of this investigation is that, as a whole, the greatest number of SUT students reported surfing the Internet in order to acquire their general knowledge in English. In this regard, teachers should be able to design lessons involving using the Internet or any types of computer games in enhancing their ability in English. Another

method which may work is that the University's self-access centre should provide exercises or guidelines which students can make use of when they use the centre and as a result, students can fully make use of the Internet. By doing this, autonomous learning may be able to promoted.

3. Nunan (1997) points out that there is enough evidence that strategy training can make a difference. Teachers can teach students how to learn. They can help them to be empowered learners and to take some responsibility for their own success by providing them with a sense of what a strategy is and how they can develop their own strategies (Brown, 1993). Consequently, language teachers teaching English to SUT students may need to modify their roles in helping students to employ appropriate language learning strategies. In addition to Nunan and Brown, Prokop (1989) makes a sound comment about training or teaching language learning strategies to language learners, regardless of their language ability levels that:

> "It has been determined that learning strategies can be taught, even to 'poor' learners, and that the average and low achievers are most likely to benefit from instruction in using effective second language learning strategies. Consequently, the time and effort needed for assisting weaker students to acquire such strategies yields a greater return than similar work with top students, who are likely to be aware of how they should approach a learning task', (Prokop, 1988:159).

However, it is important for teachers to understand that certain language learning strategies may work with some learners, but not with others. In this respect, Cohen (1990) makes an interesting suggestion that:

"....learners differ notably in language learning and in the ways that they make effective use of a given strategy in a given instance. The view that strategies are inherently good for all learners or that their use would produce successful results for the same learners each time has been found to be simplistic. Rather, it is important to lay out a series of options and to let the particular learner choose according to taste and results from using a given strategy" (Cohen, 1990 : 15).

4. Another point which should be noted here is that the findings of this investigation show that the gender of students did not exhibit strong relationship with their choice of strategy use. That is to say, female and male students did not differ in terms of their employment of out-of-class language learning strategies. In this respect, teachers may not take the gender of their students into serious consideration when introducing or training learning strategies to their students.

5. Through an informal talk with some students why they did not do much with English outside a classroom setting, the researcher has learnt that many of them did not know how to manage time properly. In other words, they seemed to focus on their major field of study rather than English. They wish they had more time. In this regard, SUT lecturers should raise the issue of time management and raise students' awareness on how they can man manage to allocate some time for English in addition to their regular lessons.

6. In terms of use of strategies to achieve the five purposes, it was found that these students reported employing out-of-class strategies to improve their speaking skill far less frequently than the other four purposes though the highest percentage of the students (34.8%) reported that this skill is the more important than the other four skills including grammar and vocabulary. The percentages of students reporting these skills the most important were: 29.% for listening; 21.7% vocabulary; 8.6% reading; 5.1% grammar; and 0.6% writing. Regarding this respect, the School of English should provide more opportunity for students to expose themselves to improve their speaking skill. What may be done to help them is that an informal group may be formed in order to support students who are interested in practising speaking. The time of meeting can be flexible, depending largely on when students feel it would be convenient for them. Another possible way is set

up a speaking corner in the University's self-access centre or ELRU. Members of staff from School of English may take turns organising speaking activities regularly. As for the improvement of the other language skills, similar activities could be organised as well.

### 6.5. Contributions of the Present Investigation

The present investigation has some significant contributions to the area of language learning strategies. As previously seen in Chapter 2, there has been some research work on language learning strategies carried out with Thai students, but most of the focal points of study have generally been limited to looking into the relationship between strategy use and students' language proficiency/achievement levels. In terms of the focal points of study, the present investigation has offered a broader investigation concerning the relationship between students' reported frequency of strategy use and variables which include gender of students, and students' field of study in addition to students' language proficiency levels. In addition, this present investigation has offered the perspective of out-of-class language learning strategies exclusively to be examined.

### 6.6. Limitations of the Present Investigation and Proposals for Future Research

The present investigation has been valid and valuable in addressing the primary research questions, which are to describe frequency of out-of-class language learning strategies reported by students learning English at Suranaree University of Technology and to investigate variation patterns of and to examine relationships between frequency of students' reported strategy use at different levels with reference to 'perceived' English language ability levels, gender, and field of study. However, in carrying out the research, certain limitations have been apparent, and areas for possible future research have been discerned. Looking first at the limitation issue, the researcher would wish to note critically that:

- the research methods should have been triangulated, i.e. student interviews should have been included. The researcher for the present investigation realised that it may enable a researcher to discover other aspects, for example, students' attitude toward or beliefs about learning English. This may give a clearer picture why students, on a whole, did not report using any out-of-class strategies at a high level.
- the research population should have been more or lass the same especially by field of study where Engineering students made up almost fifty per cent of the subjects which Agricultural Technology and Public Health were only about a fourth of the subjects.
- some language learning strategies from other existing strategy questionnaires by other researchers should have been derived and included in the strategy questionnaire for the present investigation to offer a wider range of learning strategies to students to choose from.

Notwithstanding the limitations, the research is nonetheless valid, but the researcher acknowledges that some areas might justify further research. These areas could include the following:

1. As shown in the literature review section in Chapter 2, it can be seen that a larger amount of research work on language learning strategies has been carried out with Thai students learning at the Tertiary level. More research work in the area needs to be carried out with a wider range of populations in different contexts, i.e. secondary school students or adult language learners.

2. Through the literature reviews and related materials, to date no researchers in the field appear to have taken such variables as students' socio-economic/academic backgrounds, or parents' attitude towards language learning into consideration as one of the factors which may

affect students' use of language learning strategies. So they should be taken into consideration by researchers in the field.

3. In the Thai context, previous attempts to examine language learning strategies have been made only with English major students or successful language learners. Examples are Sarawit (1986), Rattanaprucks (1990), Mullins (1992), and Lappayawichit (1998). There is a need to examine use of language learning strategies of students majoring in different fields other than English who may also be successful language learners and comparison of strategy use of different groups of students should be made.

4. A comparison of teaching styles or habits of teachers teaching different groups of students may be made in order to understand learning strategy use better. The teaching styles or teaching habits may include teaching methods, content areas, teacher's expectation and language skills provided to students. The nationality of teachers may also be taken into consideration.

5. Since the research population for the present investigation consists of students studying in different years, i.e. 1st, 2nd, 3rd, or 4th, the researcher has always recognised that the heterogeneity of students in terms of the number of years which students have been studying may have affected students' choices of strategy use. Thus, there is a need for future research to examine whether or not this aspect affects students' reported choices of strategy use. In addition, instead of exploring students' reported strategy use relying solely on a statistical comparison, students may be also asked to evaluate the proposed strategies in terms of their usefulness or workability.

## 6.7. Conclusion

The present investigation has been conducted in a data-based, systematic, and non-judgemental descriptive manner. It has contributed to the field of research on language learning strategies in terms of types of language learning strategy, the variables investigated, and students' language ability measurement. The main contribution of the present investigation has been focal point of investigation which exclusively examines out-of-class language learning strategies. Of the variables investigated, two variables i.e. gender and field of study have rarely been taken into consideration by any researchers previously in this area.

Lastly, the researcher for the present investigation has suggested some implications arising out of the research findings for the teaching and learning of English to students at Suranaree University of Technology and may be able to apply where the context is similar in Thailand. Limitations of the present investigation and some proposals for future research have also been put forward. The researcher believes that with appropriate instruments for eliciting language learning strategies, as well as a research design as presented in Chapter 3, a researcher can gain further insights into how students deal with language learning strategies are employed by different students in different learning contexts, especially outside the classroom setting. Other variables, for example, teachers' teaching styles; students' language learning background; learner belief in language learning; or students' socio-economic, could have an impact on such research.

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**Background Questionnaire**

Please provide the following information by choosing an appropriate choice for each item. Put a cross (X) in the space provided:

1. You are:

   _____ male (เพศชาย) _____ female (เพศหญิง)

2. You are studying:

   _____ Engineering

   _____ Agricultural Technology

   _____ Public Health

   _____ Information Technology

3. Are you studying English this term?

   _____ No .

   _____ Yes. I am studying:

   _____ English 1

   _____ English 2

   _____ English 3

   _____ English 4

   _____ English 5

   _____ English Elective 1

   _____ English Elective 3

   _____ English Elective 4

4. นักศึกษาเรียนวิชาภาษาอังกฤษกี่รายวิชาแล้วที่ มทส

   _____ 1 รายวิชา

   _____ 2 รายวิชา

   _____ 3 รายวิชา

   _____ 4 รายวิชา

   _____ 5 รายวิชา

5. นักศึกษาคิดว่าความสามารถทางภาษาอังกฤษของตนเองอยู่ในระดับใด

   _____ Good (ดีหรือดีมาก) _____ Fair (ปานกลาง) _____ Poor (อ่อนต้องปรับปรุง)

***Thank you for your cooperation.***

**แบบสอบถาม**

**"กลวิธีการเรียนภาษาอังกฤษนอกชั้นเรียนของนักศึกษามหาวิทยาลัยเทคโนโลยีสุรนารี"**

<u>คำชี้แจง</u> : แบบสอบถามนี้สร้างขึ้นเพื่อรวบรวมข้อมูลเกี่ยวกับกลวิธีการเรียนภาษาอังกฤษนอกชั้นเรียนของนักศึกษามหาวิทยาลัยเทคโนโลยีสุรนารี ปีการศึกษา ๒๕๔๕ ข้อความในแบบสอบถามนี้เป็นกลวิธีการเรียนภาษาอังกฤษนอกชั้นเรียนของนักศึกษา โปรดอ่านและพิจารณาดูว่านักศึกษา ใช้กลวิธีการเรียนภาษาอังกฤษในแต่ละข้อเหล่านี้บ้างหรือไม่ โดยเลือกคำตอบว่า **"ใช่"** หรือ **"ไม่ใช่"** ถ้าคำตอบคือ **"ไม่ใช่"** ให้นักศึกษาข้ามไปทำ ข้อในข้อต่อไป ตามคำสั่งถ้าคำตอบคือ **"ใช่"** ให้นักศึกษาพิจารณาเลือกเกณฑ์ต่อไปนี้ให้สอดคล้องกับความเป็นจริงที่นักศึกษาปฏิบัติอยู่เกี่ยวกับการใช้กลวิธีเหล่านี้ โดยการกาเครื่องหมายกากบาท (X) ลงในว่างที่เหมาะสม คือ

| | | |
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| ปฏิบัติเป็นประจำ หรือ เกือบประจำ | <u>หมายถึง</u> | นักศึกษาใช้กลวิธีการเรียนภาษาอังกฤษนั้น ๆ อย่างสม่ำเสมอหรือเกือบสม่ำเสมอ |
| ปฏิบัติบ่อยครั้ง | <u>หมายถึง</u> | นักศึกษาใช้กลวิธีการเรียนภาษาอังกฤษนั้น ๆ มากกว่าครึ่งหนึ่งของการปฏิบัติ |
| ปฏิบัติเป็นบางครั้ง | <u>หมายถึง</u> | นักศึกษาใช้กลวิธีการเรียนภาษาอังกฤษนั้น ๆ น้อยกว่าครึ่งหนึ่งของการปฏิบัติ |
| ไม่เคยปฏิบัติเลย | <u>หมายถึง</u> | นักศึกษาใช้กลวิธีการเรียนภาษาอังกฤษนั้น ๆ เลยแม้แต่ครั้งเดียว |

<u>ตัวอย่าง</u>

()() นักศึกษาพยายามเตรียมตัวให้พร้อมเพื่อที่จะไปเรียนวิชาภาษาอังกฤษใช่หรือไม่

☐ ใช่ ☐ ไม่ใช่

ถ้าตอบว่า **"ไม่ใช่"** โปรด**ข้ามไปทำข้อ** 2

ถ้าตอบว่า **"ใช่"** นักศึกษา พยายามเตรียมตัวให้พร้อมเพื่อจะไปเรียนวิชาภาษาอังกฤษโดยใช้กลวิธีการเรียนต่อไปนี้มากน้อยเพียงใด

| **กลวิธีการเรียนภาษาอังกฤษ** | ปฏิบัติ เป็นประจำ หรือเกือบประจำ | ปฏิบัติ บ่อยครั้ง | ปฏิบัติ เป็น บางครั้ง | ไม่เคย ปฏิบัติเลย |
|---|---|---|---|---|
| 0.1 ศึกษาเนื้อหาบทเรียนหรือจุดประสงค์การเรียนรู้ของแต่ละบทเรียนล่วงหน้า | ____ | X | ____ | ____ |

1. นักศึกษาพยายามเพิ่มเติมความรู้ด้านคำศัพท์หรือการใช้ภาษาอังกฤษใช่หรือไม่

☐ ใช่ ☐ ไม่ใช่

ถ้า **"ไม่ใช่"** โปรดข้ามไปทำข้อ 2

ถ้า **"ใช่"** นักศึกษาพยายามเพิ่มเติมความรู้ด้านคำศัพท์หรือการใช้ภาษาอังกฤษโดยวิธีการต่อไปนี้มากน้อยเพียงใด

| **กลวิธีการเรียนภาษาอังกฤษ** | การปฏิบัติเป็นประจำหรือเกือบประจำ | ปฏิบัติบ่อยครั้ง | ปฏิบัติเป็นบางครั้ง | ไม่เคยปฏิบัติเลย |
|---|---|---|---|---|
| 1.1 อ่านสิ่งพิมพ์เป็นภาษาอังกฤษ เช่น ป้าย โฆษณา แผ่นปลิว หนังสือพิมพ์ วารสาร หรือนิตยสาร | | | | |
| 1.2 เล่นเกมส์เป็นภาษาอังกฤษ เช่น เกมส์ต่อคำศัพท์ | | | | |
| 1.3 ดูภาพยนตร์ เสียงในฟิล์มเป็นภาษาอังกฤษ | | | | |
| 1.4 ฟังเพลงภาษาอังกฤษ | | | | |
| 1.5 อื่น ๆ (โปรดระบุ) | | | | |

2. นักศึกษาพยายามที่จะพัฒนาทักษะการฟังภาษาอังกฤษ ใช่หรือไม่

☐ ใช่ ☐ ไม่ใช่

ถ้า **"ไม่ใช่"** โปรดข้ามไปทำข้อ 3

ถ้า **"ใช่"** นักศึกษาพยายามที่จะพัฒนาทักษะการฟังภาษาอังกฤษ โดยใช้วิธีการต่อไปนี้มากน้อยเพียงใด

| **กลวิธีการเรียนภาษาอังกฤษ** | ปฏิบัติเป็นประจำหรือเกือบประจำ | ปฏิบัติบ่อยครั้ง | ปฏิบัติเป็นบางครั้ง | ไม่เคยปฏิบัติเลย |
|---|---|---|---|---|
| 2.1 ดูภาพยนต์เสียงในฟิล์มเป็นภาษาอังกฤษ | | | | |
| 2.2 ฟังเพลงเป็นภาษาอังกฤษหรือเทปการสนทนาภาษาอังกฤษ | | | | |
| 2.3 ฟังรายการวิทยุภาคภาษาอังกฤษ | | | | |
| 2.4 ดูรายการโทรทัศน์ภาคภาษอังกฤษ | | | | |
| 2.5 อื่นๆ (โปรดระบุ) | | | | |

3. นักศึกษาพยายามที่จะพัฒนาทักษะการพูดภาษาอังกฤษใช่หรือไม่

☐ ใช่ ☐ ไม่ใช่

ถ้า **"ไม่ใช่"** โปรดข้ามไปทำข้อ 4

ถ้า **"ใช่"** นักศึกษาพยายามที่จะพัฒนาทักษะการพูดภาษาอังกฤษโดยใช้วิธีการต่อไปนี้มากน้อยเพียงใด

| **กลวิธีการเรียนภาษาอังกฤษ** | ปฏิบัติเป็นประจำหรือเกือบประจำ | ปฏิบัติบ่อยครั้ง | ปฏิบัติเป็นบางครั้ง | ไม่เคยปฏิบัติเลย |
|---|---|---|---|---|
| 3.1 พูดภาษาอังกฤษกับตัวเอง | | | | |
| 3.2 พยายามที่จะเรียนแบบเจ้าของภาษาจากภาพยนต์หรือเทป | | | | |
| 3.3 พูดภาษาอังกฤษกับเพื่อน พี่น้องหรือ ชาวต่างประเทศ | | | | |
| 3.4 ใช้โปรแกรมคอมพิวเตอร์ เช่น "Chat" progamme | | | | |
| 3.5 เรียนที่โรงเรียนสอนภาษา | | | | |
| 3.6 อื่นๆ (โปรดระบุ) | | | | |

4. นักศึกษาพยายามที่จะพัฒนาทักษะทางการเขียนภาษาอังกฤษใช่หรือไม่

☐ ใช่ ☐ ไม่ใช่

ถ้า **"ไม่ใช่"** โปรดข้ามไปทำข้อ 5

ถ้า **"ใช่"** นักศึกษาพยายามที่จะพัฒนาทักษะทางการเขียนภาษาอังกฤษโดยใช้วิธีการต่อไปนี้มากน้อยเพียงใด

| **กลวิธีการเรียนภาษาอังกฤษ** | ปฏิบัติเป็นประจำหรือเกือบประจำ | ปฏิบัติบ่อยครั้ง | ปฏิบัติเป็นบางครั้ง | ไม่เคยปฏิบัติเลย |
|---|---|---|---|---|
| 4.1 โต้ตอบเป็นภาษาอังกฤษทางจดหมายหรือ e – mail | | | | |
| 4.2 ฝึกเขียนประโยคหรือเรียงความเป็นภาษาอังกฤษ | | | | |
| 4.3 ฝึกแปลภาษาไทย เป็นภาษาอังกฤษ | | | | |
| 4.4 อื่นๆ (โปรดระบุ) | | | | |

5. นักศึกษาพยายามที่จะเพิ่มพูนความรู้ทั่วไปเกี่ยวกับภาษาอังกฤษใช่หรือไม่

☐ ใช่ ☐ ไม่ใช่

ถ้า **"ไม่ใช่"** โปรดหยุด

ถ้า **"ใช่"** นักศึกษาพยายามที่จะเพิ่มพูนความรู้ทั่วไปเกี่ยวกับภาษาอังกฤษโดยใช้วิธีการต่อไปนี้มากน้อยเพียงใด

| กลวิธีการเรียนภาษาอังกฤษ | ปฏิบัติเป็นประจำหรือเกือบประจำ | ปฏิบัติบ่อยครั้ง | ปฏิบัติเป็นบางครั้ง | ไม่เคยปฏิบัติเลย |
|---|---|---|---|---|
| 5.1 พยายามหาโอกาสที่จะใช้ภาษาอังกฤษหรือเพิ่มความรู้ภาษาอังกฤษ. | | | | |
| 5.2 เรียนเพิ่มเติมที่สถาบันสอนภาษาเรียนพิเศษ | | | | |
| 5.3 อ่านสิ่งพิมพ์ภาษาอังกฤษ เช่น หนังสือทั่วไป หนังสือเรียน วารสาร หรือนิตยาสาร | | | | |
| 5.4 ใช้ Internet | | | | |
| 5.5 อื่นๆ (โปรดระบุ) | | | | |

**ขอขอบคุณที่ให้ความร่วมมือ**

## About the Author

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Inataraprasert, C. (2003) **Classroom-Independent Strategies Used by EST Students: factor analysis** Paper presented at Burapha University, July 6, 2003.

Dr Channarong Intaraprasert, started teaching English to Thai students in 1984 and is currently working at School of English, Suranaree University of Technology, Thailand. He is interested in learner beliefs about language learning and how students go about learning a foreign language especially English as a foreign language. He used to work extensively as a teacher trainer for primary as well as secondary school teachers under the jurisdiction of the Ministry of Education. Apart from teaching, he presently co-supervises theses for graduate students with his colleagues at the University.