RELATIONSHIP BETWEEN LANGUAGE LEARNING STRATEGIES AND THE PSYCHOMOTOR DOMAIN OF LIFE SKILLS AMONG FIRST-YEAR STUDENTS AT MAHIDOL UNIVERSITY

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ABSTRACT

The purpose of this study was to investigate the relationship between language learning strategies and the psychomotor domain of life skills. The participants were 570 first year Mahidol University students from 24 study programs. The sample included 406 females and 164 males. The instruments used were the Strategy Inventory Language Learning (SILL) version 7.0 and the Life Skill Test. The Cronbach's alpha reliability coefficients of the first and the second were .94 and .91 respectively. Statistical devices included descriptive statistics (mean and standard deviation), Spearman rho correlation coefficient, Pearson product moment correlation coefficient, and multiple regression.

The results showed that language learning strategies were positively significantly correlated with the psychomotor domain of life skills ($r= .185$, $p < .01$). All six categories of language learning strategies were positively correlated with the three sub-psychomotor domains. Memory strategies were the best predictors for interpersonal relationships, communication skills, and coping with emotion and stress skills; metacognitive strategies were the best predictors for interpersonal relationships, communication skills, decision making and problem solving skills.

The findings suggest that language teachers should create interdisciplinary lessons for language teaching and psychomotor training. It is also necessary to integrate life skills teaching into every subject and this integration should be practiced at all levels: primary, secondary, and tertiary. Additionally, this integration should be addressed by Thai education policy.

KEY WORDS: LANGUAGE LEARNING STRATEGIES / LIFE SKILLS / PSYCHOMOTOR DOMAIN / RELATIONSHIP / FIRST-YEAR STUDENTS

114 pp.

การศึกษาความสัมพันธ์ระหว่างกลยุทธ์การเรียนภาษาอังกฤษและทักษะชีวิตด้านทักษะพิสัยของ นักศึกษาชั้นปีที่ 1 มหาวิทยาลัยมหิดล (RELATIONSHIP BETWEEN LANGUAGE LEARNING STRATEGIES AND THE PSYCHOMOTOR DOMAIN OF LIFE SKILLS AMONG FIRST-YEAR STUDENTS AT MAHIDOL UNIVERSITY)

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บทคัดย่อ

         การวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างกลยุทธ์การเรียนรู้ภาษาและทักษะชีวิต ด้านทักษะพิสัยรวมทั้งศึกษาระดับความสัมพันธ์และอิทธิพลของกลยุทธ์การเรียนรู้ภาษาและทักษะพิสัยซึ่ง เป็นด้านหนึ่งของทักษะชีวิต ในกลุ่มนักศึกษาปริญญาบัณฑิต มหาลัยมหิดล ชั้นปีที่ 1 โดยใช้แบบสอบถาม ที่ประกอบด้วย แบบสอบถามยุทธวิธีการเรียนภาษาอังกฤษสำหรับผู้เรียนภาษา อังกฤษเป็น ภาษาต่างประเทศหรือภาษาที่สองและแบบประเมินทักษะชีวิต ซึ่งแบบสอบถามทั้งสองมีค่าสัมประสิทธิ์ แอลฟาของคอนบาคเท่ากับ .94 และ .91 ตามลำดับ ส่วนค่าสถิติที่ใช้ในการวิเคราะห์ข้อมูลตามลำดับมีดังนี้ สัมประสิทธิ์สหสัมพันธ์ของสเปียร์แมน สัมประสิทธิ์สหสัมพันธ์ของเพียร์สัน และการวิเคราะห์ถดถอยพหุ แบบขั้นตอน

         ผลการศึกษาพบว่ากลยุทธ์การเรียนภาษาอังกฤษมีความสัมพันธ์กับทักษะชีวิตด้านทักษะพิสัย อย่างมีนัยสำคัญทางสถิติที่ $p < .01$ ความสัมพันธ์ในเชิงบวกระหว่างกลยุทธ์การเรียนภาษา อังกฤษทั้ง 6 ด้านมีความสัมพันธ์ในเชิงบวกกับทุกองค์ประกอบของทักษะพิสัย นอกจากนี้ ยังพบว่าองค์ประกอบของ การเรียนรู้ภาษาด้านเทคนิคการจำเป็นตัวทำนายที่ดีสุดของ 2 องค์ประกอบของทักษะพิสัย นั่นคือ ทักษะ การสร้างสัมพันธภาพ และการสื่อสารและทักษะการจัดการกับอารมณ์และความเครียด ส่วนทักษะการ ควบคุมกระบวนการเรียนรู้ เป็นตัวทำนายที่ดีที่สุดของ 2 องค์ประกอบของทักษะพิสัย นั่นคือ ทักษะการ สร้างสัมพันธภาพและการสื่อสาร และทักษะการตัดสินใจและแก้ปัญหา

         ผลการศึกษาของการวิจัยนี้ได้เสนอแนะให้มีการสอนกลยุทธ์การเรียนภาษาควบคู่ไปกับการสอน ทักษะชีวิตและควรมีการสร้างบทเรียนบูรณาการที่มีสอนทักษะชีวิตในทุกวิชาและทุกระดับชั้นนอกจากนี้ ควรมีการกำหนดให้มีการบูรณาการการสอนทักษะชีวิตไว้ในนโยบายการศึกษาและหลักสูตรการศึกษา

114 หน้า

CONTENTS

CONTENTS (Continued)

LIST OF TABLES

LIST OF FIGURES

CHAPTER I
INTRODUCTION

1.1 Introduction

Globalization has a powerful effect on economic, political, cultural and social dimensions (El-Ela, 2003). In the age of globalization, companies offer information and communication technology services to their customers (Alden, 2004). The companies can increase their net incomes because the customers from any place are not necessity to have face-to-face interaction with sellers. For example, Amazon is an book supplier which communicates with buyers located anywhere in the world pass through the Internet. Because the communication between residents from different continents is required, English plays an essential role as an International language.

English is used as the international language by the world's citizens (Phillipson & Skutnabb-Kangas, 1996). The very fact that English is an international language means that no nation can have custody over it (Nunan, 2003; Widdowson, 1994). In important world organizations such as the United Nation, the World Bank, the International Monetary Fund, the Organization for Economic Cooperation and Development, many other world policy organizations, and most of the world's big businesses, English plays the dominant role (Phillipson & Skutnabb-Kangas, 1996). At this time, people use the Internet and the World Wide Web for communication and entertainment; English is the major language used (Wongsothorn, Hiranburana, & Chinnawongs, 2002).

English knowledge and skills play some parts in everyday lives of Thai people (Wiriyachitra, 2002). Nonnative speakers need to use the language daily for presentation of complex ideas, international collaboration and negotiation, and location and critical interpretation of rapidly changing information (Warschauer, 2000). As a result of English being used worldwide; there is necessity for students to learn English as a means for general communication, academics, and in occupational areas (Noytim, 2006; Sifakis & Sougari, 2003). For this reason, students who lack

English knowledge and skills may have more difficulties in daily life more than the others.

English knowledge and skills are important in the education because in technical and critical fields such as medicine, commerce, technology, engineering, education and politics, most journals are written in English and most international conferences are held in English (Clark, 2001). English language is used as a tool for extracting new information from professional journals, magazines, articles, and manuals (Noytim, 2006). Moreover, the Information Technology (IT) providers such as the Internet, the campus data network, and special computer programs are big sources of information. Students must use English in order to access the professional information for their professional study.

Good communication in English is essential for most occupations, even if the occupation requires little interaction with others (Saffer, 1999) such as writing, computer programming. For example, the effective communication either on telephone or in person is essential for sale workers in order to present their products well (Brown, 1998). Health care workers need to understand patients' health information and to make their patients to understand how to maintain their health (Larson, Roberts, Grumbach, & Laine, 2005; Office of Disease Prevention and Health Promotion, 2005). Lawyers need to analyze large amounts of information and to clearly express the information in order to be successful in their task (Morcón, García, & Pizarro, 2002; Saffer, 1999). For this reason, if students lack English knowledge and skills, they may have difficulties in finding and getting jobs more than those who are proficient in English.

Due to the importance of English mentioned above, it is necessary for students to develop their English proficiency. Using learning strategies can help students to increase English proficiency because learning strategies are tools for active, self-directed involvement, which are necessary for developing communicative competence (Ehrman & Oxford, 1988, 1989; Oxford, 1990; Oxford & Nyikos, 1989). When students are proficient in English knowledge and skills, they do not have difficulties in everyday life. In addition, the English proficiency of students is likely to be a source of success in academic and vocational settings. However, only ability

in English is not enough for students to live in a society which has a lot of social problems such as alcoholism, drug abuse, sexual abuse, and smoking.

In order to cope with large number of social problems, having life skills enable students to deal with everyday social situations (Lownsbrough, Thomas, & Gillinson, 2004). World Health Organization (WHO) defined life skills as ability for adaptive and positive behavior that enables individuals to deal effectively with the demands and challenges of everyday life (1997). Life skills, therefore, play an important role in the promotion of mental well-being. The promotion of mental well-being contributes to our motivation to look after ourselves and others, the prevention of mental disorders, and the prevention of health and behavior problems. Life skills is a person's ability to maintain a state of mental well-being and to demonstrate this in adaptive and positive behavior while interacting with others, his/her culture and environment (WHO, 1997). Lack of appropriate personal and social skills is one of the most frequently cited causes of termination of employment (Goodship, 1990).

Life skills are essential to job functioning, and they must be included in instruction for students. A life skills curriculum approach blends academic, daily living, personal/social, and occupational skills into integrated lessons designed to help students learn to function independently in society (Goodship, 1990). Educational endeavour will have to ask itself whether and to what extent it promotes learning activities that help develop life skills that are vital to coping with the key issues of one's life and survival, and to what extent it stimulates requisite attitudes and motivations (curiosity, interest, self-starting qualities) for lifelong learning (Singh, 2004).

For this reason, life skill is very crucial for students because life skills education helps students to improve the decision making skill, ability to take every thing in the right sense, and also improve their contributions to the society (Francis, 2007). Since life skills education plays a vital role of life, it is essential for educators to promote learning activities that help to develop students' life skills (Singh, 2004). Therefore, integrating life skills into education for students is responsibility of a teacher. English teachers cannot stay in ivory towers alone anymore (Firkins, A., & Wong, 2005). They have to co-operate with other teachers to create interdisciplinary lessons (Holmbukt, 2006, Tsai, 2007). For example, an English teacher can work with

 a science teacher creating AIDS prevention lessons. The teachers use a short article about AIDS preventions as a material. The English teacher employs the article to teach reading, vocabulary, grammar, and other linguistics features. The science teacher uses that article to teach about of causes of AIDS contamination and how to prevent infection. Then the English teacher and the science teacher may ask students to think of a way to promote AIDS prevention and then present it to their peers in English. In this activity, students use both English knowledge and science knowledge.

1.2 Background of the study

English language learning and life skills are necessary for Thai students, so the Office of the National Education Commission specifies it in the Thai National Education Act of B. E. 2542 (1999). In Section six and seven, it indicates that full development of Thai people requires knowledge, critical thinking, capability, virtue and social responsibility. The "knowledge" in the present study refers to English knowledge and skills whereas critical thinking, capability, virtue and social responsibility are considered as components of life skills. In order to fulfill the requirement of the Act, schools have autonomy in time management to provide appropriate English language teaching for their students (Wongsothorn, Hiranburana, & Chinawongs, 2002). The mandate to develop life skills of the students was introduced in the Basic Education Curriculum of B.E. 2544 (2001).

English

In Thailand, English is taught as the first foreign language because the government has recognized that it is the global language (Punthumasen, 2007; Wiriyachitra, 2002; Wongsothorn, Hiranburana, & Chinawongs, 2002). Schools in general teach English language following the 2001 Basic Education Curriculum (BEC) established by the Department of Curriculum and Instruction Development, which is presently under the Office of the Basic Education Commission. The content of foreign language includes, for example, topics such as: Language for Communication; Language and Culture; Language and other Academic Subject Groups; Relationships and Language including both within Community and in World Relationships. Included in the subject of Language for Communication, teachers teach all four basic language skills to students: listening and reading, speaking and writing.

According to Punthumasen (2007), the study examined the situation of English education in basic education and problems related to the quality of teachers of English. Her study found that the Thai Government has recognized the importance of English language and allowed the Ministry of Education to develop English language education. The Ministry has announced the policies and allowed the education institutions to promote the improvement of English language capabilities in Thailand as follows: international schools, English curriculum, and English Program (E.P.) School. International school were allowed to open for non-Thai nationality, or children of Thais who had been living abroad with their parents or otherwise studying abroad (Deveney, 2005; Office of the National Education Commission, 2003; Yunibandhu, 2004). Gradually, international schools have also been Thai students to enroll, up to 50% of their student enrollment (Punthumasen, 2007). However, realistically, the number of students who can study in International schools is too small due to the prohibitive costs and limited capacity of these schools. English curriculum indicates that all schools could teach English beginning at the Prathomsuksa 1 (Grade 1) level, in both public and private schools across the country. English Program (EP) schools or bilingual schools use English as a medium of instructions. There are about 4 subjects taught in English in E.P. schools, such as Science, Mathematics, English, and Physical Health Education, while other subjects will be taught in Thai such as Thai Language and Social Studies.

Life skills

Since life skills were introduced in the Thai National Education Act B. C. 2542 (1999) and BEC (2001), there were two teaching models created for promoting life skills: participatory learning (PL) and School Based Program (SBP) (Department of Mental Health, 2004). PL is a process developed by teachers and public health personnel. The target group of this process is teachers in secondary schools and extended schools. Only related teachers such as guidance teachers and health teachers attend the training to be an expert in AIDS prevention. These teachers are expected to transfer knowledge to other teachers in the school. Then teachers are expected to apply the PL process for AIDS prevention in their teaching. Department of Mental Health (2004) revealed that there was a weakness in this process because there was no specific session for life skills teaching. In addition, teachers gave less attention in

AIDS prevention as they thought that it was far from students and the teachers lacked of ability to transfer knowledge to other teachers. Because of these weakess, in 1997, the Office of the National Primary Education Commission (ONPEC) and the Department of Mental Health initiated the SBP model (Department of Mental Health, 2004). Teachers of every subject in the school were trained in applying PL process promoting general life skills in every subject. According to Erawan (1997), SBP was a high proficient model. It affected the change of teachers' teaching behaviors in every subject and created teamwork among teachers

The focuses of life skills have been changed over time to respond social problems (Department of Mental Health, 2004). For instance, during 1994 and 1998, there was a drastic epidemic of AIDS, so life skills was first introduced in prevention of AIDS. Later, during 1999-2003, life skills focused on prevention of drug use in school and partly for mental health problems in some schools as well. This is because the problem of drugs and narcotics had been increasingly violent during the economic change, and at the same time, advanced technology had posed enormous mental problems to families and students.

Due to the changing world, Thai government has clearly stated that English skills are crucial parts of Thai citizen's capacity to deal with the changing world (Wiriyachitra, 2002; Wongsothorn, Hiranburana, & Chinawongs, 2002). However, only English capacity is not enough for Thai students as they need life skills to live in harmony with other people and themselves. Life skills comprise thee major domains: cognitive, affective, and psychomotor (Department of Mental Health, 2004; WHO, 1997). The cognitive domain encourages students to think systematically and creatively while learning English. The affective domain encourages students to enjoy learning English and recognize the values of the others and themselves in the classroom. The psychomotor domain allows students to work with the others effectively and present to their ideas clearly.

1.3 Rationale of the study

According to the Education Act (1999), English proficiency and life skills are considered as the important skills for Thai students. A good knowledge of English is no longer a luxury but a necessity in Thai society (Wongsothorn, Hiranburana, &

Chinnawongs, 2002). Thai students need to be proficient in English for their everyday life, scholastics, and occupation (Noytim, 2006). In addition, life skills education is essential for Thai students because it encourages students to be knowledgeable, responsible, socially skilled, healthy, caring, and contributing citizens (Greenberg et al, 2003).

English

Good command of English knowledge and skills are essential for Thai students as it is a tool for exchange general knowledge and information with the world community (Office of National Education Commission, 2003; Prappal & Opanon-Amata, 2002; Wongsothorn, Hiranburana, & Chinnawongs, 2002). The necessity of learning English of Thai students resulted from four factors: global network, expanding information, learning based society, and business competition (Office of National Education Commission, 2003). In this era of global networking, there is the growth of interaction between people from different countries around the world. People connect to the other by using English language for creating cooperation in business. Therefore, people who are proficient in English have a higher potential for success in their business. The rapid development in information technology provides both advantages and disadvantages. The ability to use English knowledge assists Thai students to select appropriate information. In the learning based-society, English knowledge and skills provide Thai students direct access to knowledge from the original sources. Growth of business in Thailand causes Thai people to communicate with foreigners. Therefore, Thai students who can communicate with high proficiency in English are needed in a job market.

Thai students need to improve their proficiency in English learning (Prappal & Opanon-Amata, 2002;). As the world becomes more and more connected by trade, medical, political, and cultural demands (Brumfit, 1982); effective communication in English is required for Thai students in order to survive in both academic and vocational areas. Coping with English learning difficulties and teaching language learning strategies can help students to improve their English proficiency. Change in the socio-economic situation causes Thai students to develop their English competence. Furthermore, the change also affects students' lifestyles; hence students need a skill that can help them to adjust themselves in the right way. Language learning

strategies may be one effective way to improve competence in English. Effective strategies might help students to develop higher levels of language proficiency (Griffiths, 2003). Language learning strategies enable students to gain a large measure of responsibility for their own progress, and there is considerable evidence that effective strategy can be taught (Green & Oxford, 1995). Learner training, which often involves teaching better strategy and sometimes address individual learning styles as well, has been highly successful in some instances and not in others, sometimes depending on the language skills involved (O'Malley & Chamot, 1990). Oxford, Crookall, Cohen, Lavine, Nyikos, and Sutter (1990) found that the best learner training includes an explicit and clear focus on specific strategies, has frequent practice opportunities for strategies is integrated with regular class work, and shows students how to transfer strategies to new situations.

Life skills

Life skills are abilities that enable individuals to behave in healthy ways, given the desire to do so and given the scope and opportunity to do so. Life skills is a tool to help develop desirable characteristics among individuals including analytical thinking and creative thinking, ability, effective communication, good decision making, self-recognizing, and understanding others (Department of Mental Health, 2004). Life skills enable individuals to translate knowledge, attitudes and values into actual abilities. Learning life skills can enable students to translate knowledge, attitudes and values into actual situations. Therefore, teaching life skills as generic skills in relation to everyday life could form the foundation of life skills education for the promotion of mental well-being, and healthy interaction and behavior.

The Life Skills program is a comprehensive behavior change approach that concentrates on the development of the skills needed for life such as communication, decision-making, thinking, managing emotions, assertiveness, self-esteem building, resisting peer pressure, and relationship skills (Peace Corps, 2001). Additionally, it addresses the important related issues of empowering girls and guiding boys towards new values. The program moves beyond providing information. It addresses the development of the whole individual so that a person will have the skills to make use of all types of information, whether it is related to HIV/AIDS, STDs, reproductive health, safe motherhood, other health issues, and other communication and decision-

making situations. The Life Skills approach is completely interactive, using role plays, games, puzzles, group discussions, and a variety of other innovative teaching techniques to keep the participant wholly involved in the sessions (Peace Corps, 2001).

Because Thai students have to communicate with the foreigner in the educational and occupational community, the communication and interpersonal relationship skills are essential for them. These skills are components of psychomotor domain which comprise three pairs of components: interpersonal relationship and communication skills, decision making and problem solving skills, and coping with emotion and stress skills (Department of Mental Health, 2004). The communication and interpersonal relationship skills mean ability in using verbal or non-verbal language to communicate ones own feeling and thoughts, and ability to perceive others' feeling and thoughts which include desire, admiration, refusal, and establishing relationship. Decision making and problem solving skills mean ability to perceive problems and causes, seek choices, analyze advantages and disadvantages of each choice, assess choices, make decision of choice and solution, and implement a suitable and correct solution. Coping with emotion and stress skills means having the ability to assess emotion and being aware of its influence upon individuals' behavior, select suitable means to manage emotion, and an ability to recognize causes of tension and how to cope with them, how to release, avoid, and shift tension to other desirable behavior.

Training the psychomotor domain to the students helps them to create good relationship with the others in order to exchange the information in the education. Additionally, the ability of decision making facilitates students to access useful information from numerous sources. When students finish their study, they can survive in the workplace because they have communication and interpersonal skills.

Due to the importance of English ability and life skills for Thai students, there is a question to be considered. The question is: do Thai students have enough English ability and life skills? Therefore, next part of this study presents students' problems in both English learning and life skills. Exploring students' problems provides specific and useful information for students and teachers. The students can take advantages of coping their previous problems for solving their new problems and developing their

capacity of the problem solving skill. Teachers can use this information to generate a lesson for developing students' performance.

1.4 Statement of Problems

Thai students have had difficulties in English language learning according to the studies of the studies of Thai students' English performance. Similarly, students also have difficulties making decision about their lives when they are in trouble.

Problems in English learning

The English proficiency of Thai students was lower than the international standard required for further studies at graduate level abroad and was lower than students from other Southeast Asia countries such as Malaysia, Philippines, and Singapore (Prappal & Opanon-Amata, 2002). The finding of this study was similar to the finding of Wongsothorn (2003) who also examined the levels of English knowledge and skills of Thai students. Her study found that university students had a medium level of ability, especially in reading and writing skills. The findings of these studies imply that Thai university students need to improve their English knowledge and skills.

Students at Mahidol University have difficulties in learning English (Chomphuchart, 1998; Kaotsombut, 2003). Chompuchart (1998) stated that science students had reading difficulties. This problem was similar to Koatsombat (2003) who found that students had writing problems when they were asked to write papers in English. Students also had reading problems as they could not understand what they are required to read. Additionally, Kaotsombat (2003) stated that students had problems when they communicated with their foreign professors. To sum up, the students suffer from English learning difficulties because they could not solve those difficulties.

These problems and difficulties may be decreased if students employ variety of language learning strategies and use them frequently, because language learning strategies can help students to improve their language skills. For example, Dhieb-Henia (2003) studied an effect of metacognitive strategy training on reading performance. The study showed that there was an improvement of students' reading performance after they got training. Atay and Ozbulgan (2007) conducted a study to

examine the effectiveness of memory strategy instruction on vocabulary recall. The results showed that students who received memory strategy training gained vocabulary scores better than students who did not get training. The findings of these studies, there are positive effects of learning strategies training.

Problems in life skills

Changes in the socio-economic situation have affected Thai youth because they lack life skills and mental resistance (Department of Mental Health, 2004). Parents who are in low socio-economic status may have no time to teach their children. Thai youth, therefore, have been facing many problems as they are easily influenced by inappropriate presentation through various media. Lacking life skills and mental resistance, these young Thais increase their freedom, but they are irresponsible in their sexual behaviors, and contribute to a decline in moral and ethics (Department of Mental Health, 2004). Irresponsible sexual behavior leads to sexually transmitted infections including HIV/AIDS, unwanted pregnancy and illegal abortion (Poonkhum, 2003). Besides, during the economic change, the problem of drugs and narcotics has been increasingly violent among Thai youth (Department of Mental Health, 2004).

The above problems show that these poor young Thai lack life skills and mental resistance; studies were conducted to investigate life skills of Thai adolescents. For example, Phokanaruk (2001) conducted a study to investigate the effectiveness of the life skills program for improving appropriate food consumption behaviors among secondary school students. Results showed that students who attended the life skills program had higher critical thinking, self-awareness, and decision making skills for improving appropriate food consumption behaviors than other students. Saimai (2003) studied life skills of secondary students in Bangkok. Her study found that students had life skills at moderate level. Jantarat (2004) conducted an experimental study to investigate the effectiveness of participatory learning on life skills development program to prevent sexual problems for secondary students. The results showed that the experimental group had mean scores of self-awareness, social responsibility, sexual emotional management skills, and refusal skills significantly better than before and better than the control group. According to these studies, it shows that the study of life skills conducted in the public health area. Moreover, the previous studies of life

skills in Thailand were mostly conducted with secondary school students (Phokanaruk, 2001; Saimai, 2003; Supphakun, 2005; Termsirat, 2003). Life skills are also necessary for university students. Limviroj (2006) stated that the changing of socio-economic status causes Thai university students to suffer with problems in terms of behavior, emotion, and mentality. These problems may be decreased or even disappeared if the university students can solve or learn to solve them in a right way. On the contrary, if the students are not able to solve these problems or do it with a wrong solution; students may face other problems such as drug, stress, illness, mental illness, and pathological gambling, which may lead to suicide. For this reason, Thai university students have to be trained to develop life skills in order to survive and be happy in the higher education level.

English teachers can help students by integrating life skills into English classrooms. For example, teachers create activities and tasks which allow students to work in pairs or in groups can develop students' interpersonal relationship and communicative skills. While students work with others, they express their ideas to the other and receive the other's idea. If there is more than one choice while working, students can practice decision making skills in choosing the best choice or the most appropriate choice which suits to their situation. English activities and tasks which life skills is integrated in may be one useful way to help Thai students face, manage, and solve those difficulties effectively and efficiently. To do this, language learning strategy and life skills need to be contributed to see whether there is a relationship or not. Unfortunately, no studies have been conducted to find the relationship between language learning strategies and life skills. Therefore, it is essential to conduct this study to find the relationship between language learning strategies and life skills.

1.5 Purpose of the study

The purpose of this study is to investigate the relationship between language learning strategies and the psychomotor domain of life skills among first-year undergraduate students at Mahidol University, during the academic year 2006. The present study will be conducted to answer these questions:

1. Is there any relationship between learning strategies and the psychomotor domain for first-year undergraduate students at Mahidol University?

2. Are there relationships between two strategy classes (direct and indirect strategies) and the psychomotor domain (interpersonal relationship, problem-solving, coping with emotion, communication skill, decision making, and stress skill)?

3. Are there relationships between six categories of language learning strategies (memory, cognitive, compensatory, metacognitive, affective, and social) and the psychomotor subdomain (interpersonal relationship, communication skill, decision making, problem solving, coping with emotion, and coping with stress skills)?

1.6 Conceptual framework

Language Learning Strategies   **Life Skills**
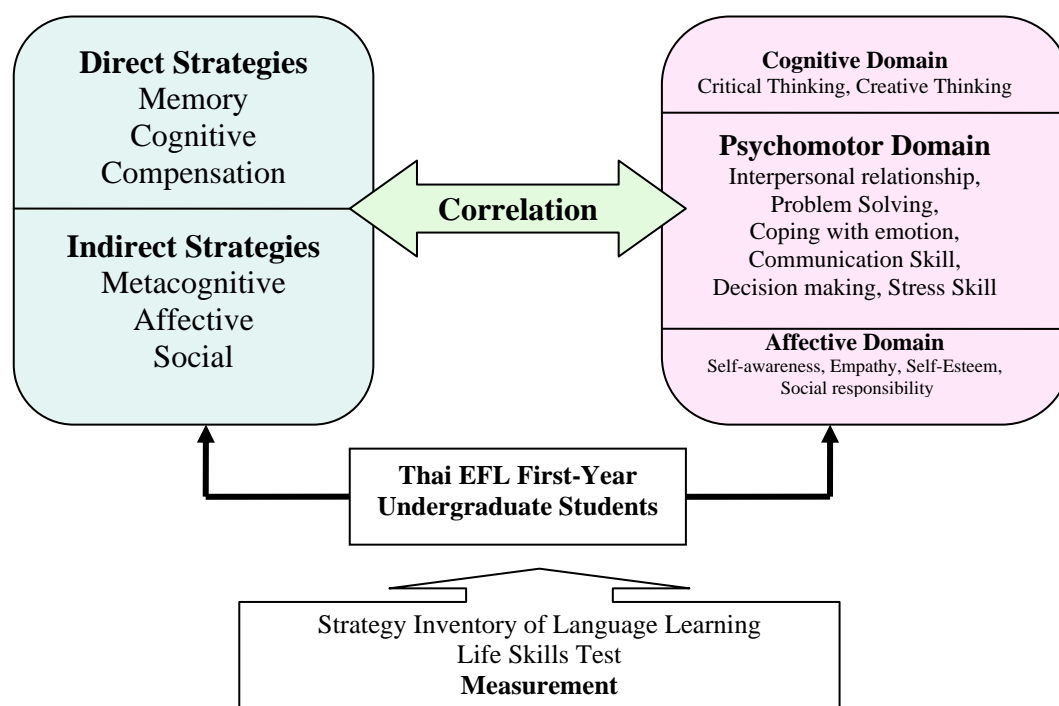
Note: EFL is an abbreviation for English as a foreign language.

Figure 1 Research conceptual framework model

The conceptual framework of this study was constructed base on the theories of language learning strategies proposed by Oxford (1990) and life skills proposed by Department of Mental Health (Erawan & Luang-Ungkoon, 2003). The research instrument of this present study was the questionnaire which contains two parts. First

part is Strategy Inventory for Language Learning (SILL) developed by Oxford (1990) to identify the frequent use strategies. Another part is Life Skill Test developed by Department of Mental Health (Erawan & Luang-Ungkoon, 2003) to identify the level of life skills which this present study focuses on the psychomotor domain. Scores of the language learning strategies and life skills measurement instruments were studied to find whether there was a relationship between language learning strategies and the psychomotor domain of life skills.

1.7 Significance of the Study

The expected results obtained from the present study will be useful in the following ways:

1. If there is a relationship between language learning strategies and psychomotor domain, the results may be useful for designing English course that integrate language learning strategies and life skills approach in order to improve students' language learning strategies and life skills.

2. The results will provide useful information for designing appropriate English tasks that encourage students to practice language learning strategies skills in order to develop skills in psychomotor domain and vise versa.

1.8 Basic Assumption

First-year undergraduate students were a source of data in both language learning strategies and the psychomotor domain of life skills. They were asked to give their opinions on their language learning strategies information via Strategy Inventory of Language Learning (SILL-version 7.0) and the information of psychomotor domain through Life Skill Test. In addition, the students were informed that there is no right or wrong answers and their answers do not affect their performance on examination. For this reason, they were asked to honestly and voluntary complete the questionnaires.

1.9 Limitation of the Study

The research aims to examine the relationship between language learning strategies and the psychomotor domain on life skills among undergraduate university students. The participants of this study were Thai EFL first-year university students at

Mahidol University. Because the sample was a small homogenous group of students, the results of this study may generalize to other levels, but generalization the results from this study must be done carefully.

1.10 Definition of Terms

1. *Language learning strategies* are specific actions, taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situation (Oxford, 1990). Language learning strategies are divided into two major classes: direct and indirect strategies. The directed strategies are subdivided into memory, cognitive, and compensation. The indirect strategies are subdivided into three groups of strategies: metacognitive, affective, and social (Oxford, 1990).

2. *Strategy Inventory for Language Learning (SILL)* is an instrument developed by Oxford (1990). It is designed for investigate the frequency of language learning strategies used by learners. The SILL version 7.0 (50 items) was developed for gathering data from speakers of other languages learning English.

3. *Life skills* are abilities comprising knowledge, attitude, and skills in managing surrounding problems in the current social situation, and preparedness for self-adjustment in the future relating to sex, subsequences, gender role, family life, health media influence, environment, ethics, and social problems (Ministry of Public Health, 1998 cited in Department if Mental Health, 2004).

4. *Life Skills Test* is an instrument developed by Department of Mental Health (Erawan & Luang-Ungkoon, 2003). It is designed to investigate the level of life skills for Thai adolescences. There are 120 items in the questionnaire presented in 3-point Likert scale format.

5. *Psychomotor domain* concerns personal and interpersonal skills (Department of Mental Health, 2004). Its components are categorized into three pairs: interpersonal relationship and communication, decision making and problem-solving, and coping with emotion and stress.

6. *Interpersonal relationship skill* means ability to learn the value of relationships with family, friends and other, to know the needs, interests, needs of parents, teachers, relation, friends and others, ability to learn how to make friends,

ability to adapt for good relationships with others and environment, compromise self-expectations with others, to live and work happily with others (WHO, 1997)

7. *Communication skill* means ability in using verbal or non-verbal language to communicate ones own feeling and thoughts, and ability to perceive others' feeling and thoughts which include desire, admiration, refusal, and establishing relationship (WHO, 1997).

8. *Decision making skill* refers to ability to understand the importance of decision making, collect data for decision making, generate alternatives, choose the best choice in decision making, understand the basic steps for decision making, appraisal of decision making and talking responsibility for self and group decision making (WHO, 1997).

9. *Problem solving skill* means ability to perceive problems and causes, seek choices, analyze advantage and disadvantage of each choice, assess choices, make decision of choice and solution, and implement suitable and correct solution (Department of Mental Health, 2004).

10. *Coping with emotion skill* means ability to assess emotion and being aware of its influence upon individuals' behavior, select suitable means to manage emotion (Department of Mental Health, 2004).

11. *Coping with stress skill* means ability to recognize causes of tension and how to cope with it, how to release, avoid, and shift tension to other desirable behavior (Department of Mental Health, 2004).

CHAPTER II
LITERATURE REVIEW

The present study was established to examine the relationship between language learning strategies and the psychomotor domain of life skills among first-year undergraduate students. To provide the background information of the present study, the relevant literature and some previous research of language learning strategies and life skills are outlined as follow.

2.1   Learner-centered approach

2.2   Language learning strategies

    2.2.1   Definitions

    2.2.2   Classifications

    2.2.3   Previous studies of language learning strategies

2.3   Learner autonomy

2.4   Life skills

    2.4.1   Definitions

    2.4.2   Classification

    2.4.3   Previous studies of life skills

2.5   Language learning strategies and life skills

2.6   Chapter summary

2.1 Learner-centered Approach

There are a number of educators (Hutchison & Waters, 1987; Mahendra, Bayles, Tomoeda, & Kim, 2005; Nunan, 1988; Tudor, 1996) expressing differing ideas about what the leaner-centered approach is. Learner-centered approach is an approach that centers on the students' responsibility for activities in learning, such as planning, researching, and assessing learning (Nunan, 1988). Learner-centeredness is the endeavor to gear instruction around the needs and characteristics of the students (Tudor, 1996). Learner-centered education is a pedagogical framework that positions learners at the heart of the instructional process, not as passive recipients of

information as in a traditional teacher- or content-centered approach (Mahendra, Bayles, Tomoeda, & Kim, 2005). Committee on Academic Programs and Teaching (CAPT) of University of Southern California describes the term learner-centered slightly different from the others. They define learner-centered approach as a concept and a practice in which students and professors learn from one another (Committee on Academic Programs and Teaching [CAPT], 2005-2006). According to definitions of learner-centered approach, learner-centered approach is an approach encouraging students to take responsibility for their individual learning, and there is negotiation between students and teachers in order to take advantage of such negotiation.

Due to the characteristics of learner-centered approach, learners have to play an active role in order to mange their own learning (Tudor, 1996). Learners are viewed as initiators of learning process who actively participate and negotiate in meaningful interaction to interpret and construct the meaning of their own learning (Brown, 2001; Harmer, 2001; O'Neil & McMahon, 2005). In other words, learners participate in decision-making. The learning goals for enriching the knowledge are based upon learners' background and interests, as well as what teacher brings to them. Although learning responsibility mostly belongs to students, the teachers have to be more active, to be better prepared and to work harder than teachers in the teacher centered-approach (Carter, 1993).

The primary role of teachers in the learner-centered approach is to help learners learn, solve problems, and cope with their own emotional needs and tension, as well as with the needs around them (Withall, 1975). Nunan (1988) stated that the teachers should use students' background of understanding, cooperative learning, and authentic learning problems as foundational information in their teaching and learning process. As teachers and learners can learn from each other (CAPT, 2005-2006), it is necessary for both teachers and learners to respect and accept each other. Students always respect their teachers when teachers play as a controller. In the learner-centered environment, teachers have to change their roles from controllers to be helpers, facilitators, consultants, advisers, and coordinators guiding students to the appropriate ways (Harmer, 2001; Tudor, 1996; Withall, 1975).

The purpose of a student-centered curriculum is to make learning maximally effective not for the average students, but for each student (Cross, 1975; Papalia,

1976). This approach needs collaborative and supportive classroom culture (Hayes, 2000; Mahendra, Bayles, Tomoeda, & Kim, 2005). Thus, this model for language curriculum development shifts from what should be done in a course of study to what is specifically done by language teachers in their classes, through negotiation between teachers and learners in the planning, implementation and evaluation of language courses (Nunan, 1988). It is not intended to diminish the importance of the instructional side of the classroom experience. Instead, instruction is broadened to include other activities that produce desirable learning outcomes (CAPT, 2005-2006). In other words, students have to work with the others in order to achieve success, and wok with themselves to develop their learning performance. In the learner-centered instructional environment, professors and students learn together through stimulating, interactive, and thought-provoking experiences (Hayes, 2000). Assessment practices in this learning environment are related to learning outcomes, and the climate is safe for all students (Mahendra, Bayles, Tomoeda, & Kim, 2005).

In the atmosphere of learner-centered approach, a course of study provides individual students build a maximally effective learning (Cross, 1975). In order to maximize effective learning, learner-centered teachers design educational experiences which provide opportunities for learners to demonstrate their success in achieving learning goals (CAPT, 2005-2006; Nonkukhetkhong, Baldauf & Moni, 2006). In addition, as there is negotiation between learners and teacher, this cooperation shifts in the power relationship between them (O'Neill & McMahon, 2005). In the learner-centered environment, this approach empowers students to become more autonomous and self-directed learners (Dickinson, 1994).

In order to be self-directed learners, students need strategies for increasing their learning performance and autonomy (Cotterall, 2000; Dickinson, 1994; Ehrman, Leaver, & Oxford, 2003; Oxford, 1986; Oxford & Nyikos, 1989). Therefore, it is teachers' responsibility to empower learners by enabling them to assume an informed and self-directive role in the pursuance of their language-related life goals (Tudor, 1996). Learning strategy training is one effective way of enhancing learner autonomy (Allwright, 1990; Lee & Oxford, 2008; Little, 1991; Su, 2005) According to Oxford, Crookall, Cohen, Lavine, Nyikos, and Sutter (1990), strategy training seeks to encourage greater responsibility and self-direction in learners, stimulate a

collaborative spirit between learners and teachers and also among learners themselves, and help learners to master specific strategies that facilitate learner autonomy.

2.2 Language Learning Strategies

2.2.1 Definitions

Knowing what learning strategy is provides background knowledge of language learning strategies. The term learning strategies is variously defined by educators, such as Bialystok (1978), Chamot (1987), O'Malley and Chamot (1990), Oxford (1990), Rubin (1975, 1987), and Wenden (1991). Rubin (1975) was the first of these educators who conducted a study in the field of language learning strategies. Since 1975, educators have defined and conducted studies in the field of language learning strategies. As there are several definitions of language learning strategies, such definitions are chronologically presented on Table 1.

Table 1 Definitions of Language Learning Strategies

Researcher (s)	Definition
Rubin (1975)	Language learning strategies refer to techniques or devices which a learner may use to acquire knowledge (p.43).
Bialystok (1978)	Language learning strategies are defined as optional means for exploiting available information to improve competence in a second language (p. 71).
Rigney (1978)	Language learning strategies are general operations or procedures used by language learners to aid the acquisition retention and retrieval of knowledge and performance (p. 165).
Brown, Bransford, Ferrara, and Campione (1983)	Learning strategies refers to systematic application of deliberate plans, routines, or activities to enhance learning (p.85).
Rubin (1987)	Language learning strategies are strategies which contribute to the development of the language system which the learner constructs and affects learning directly (p. 23).
Chamot (1987)	Language learning strategies are defined as techniques, approaches or deliberate actions that students take in order to facilitate the learning and recall of both linguistic and content area information (p. 71).

Table 1 Definitions of Language Learning Strategies (cont.)

Researcher (s)	Definition
O'Malley and Chamot (1990)	Language learning strategies are the special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information (p. 1).
Oxford (1990)	Learning strategies are specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective and more transferable to new situations (p. 8).
Wenden (1991)	Language learning strategies are mental steps the learners operate to learn a new language and to take their efforts to do so (p.18).
Stern (1992)	The concept of learning strategy is dependent on the assumption that learners consciously engage in activities to achieve certain goals and learning strategies can be regarded as broadly conceived intentional directions and learning techniques (p. 261).
MacIntyre (1994)	Language learning strategies are the actions chosen by language students that are intended to facilitate language acquisition and communication (p. 190).
Cohen (1998)	Language learning strategies are defined as processes which are consciously selected by learners and which may result in action taken to enhance the learning or use of a second or foreign language, through the storage, retention, recall, and application of information about that language (p. 4).
Richard, Platt, and Platt (1999)	Language learning strategies refer to the intentional behavior and thoughts that learners make use of during learning in order to better help them understand, learn or remember new information (p. 208).

Table 1 reveals that the writers define learning strategies as something used by students to achieve their learning. Definitions of learning strategies can be seen as the mental process (O'Malley & Chamot, 1990; Stern, 1992; Wenden, 1991) and the general (Rigney, 1978) and specific actions (Oxford, 1990). Therefore, it can be said that learning strategies are deliberated mental process leading to actions which learners employ for comprehending, facilitating, enhancing, storing, recalling, applying, and evaluating their knowledge. Although there are various meanings of the term "learning strategies" such as operations (Rigney, 1978), steps (Oxford, 1990;

Nyikos, 2007) or techniques (Oxford, 1990), those definitions focus on the same point that is actions or behaviors which learners use to improve or to develop their learning (Lee & Oxford, 2008; Oxford, 1990).

2.2.2 Classifications

As language learning strategies have various definitions, they were classified into categories and subcategories (O'Malley, Chamot, Stewner-Manzanares, Russo, & Kupper, 1985; Oxford, 1990; Rubin, 1987; Stern, 1992; Tarone, 1980). In order to provide a clear picture, the classifications of language learning strategies are chronologically presented on Table 2.

Table 2 Classifications of language learning strategies

Researcher (s)	Classification

Tarone (1980)	1. Strategies of language use
	    I. Communication strategies
	    II. Production strategies
	2. Language learning strategies

Rubin (1987)	1. Learning strategies
	    I. Cognitive learning strategies (clarification/ verification, guessing/ inductive inferencing, deductive reasoning, practice, memorization, monitoring)
	    II. Metacognitive learning strategies (planning, prioritizing, setting goals, self-management)
	2. Communication strategies
	3. Social strategies

O'Malley, Chamot, Stewner-Manzanares, Kupper, and Russo (1985)	1. Metacognitive strategies 2. Cognitive strategies 3. Social/affective strategies

Table 2 Classifications of Language Learning Strategies (cont.)

Researcher (s)	Classification

Oxford (1990)	1. Direct strategies
	    I. Memory strategies
	    II. Cognitive strategies
	    III. Compensation strategies
	2. Indirect strategies
	    I. Metacognitive strategies
	    II. Affective strategies
	    III. Social strategies

Stern (1992)	1. Management and planning strategies
	    I. decide what commitment to make to language learning
	    II. set himself reasonable goals
	    III. decide on an appropriate methodology, select appropriate resources, and monitor progress,
	    IV. evaluate his achievement in the light of previously determined goals and expectation
	2. Cognitive Strategies
	    I. Clarification / verification
	    II. Guessing / inductive inferencing
	    III. Deductive reasoning
	    IV. Practice
	    V. Memorization
	    VI. Monitoring
	3. Communicative - experiential strategies
	4. Interpersonal strategies
	5. Affective strategies

Classifications of language learning strategies on Table 2 show that the educators classified learning strategies in different points of view. For example, Tarone's (1980) classification focused on the communication strategies because they could help to expand language. Therefore, communication strategies were considered as a learning strategy, although this strategy was not perfect in grammatical or lexical terms (Griffiths, 2004). However, in order to focus on learning strategy rather than communication strategy, there is continuing debate about motivation. "The basic motivation is not to communicate but to learn" (Tarone, 1980). In addition, Tarone

(1998) stated that "The relationship of learning strategies to communication strategies is somewhat problematic". Therefore, this classification was not employed in this study.

Learning strategy classifications purposed by Rubin (1987), O'Malley, Chamot, Stewner-Manzanares, Kupper, and Russo (1985), Oxford (1990), and Stern (1992) focus on two frameworks that are cognitive and metacognitive strategies. However, these classifications are different in three components: communication (Rubin, 1987; Stern, 1992), social (O'Malley, Chamot, Stewner-Manzanares, Kupper, & Russo, 1985; Rubin, 1987; Stern, 1992), and affective strategies (O'Malley, Chamot, Stewner-Manzanares, Kupper, & Russo, 1985; Oxford, 1990; Stern, 1992). According to Stern's (1992) classification, terminologies used in the classification are different from the others but it can be interpreted as the same concept. For example, management and planning strategies can be considered as metacognitive strategies of the others. Interpersonal strategies (Stern, 1992) can be considered as social strategies in Rubin (1987), O'Malley, Chamot, Stewner-Manzanares, Kupper, and Russo (1985), and Oxford (1990). Interpersonal strategies are considered as social strategies because interpersonal strategies refer to ability which learners use to acquire culture of target language by connecting and cooperating with native speakers (Stern, 1992). Although these classifications share the similar points, these classifications overlap as they have been developed by scholars.

Oxford (1990) broke down the social/affective category of O'Malley, Chamot, Stewner-Manzanares, Kupper, and Russo (1985) into two categories, social and affective, and included more strategies in these two categories. Oxford's classification increased emphasis on social and affective strategies accorded with research from cognitive and educational psychology (Oxford, 1990). Additionally, according to Lan (2005), Oxford's (1990) classification combined the whole range of compensation strategies for making up for missing knowledge and creating systematic classification. Other language learning strategies classification had unsystematically scattered compensation strategies into categories (Lan, 2005) such as cognitive strategies (O'Malley, Chamot, Stewner-Manzanares, Kupper, & Russo, 1985). Furthermore, Oxford's classification can provide a useful base for understanding language learning strategies and for launching research (Griffiths, 2004). For this

reason, Oxford's (1990) classification was employed as a main scheme for classifying language learning strategies in this study.

Oxford (1990) classified language learning strategies into two main categories: direct and indirect strategies. The direct strategies are behaviors that directly involve the target language and enhance language learning. The direct strategies consist of three subcategories: memory, cognitive, and compensation strategies. The indirect strategies are behaviors supporting and managing language learning without directly involve in the target language. The indirect strategies consist of three subcategories: metacognitive, affective, and social strategies.

Memory strategies help learners for remembering information and then recalling it when the learners need to it for comprehension or production. The memory stores the important things the learners hear or read in the new language, thus the learners enlarge their knowledge based. The memory strategies include creating mental linkages, applying images and sound, reviewing well, and employing action.

Cognitive strategies enable learners to understand and produce new language in a variety of different ways. Learners use the cognitive strategies to link new information to the existing knowledge in order to understand the target language. The cognitive strategies include four subcategories as follows: practicing, receiving and sending messages, analyzing and reasoning, and creating structure for input and output.

Compensation strategies help learners to use the language in spite of their large gap of information. The compensation strategies enable learners communicate in four skills with the missing or limitation of knowledge. The compensation strategies include two subcategories that are guessing intelligently in listening and reading, and overcoming limitations in speaking and writing.

Metacognitive strategies provide a way for learners to control their own learning process. Metacognitive strategies consist of centering your own learning, arranging and planning your learning, and evaluating your learning.

Affective strategies help learners to manage emotions, motivations, and attitudes in language learning. Affective strategies consist of three subcategories: lowering your anxiety, encouraging yourself, and taking your emotional temperature.

Social strategies enable learners interact with the other in order to exchange or gain new knowledge. Social strategies include asking questions, cooperating with others, and empathizing with others.

2.2.3 Previous Studies of Language Learning Strategies

Studies that assess language learning strategies have become commonplace around the world (Bernat & Lloyd, 2007; Brown, 2005; Cohen & Shively, 2007; Dhieb-Henia, 2003; Gao, 2006; Graham & Macaro, 2008; Graham, Santos, & Vanderplank, 2008; Ghonsooly & Eghtesadee, 2006; Goh & Foong, 1997; Grainger, 1997; Grainger, 2005; Hsiao & Oxford, 2002; Lawes & Santos, 2008; Lee & Oxford, 2008; Li, Haggard, & Lin, 2007; Macaro, 2006; Magogwe & Oliver, 2007; Oxford, Cho, Leung, & Kim, 2004; Shen, 2005; Sheorey, 1999; Su, 2005; Wharton, 2000; Woodrow, 2006; Woore, 2008; Yang 2007). International studies were done in Britain (Griffiths & Parr, 2001), Korea (Ok, 2003), Thailand (Phakiti, 2003; Phothongsunan, 2006), and Turkey (Atay & Ozbulgan, 2007). There are a large number of studies in language learning strategies which look at the relationship between language learning strategies used by students and their English proficiency (e.g. Griffiths, 2003, Song, 2005). There are also studies of effectiveness of language learning strategies training (Graham & Macaro, 2008; Lawes & Santos, 2008). To easily study the related literatures, the present study systematically reviews the literatures by adapting three aspects related to language learning strategies indicated by Oxford (1994). Three aspects of language learning strategies include good language learners, factors influencing the choice of second language learning strategies, and second language strategy training. The literatures of the present study are classified into three groups: relationship between language proficiency and language learning strategies used, factors influencing language learning strategies, and effectiveness of language learning strategies training.

1. Relationship between language learning strategies and language performance

Research in language learning strategies and students' language performance has focused in different aspects such as successful learners (Rubin, 1975; Naiman, Frohlich, Stern, & Todesco, 1978), unsuccessful learners (Vann & Abraham, 1990),

strategies students use to deal with new vocabulary (Porte, 1988), and comparing language learning strategies used by effective and ineffective learners (Chamot & Kupper, 1989; Kaotsombat, 2003). Three aspects of language learning strategies will be presented in this review: language learning strategies used by successful and unsuccessful learners, strategies used in four skills (reading, writing, listening, and speaking), and effects of language learning strategies on language learning.

Successful & unsuccessful learners

Phillip (1991) used SILL and TOEFL scores to investigate the relationship between adult ESL students' language learning strategies and proficiency. Phillips reported there were strong relationships between ESL/EFL SILL frequencies and English proficiency levels. Oxford, Park-Oh, Ito and Sumrall (1993), studying 107 high school students of Japanese, also reported a significant relationship between strategy use and language achievement scores. Park (1997) also used SILL to investigate the relationship between strategy use and proficiency in Korea. In this study, standardized test scores-TOEFL scores-were used to measure proficiency. Park indicated a linear relationship between strategy use and language proficiency.

Rubin (1975), the pioneer educator to conduct research in language learning strategies, conducted a study which suggested that good language learners are willing to be guessers, have a strong motivation to communicate, are not afraid to make mistakes, attend to forms and meaning, and seek opportunities to practice. In other words, good language learners are students who use compensation, affective, and social strategies. Griffths and Parr (2001) conducted the study in New Zealand to discover language learning strategies used by speakers of other languages. The results reported that students most frequently use social strategies, followed by metacognitive strategies. Students ranked compensation and cognitive strategies in the middle-frequency range, while affective strategies and memory strategies were less frequently used. Kaotsombat (2003) investigated language learning strategies used by graduate students in a public university, Thailand. The results showed that the participants generally used compensation, metacognitive, cognitive, social, affective, and memory strategies, respectively.

Griffiths (2003) conducted a study in a private school in Auckland, New Zealand to investigate the relationship between course level and reported frequency of

language learning strategy use by speakers of other languages. The researcher found that there were significant differences in strategy use and course level according to nationality. Students in higher levels frequently use of a large number of language learning strategies. The finding was similar to the study conducted by Green and Oxford (1995). The results showed that higher-proficiency students use all kinds of strategies more than lower-proficiency students. On the contrary, according to the study of how the task difficulty affects strategy use revealed that lower-proficiency learners use strategies more often than higher-proficiency learners (Oxford, Cho, Leung, & Kim, 2004).

Strategies used in four skills (reading, writing, listening, and speaking)

Chotirat (1998) investigated writing strategies employed by accounting undergraduate students with high and low writing ability at a university in Thailand. The results showed that students with high and low writing ability used all six groups of strategies. Students with high writing ability used all strategies at moderate level while another group's strategy use was low.

Phakiti (2003) conducted a study to investigate metacognitive and cognitive strategies used by Thai EFL students to take a reading test. The study found that highly successful students most frequently use metacognitive strategies more than cognitive strategies when they did the reading test performance. Ghonsooly and Eghtesadee (2006) conducted their study to investigate the role of cognitive style of field-dependence/independence (FD/FI) in using metacognitive and cognitive reading strategies in novice and skilled readers. Their results showed that cognitive style of FD/FI influences the use of reading strategies in skilled readers.

Graham, Santos, and Vanderplank (2008) conducted a longitudinal study to examine the development of strategy use by two lower-intermediate learners of L2 French in secondary schools in England. These learners were selected from a larger sample on the basis of their scores on a recall protocol completed after listening to short passages at two time points: one was consistently a high scorer; the other one, a low scorer. The results showed that high score student mostly used metacognitive strategies while listening, by contrast, lower score student could not apply the metacognitive strategies for listening comprehension.

Varasarin (2007) conducted a study to investigate pronunciation training and language learning strategies use by Thai university students. The finding presented that language learning strategies training enhanced students' pronunciation and their self-confidence. In addition, the study found that language learning strategies and pronunciation learning strategies supported students' learning achievement.

Effects of particular language learning strategies on language learning

There are two studies conducted to investigate particular strategies students use in language learning. Chomphuchart (1998) investigated metacognitive strategies which non-native English speaking graduate science students at a university in Thailand used to understand scientific reading. Her study found that the participants employed a diversity of metacognitive strategies such as using prior knowledge, self-questioning, highlighting important information, rereading, skipping unimportant parts, using interest, comparison, and imagination. The participants also used linguistics knowledge such as word formation, root words while reading. Phothongsunan (2006) studied the social strategies used by Thai undergraduate university students majoring in Business English at a private university in Thailand. The results showed that students mostly used social strategies that are easily available: asking for repetition or clarification, watching TV and listening to songs, and that talking to other foreigners and to native English speakers are useful strategies to enhance chances to practice English.

2. Factors influencing language learning strategies

Using language learning strategies among foreign language learners was influenced by many factors (Oxford & Nyikos, 1989) such as ESL or EFL setting, career interests, institutions, cultural background, and gender (Oxford & Burry-Stock, 1995). Researchers (Green & Oxford, 1995; Oxford & Ehrman, 1995; Oxford & Nyikos, 1989) investigated the relationship between language learning strategies and gender. Their finding showed that female tended to use language learning strategies more than male. There were studies examined language learning strategies use and psychological type such as personality (Ehrman & Oxford, 1989; Oxford & Ehrman, 1995), motivation (Oxford & Ehrman, 1995; Oxford & Nyikos, 1989), anxiety (Oxford & Ehrman, 1995), and self-efficacy beliefs (Magogwe & Oliver, 2007). These

studies concluded that the psychological factors had a strong influence on language learning strategies. Cultural background also affected learning strategies of foreign language learners (Green & Oxford, 1995; O'Malley, 1987; O'Malley & Chamot, 1990; Xuan, 2005). In addition, there are other factors such as age (Magogwe & Oliver, 2007) and field of study (Satta-Udom, 2007) influencing which strategies are used.

3. Effectiveness of language learning strategies training

The idea of learning strategies instruction is teachable was investigated (O'Malley, 1987; Tang & Moore, 1992). For example, Tang and Moore (1992) conducted a study to examine the effect of teaching cognitive and metacognitive strategies on reading comprehension in the classroom. The results of the study presented the effectiveness of strategy training, which indicated that cognitive strategy training improved comprehension scores while metacognitive strategy instruction improved comprehension ability. The effectiveness of memory strategy was investigated by Atay and Ozbulgan (2007). They conducted the study to examine the effects of memory strategy instruction along with learning through context on the ESP vocabulary recall of Turkish EFL learners. The results of the study indicated that the experimental group students had significantly better vocabulary gain scores than the control students at the end of the study. The results of Tang and Moore (1992) were dissimilar to O'Malley's (1987). According O'Malley (1987), the experimental study was conducted to give learning strategies for listening, speaking, and vocabulary in the treatment group. The results presented that the control group got vocabulary scores slightly higher than the treatment group.

According to six situational case studies of strategy training for language learners (Oxford Crookall, Cohen, Lavine, Nyikos, & Sutter, 1990), positive effects of strategy training were reported by students who attended strategy training. Students developed an awareness of their own personal responsibilities and choices in language learning. For example, students started to analyze their individual learning needs. Additionally, students showed a positive attitude toward active language instruction techniques such as simulation, games, and discussion. In short, students must be trained to employ these language learning strategies explicitly. Using language

learning strategies helps students to learn faster, easier, and more cheerfully. These are signs of independent learners because they can learn and develop their language ability by their own. Thus, if they continue practice, they will become autonomous learners.

However, in the age of globalization, facing complex situations and socio-economic difficulties, students need to be armed not only with language learning strategies but also life skills because students live in a society (Dunn, 2003; Ford, 2001; Fountain, 1999; Kaechele, 2006). They need to communicate, work, and live with the others (Francis, 2007; Goodship, 1990; Lownsbrough, Thomas, & Gillinson, 2004; Peace Corps, 2001; Saffer, 1999; United Nations International Children's Fund [UNICEF], 2003; Wongsothorn, Hiranburana, & Chinnawongs, 2002). Additionally, life skills will act as an effective tool for students to deal with social problems (Brinkmeyer, 2005; Lownsbrough, Thomas, & Gillinson, 2004; Maurer, 2005; Poonkhum, 2003; Ventegodt, Morad, Kandel, & Merrick, 2004; WHO, 1997). English teachers play crucial role here (Berns & Erickson, 2001). They may integrate life skills into language tasks and activities (Firkins & Wong, 2005; Holmbukt, 2006; Singh, 2004; Tsai, 2007). Thus, the next section will present information about life skills.

2.3 Learner Autonomy

Oxford (1990) stated that learning strategies are essentially important for language learning because they help learners participate actively and individually for their learning. In other word, learning strategies and autonomous learning are closely associated. Consequently, if learners use learning strategies appropriately, the degree of learner autonomy will be increased.

The term "learner autonomy" was first introduced into a field of language teaching and learning by Holec in 1981 (Little, 2000). According to Holec (1995), autonomy is viewed as learner's willingness and capacity to control their own learning. Students are to become their own person in a context of working with others helping all to achieve their learning objectives, singly and cooperatively. Learner autonomy has been interpreted as freedom from the control of the teacher, freedom from the constraints of the curriculum, even freedom to choose not to learn (Little & Dam, 1998). This definition is similar to Scharle and Szabo's (2000) defining learner autonomy as the freedom and ability to manage one's own affairs, which entails the

right to make decisions as well (Scharle & Szabo, 2000). According to the definitions mentioned above, learner autonomy refers to responsibility of individual learners to direct their own learning without control from the other.

To achieve learner autonomy, learners need collaboration from the others for increasing the degree of autonomy (Widdowson, 1987). Although leaning management belongs to students' responsibility, this statement does not mean that learner autonomy is isolation (Little & Dam, 1998). Therefore, teachers should foster the learner autonomy by promoting the autonomous classroom and recognize that each member has a history, has interests, and has emotional as well as educational and communicative needs (Little & Dam, 1998). Promoting autonomous learning to students allows them to be more effective learners and self-directed to achieve identity of individual learners.

Learner autonomy is also closely related to the concept of self-regulation in cognitive psychology (Hsaio & Oxford, 2002). It can be said that being autonomous learners does not mean that learners can manage their learning but it includes the ability to adjust themselves to suit the real life situation. Therefore, learners need appropriate skills which correspond to their learning and their lives. Life skills is a skill which students employ for managing their learning and their daily live.

2.4 Life Skills
2.4.1 Definitions

Many world organizations use the term "life skills", including the World Health Organization (WHO), United Nations International Children's Fund (UNICEF), United Nations Education, Scientific, and Cultural Organization (UNESCO). Life skills refer to abilities for adaptive and positive behaviors, which enable individuals to deal effectively with the demands and challenges of everyday life (WHO, 1997). UNICEF defined life skills as an approach of behavior change or behavior development designed to address a balance of three areas: knowledge, attitude and skills (2003). The definitions of the term life skills are different because of the skills required are different, depending on culture and setting. In 1998, Thai Ministry of Public Health defined life skills as ability comprising knowledge, attitude, and skills in managing surrounding problems in the current social situation, and

preparedness for self-adjustment in the future relating to sex, gender role, family life, health media influence, environment, ethics, and social problems (Department of Mental Health, 2004). Life skills refer to "capability that comprises knowledge, attitudes, and skills that enable us to deal with problem situations of every life and to be well prepared for adaptations in the future" (Erawan & Luang-Ungkoon, 2003). Despite these definitions are different, these organizations focus on the same point that is promotion of life skills is for the health and well-being of children and adolescents.

2.4.2 Classification

According to WHO (1997), life skills consisted of 10 components: Decision making, problem solving, creative thinking, critical thinking, effective communication, interpersonal relationship skills, self-awareness, empathy, coping with emotions, and coping with stress. In 2002, Department of Mental Health of Thailand added self-esteem and social responsibility into the affective domain in order to suit Thai context, thus life skills comprise 12 components. These 12 components are matched into six pairs: creative thinking and critical thinking, self-awareness and empathy, self-esteem and social responsibility, interpersonal relationship and communication skills, decision making and problem solving skills, coping with emotion and stress skills (Department of Mental Health, 2004). Additionally, these six pairs are classified into three groups: cognitive domain, affective domain, and psychomotor domain. The classification of life skills is presented in the Figure 2.
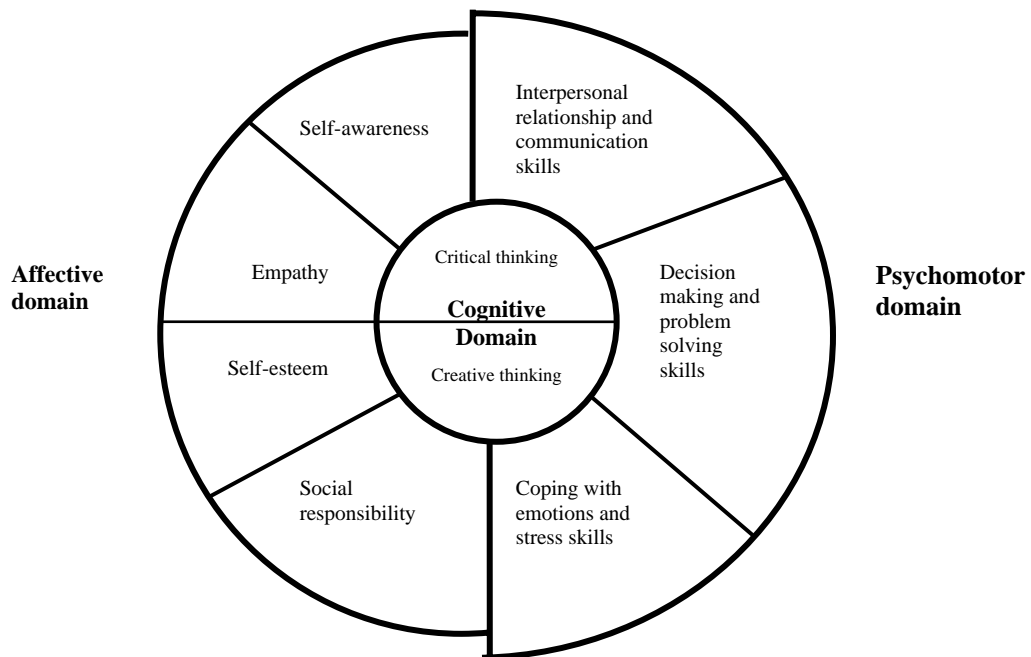
Figure 2 Components of Life Skills (Erawan & Luang-Ungkoon, 2003)

Characteristics of each component of 12 components in life skills are described as follow.

1. Critical thinking is an ability to analyze information and experiences in an objective (WHO, 1997). It enables individuals to recognize and assess the factors that influence attitudes and behavior, such as values, peer pressure, and the media.

2. Creative thinking is an ability to generate new idea by merging the existing idea (Erawan & Luang-Ungkoon, 2003). It helps individuals to look beyond the direct experience in order to explore the available alternative for decision making and problem solving (WHO, 1997). Creative thinking can help individuals to respond adaptively and with flexibility to the situations of our daily lives.

3. Self-awareness is an ability to recognize of our own feeling, characteristics, strengths, weaknesses, desires, and dislikes (WHO, 1997). Developing self-awareness enables individuals to recognize themselves when they are stressed or feel under pressure.

4. Empathy refers to an ability to listen and understand others' needs, and it is also a key interpersonal skill (Unite Nation [UN], 2003). Empathy can help

individuals to understand and accept the other who may be different from ourselves (WHO, 1997).

5. **Self-esteem** is an ability to recognize the positive sense of own values (Erawan & Luang-Ungkoon, 2003). It enables individuals to respect for themselves and to have self-confidence to use their own abilities to benefit themselves and the other.

6. **Social responsibility** is a feeling of individuals responding to progression and regression of a society because individuals belong to a part of the society (Erawan & Luang-Ungkoon, 2003).

7. **Interpersonal relationship** refers to a positive connection resulted from interaction between people (WHO, 1997). It is a skill to maintain relationship with friends and family members and also be able to end relationships constructively. This skill helps people to understand the relationship with others.

8. **Communication skill** is an ability to express feeling and give feedback (UN, 2003). It includes verbal and non verbal languages which are appropriate to the culture and situation (WHO, 1997).

9. **Decision making** helps individuals to deal constructively with decisions about their lives (WHO, 1997). Decision making skill enables individuals to make decisions about their actions in relation to health by assessing the different options, and what effects different decisions may have. Training decision making to individuals will help individual to be able to determine alternative solutions and to analyze the influence of their own values and the values of those around them (UN, 2003).

10. **Problem solving** refers to ability to use personal intelligences and existing experiences solving a problem (Erawan & Luang-Ungkoon, 2003). It enables individuals to deal constructively with problems in their lives (WHO, 1997). If individual cannot solve a problem, it can cause mental stress and give rise to accompanying physical strain.

11. **Coping with emotion** is ability to recognize personal emotions of individuals themselves and others (WHO, 1997). It enables individuals to be aware of how emotions influence behavior, and to respond to emotions appropriately. Intense emotions, like anger or sorrow can have negative effects on our health if there is no appropriate response to such emotions.

12. Coping with stress is ability to recognize the sources of stress, recognize how the stress affects, and act to control the level of stress (WHO, 1997).

In conclusion, the classifications of life skills components are different because they were classified to suit the particular cultures and countries (Erawan & Luang-Ungkoon, 2003). In Thailand, components of life skills were categorized following the groups of learning behaviors, which are cognitive, affective, and psychomotor domains. Although of classification of life skills components are different, those skills are essential for people to live happily in the society.

2.4.3 Previous Studies of Life Skills

Life skills studies have been conducted in the field of public health, such as AIDS prevention (Magnani, MacIntyre, Karim, Brown, & Hutchinson, 2005), sexually transmitted diseases (Luksamijarulkul, Thongvichien, & Triamchaisri, 2007). Magnani, MacIntyre, Karim, Brown, and Hutchinson (2005) conducted the research to assess the impact life skills education has on knowledge and behaviors associated with the spread of HIV/AIDS. The results showed that life skills education can help youth to develop skills relevant to reducing HIV risk. According to a study conducted by Luksamijarulkul, Thongvichien, and Triamchaisri (2007), the study investigated the level of life skills toward the prevention of sexual infectious diseases of married couples. The results showed that participants who had higher level of life skills scores had lower level of risk behaviors scores.

In Thailand, life skills education had been brought into formal and in formal education system (Department of Mental Health, 2004: p. 44). Studies of life skills program in Thai education system focus on the development of safeguard individual (Aroonsit, 2001; Homkanjun, 2001; Jantarat, 2004; Navapan, 2001; Phokanaruk, 2001; Pinvanich, 2000; Polrit, 2001; Saimai, 2003; Termsirat, 2003). For example, life skills studies on sexual problem prevention (Pinvanich, 2000; Navapan, 2001; Jantarat, 2004). The finding of these studies presented that students recognized how to prevent sexual problems after they received life skills training. The effectiveness of life skills development on stress coping behaviors was investigated by Homkanjun (2001). The results indicated that participants of experimental group had significantly higher scores on self-esteem, decision making skill, problem solving skill, coping skill

with emotional development. Poonkhum (2003) conducted a study to assess the status of adolescents' reproductive health in Thailand and to identify their needs for reproductive health services. The study found that there is magnitude and severity of reproductive health among adolescents.

2.5 Learning Strategies and Life Skills

The communication skill refers to ability to express opinions, desires, needs, and fears (WHO, 1997). According to WHO (1997), it can say that effective communication requires ability to use languages in ways that appropriate to cultures and situations. The ability to use language can be considered as the linguistic intelligence which is one of the multiple intelligences purposed by Howard Gardner (1993). Linguistic intelligence is an intellectual competence to use language on carefully selected occasions (Gardner, 1993). The potentials of linguistic intelligence are to excite, to convince, to stimulate, and to please. Additionally, Gardner stated that language is the optimal means, which people use to remember and to convey information. For these reasons, the capacity to effectively use languages is necessary for creating an effective communication.

Intrapersonal intelligences seem to be involved in language learning strategies and components of the psychomotor domain. Intrapersonal intelligence is an ability to understand one's own feelings and to guide individual's behaviors (Gardner, 1993). It can say that intrapersonal intelligence is the ability to control an individual's behavior. This ability is similar to metacognitive strategies, one of language learning strategies, which are strategies language learners use for controlling their learning process (Oxford, 1990). In addition, the examination of an individual's inner state is required for coping with emotion, and coping with stress skills, all components of the psychomotor domain. The recognition of an individuals' inner state helps individuals respond to their emotional state and stress appropriately.

Interpersonal intelligence is involved in language learning and the psychomotor domain. Interpersonal intelligence refers to an ability to understand moods, temperaments, motivations, and intentions of others (Gardner, 1993). Interpersonal intelligence can be seen to play a key role in second and foreign language learning (Smith, 2001). If language learners have a high degree of

understanding people and responding to them appropriately, those language learners seem likely to be more successful in second and foreign language learning. In the psychomotor domain, interpersonal intelligence is involved in interpersonal relationship and communication skills. Interpersonal relationship and communication skills refer to the ability to communicate one's own feelings and thoughts, and an ability to perceive others' feelings and thoughts (Department of Mental Health, 2004). In addition, the ability to understand people and respond to such people appropriately is needed for effective communication, because this ability allows continual assessment and modification of what is being said (Smith, 2001).

Language learning is a complex interaction of linguistic, intrapersonal, and interpersonal intelligences (Smith, 2001). Then language learners who want to succeed in language learning need to develop the linguistic, intrapersonal, and interpersonal intelligences. These intelligences are involved in the psychomotor domain components; language learners also develop the psychomotor domain while they are learning language. For this reason, to improve language proficiency, language learning activities should include other aspects involved in language learning.

The English Language Institutes (ELI) at Kanda University in Japan created the outdoor education program to promote life skills and language learning (Wurr, 1996). The outdoor program was conducted for students and faculty to explore their common interests in nature, sports and language learning. Based on experiential language learning, the purpose of activities created in this program aimed to develop participants' self-esteem, leadership, interpersonal skills, and intrapersonal skills which all skills had a positive effect on language learning and personal growth. The results showed that the participants improve self-esteem, leadership, trust, and interpersonal skills, as well as their English ability as a means to describe and interpret experiences.

Similarly, Suwannaprut (2007) and Tappoon (2007) conducted studies to investigate the relationship between language learning strategies and life skills among the first-year students at Mahidol University. Suwannaprut (2007) studied in the affective domain of life skills whereas Tappoon (2007) focused on the affective domain. The results of Suwannaprut (2007) presented that language learning strategies were significantly related to the affective domain of life skills, especially memory,

cognitive, and metacognitive strategies. These strategies influenced self-awareness, self-esteem, empathy, and social responsibility skills of the students. The finding of Tappoon (2007) showed that language learning strategies were significantly related with the cognitive domain of life skills, especially memory, metacognitive, and affective strategies. These strategies influenced the use of critical and creative thinking skills among students. As life skills include three domains (affective, cognitive, and psychomotor), it is essential to conduct this study for investigating the relationship between language learning strategies with the psychomotor domain. Therefore, this current study will complete the study of relationship between language learning strategies and life skills.

2.6 Chapter Summary

This chapter presents the review of related literature and previous studies associated with language learning strategies and life skills. The use of language learning strategies can benefit students to become autonomous and it also promotes a student-centered approach (Oxford, 1990). This study was conducted based on Oxford's (1990) classification of language learning strategies because of the most comprehensive explanation and details. The definitions and components of life skills in this study are mostly based on World Health Organization (1997) and Department of Mental Health (Erawan & Luang-Ungkoon, 2003). Most of previous studies on life skills are related to health education. However, there is one experimental study examined relationship of language learning strategies and life skills in the context of foreign language learning. Therefore, the present study was conducted in order to provide further useful information for the field of language learning.

CHAPTER III

METHODOLOGY

This quantitative research was conducted to investigate the relationship between language learning and the psychomotor domain of life skills set among first-year students at Mahidol University. This chapter describes population and subjects, research instruments, reliability and validity of the questionnaires, data collection procedures, and data analyses.

3.1 Population and Subjects

Population

The target population of the present study was the 2,889 first-year students at Mahidol University of academic year 2006. Students were in 24 programs which included 20 science programs and four non-science programs. There were 2,631 students from science programs and 258 students from non science programs.

Sample size and sampling

As the population of this study was large, simple random sampling was employed to select participants from the total population. Sample size of subjects in the present study was selected according to the Hendel's (1977) random sampling table at the 95% confidence level. According to the table, a minimum of first-year students would be required to represent the population. The researcher enlarged the sample size by adding 10% of the population (289 students) to 350 subjects for increasing reliability. The number of subjects was 639 first-year students, which includes 584 students and 55 non-science students. In order to increase reliability into each group of the subjects equally, the researcher added 50% of population in non-science group (AREN, ARTH, CRS, and MG) as addition subjects (130 students). As a result, there were 185 non-science students and 584 science students. The number of subjects was 769 first-year students. The proportion of subjects was calculated by using the rule of three in mathematics. After calculating the number of subjects within

each faculty, the subjects of each faculty were selected to do the questionnaires by using random sampling method proposed by McMillan and Schumacher (1997). After calculating number of subjects, 769 questionnaires were randomly distributed to the students. Questionnaires returned to the researcher were 570, giving a response rate of 74.12%. The participants of this study were 570 students who completed the questionnaire. They included 447 science students and 123 non-science students. For better understanding, Table 3 presents the number of population, samples, and participants.

Table 3 Summary of population and sample size

Study Program	Population	Sample size	Subject after distribution of questionnaire
1. Bangkok Metropolitan Medical College (BM)	80	18	16
2. Faculty of Dentist (DT)	92	20	16
3. Faculty of Engineering (EG)	357	79	57
4. Faculty of Environment and Resource studies (EN)	70	15	9
5. Nursing program at Ramathibodi Hospital (NR)	185	41	35
6. Faculty of Medical Technology (MT)	104	23	16
7. Faculty of Nursing (NS)	254	56	44
8. Occupational therapy (OT)	32	11	11
9. Faculty of Public Health (PH)	149	33	26
10. Faculty of Medicine Praboromarajchanok Institute (PI)	96	21	16
11. Prosthetics and Orthotics (PO)	12	2	2
12. Faculty of Physical Therapy and Applied Movement Science (PT)	76	16	15
13. Faculty of Pharmacy (PY)	147	32	22
14. Faculty of Medicine at Ramathibodi Hospital (RA)	132	29	21
15. Department of Radiological Technology (RT)	61	13	10
16. Faculty of Science (SC)	374	82	68
17. Faculty of Medicine at Siriraj Hospital (SI)	232	51	31
18. College of Sports Science and Technology (SS)	85	19	14
19. Applied Thai Traditional Medicine Program (TT)	48	13	13
20. Faculty of Veterinary (VS)	45	10	10
Total	**2,631**	**584**	**447**
21. Faculty of Arts (AREN)	66	47	45
22. Faculty of Arts (ARTH)	97	70	33
23. College of Religious Studies (CRS)	62	44	22
24. Management program at Nakhonsawan campus (MG)	33	24	23
Total	**258**	**185**	**123**
Grand total	**2,899**	**769**	**570**

Source: Register Division, Mahidol University

(update on December, 2006)

3.2 Research instruments

The researcher used two structured questionnaires to collect data. The first was the Strategy Inventory of Language Learning (SILL) version 7.0 developed by Oxford (1990). The other questionnaire was Life Skill Test developed by Department of Mental Health (Erawan & Luang-Ungkoon, 2003). These two questionnaires were combined together before distributing to the subjects. Consequently, there were three parts in the questionnaire: background information, the SILL, and Life Skills Test.

Part 1: Background information

This part included name, age, gender, student identification number, class level, and study program.

Part 2: Strategy Inventory of Language Learning (SILL)

This part contained 50 items of the SILL version 7.0 developed by Oxford (1990). The questionnaire comprised six strategies: memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies. The SILL used a choice of five Likert-scale responses for each strategy which students were asked to indicate their response (1, 2, 3, 4, and 5) to a strategy description. These numbers could be interpreted as the following descriptions: 1 = never or almost never true of me, 2 = generally not true of me, 3 = somewhat true of me, 4 = generally true of me, and 5 = always or almost always true of me. The organization of all items based on Oxford's (1990) classification of language learning strategies including six strategy categories: items 1-9 (memory strategies), items 10-23 (cognitive strategies), items 24-29 (compensation strategies), items 30-38 (metacognitive strategies), items 39-44 (affective strategies), and items 45-50 (social strategies).

Development of the SILL

SILL was originally created to assess the frequency of language learning strategies used by language students at the Defense Language Institute in Monterey, California in 1986 (Oxford & Burry-Stock, 1995). In 1989, the SILL was organized according to strategy groups using a statistical procedure called factor analysis. In this process, Oxford subdivided the SILL into dimensions referring to subscales or factors (Oxford & Burry-Stock, 1995). Six subscales of the SILL were developed based on

the early factor analyses. Each subscale had an adequate number of items to facilitate in-depth study of the learning strategies used by ESL and EFL learners. The early subscales included memory, cognitive, compensation, metacognitive, affective, and social language learning strategies. In 1990, Oxford developed two versions of the SILL: version 5.1 contained 80 items for native English speakers who learn other language, and version 7.0 contained 50 items for learners of English as a second or foreign language.

Oxford (1996) stated that the SILL was one of the most useful manuals for assessing learner strategies. The SILL appeared to be the only language learning strategy instrument that has been extensively checked for reliability and validity in multiple ways (Oxford & Burry-Stock, 1995) since it has been used world wide. The SILL has been translated into many languages and used in dozens of published studies around the world (Oxford & Burry-Stock, 1995), for example, Chinese (Xuan, 2005), Japanese (Hashim & Sahil, 1994; Watanbe, 1990), Korean (Ok, 2003; Park, 1997), Thai (Kaotsombat, 2003; Lappayawichit, 1998).

Measurement of SILL

Students' responses on the SILL were calculated to find sum scores and average score for each of the six categories. Then, the average score of each strategy was interpreted following the criteria: 3.5-5.0 (high), 2.5-3.49 (moderate), and 1.0-2.49 (low) (Oxford, 1990). In order to assess strategy use, the criteria were adapted as presented in the following table (Table 4)

Table 4 Criteria for assessing the frequency of strategy use

Frequency of strategy use	Level	Average mean score
Always or almost always used	Highest	4.50-5.00
Usually used	High	3.50-4.49
Sometimes used	Medium	2.50-3.49
Generally not used	Low	1.50-2.49
Never or almost never	Lowest	1.00-1.49

(adapted from Oxford, 1990)

Validity of SILL

Validity refers a judgment of the appropriateness of a measure for specific inferences, decisions, consequences or user that result from the scores that are generated (McMillan & Schumacher, 1997). In other words, validity means the degree to which an instrument measures what it aimed to measure (Oxford & Burry-Stock, 1995). A content-validity of SILL was determined by professional judgment (Oxford & Burry-Stock, 1995). They found a high validity of the SILL (.99 based on independent raters). Additionally, the SILL was studied to find other two types of validity: criterion-related validity and construct validity.

Criterion-related validity refers to the degree of effectiveness with which performance on a test or procedure predicts performance in real-life situation (Criterion-related validity, 2006). Criterion-related validity involves predictive and concurrent validity (Oxford & Burry-Stock, 1995). The predictive validity refers to the ability to predict something you want to predict (Colosi, 1997). In the SILL studies, predictive validity refers to variables or factors which relate to strategy use in language learning. Concurrent validity refers to the degree to which the scores on a test are related to the scores on another, already established, test administered at the same time, or to some other valid criterion available at the same time (Ouyang, 1996). There was relationship between criterion –related validity and language performance (Oxford & Burry-Stock, 1995). For example, Goh and Foong (1997) investigated the frequency of strategy use among Chinese students. The results showed that gender played a role in influencing the kind of strategy used. The study also found that language proficiency influenced strategy used by 175 Chinese students. The results were similar to Griffiths (2003). Her study found that language proficiency (a finding supported by the results of the ELLSI study) level predicted strategy used among 348 students from 21 different nationalities who were studying in New Zealand. The finding also presented that students' nationality influenced strategy use.

Construct validity concerns how well a theoretical construct is measured (Oxford & Burry-Stock, 1995). As the SILL was written to define an abstract notion of a theoretical construction, it was necessary to use a number of statistical procedures to illustrate evidence that the theoretical construct was defined on the instrument (Oxford & Burry-Stock, 1995). For example, Park (1997) employed the SILL to investigate the

relationship between strategy use and language proficiency among 332 Korean students. The SILL was used as an instrument to find the frequency of strategy use and the Test of English as a Foreign Language (TOEFL) was employed to get students' English proficiency. Park found that the correlation between total TOEFL scores and strategy use was $r = 34$ ($p < .01$).

Reliability of SILL

Reliability refers to the consistency of measurement; the extent to which the results are the same over different forms of the same instrument for data collection (McMillan & Schumacher, 1997). In the case of the SILL, Cronbach alpha was used to measure the internal consistency (Oxford & Burry-Stock, 1995). As the SILL has been used worldwide, it has been extensively checked for reliability (Oxford & Burry-Stock, 1995). For example, the reliability of the SILL was .92 based on 255 Japanese university students (Watanabe, 1990), 94 based on 505 participants (Yang, 1992). In Thai context, the research found the high reliability between .92 (Kaotsombat, 2003) and .94 (Sutta-Udom, 2007). In this study, the reliability was high at .94 which was similar to Sutta-Udom (2007). According to high reliability of the SILL, this instrument was acceptable.

Part 3: Life Skills Test

This part contains 120 items developed by Department of Mental Health (Erawan & Luang-Ungkoon, 2003). There are three domains consisted in the Life Skills Test that are cognitive domain, affective domain, and psychomotor domain.

Development of Life Skills Test

Life Skill Test was originally created to assess the level of life skills among Thai adolescent and the effectiveness of life skill training in formal education system from all provinces of Thailand. The development of this test was based on the theoretical framework of life skills proposed by World Health Organization (WHO), which includes ten components of life skills. Self-esteem and social responsibility were added in the Life Skills Test in order to suit Thai context. Thus, 120 items of Life Skills Test were organized following the 12 components of life skills. The Life Skills Test uses 3 Likert-scale to respond for each skill as the following descriptions: 1= never true for me, 2= somewhat true for me and 3= always true for me. The test was

divided into 9 groups due to norms of scoring: items 1-10 (critical thinking), items 11-20 (creative thinking), items 21-32 (self awareness), items 33-46 (empathy), items 47-60 (self-esteem), items 61-74 (social responsibility), items 75-91 (interpersonal relationship and communication skill), items 92-108 (decision making and problem solving), and items 109-120 (coping with emotion and stress skill).

Measurement of Life Skills

The criteria for assessing the level of life skills were divided into three levels: more than 314 (high), 269-314 (moderate), and less than 269 (low). In addition, a total score will be calculated by the points that the participants choose in each scale: never true for me = 1 point, somewhat true for me = 2 points, and always true for me = 3 points. The criteria for measuring each norm of life skills are illustrated as proposed in Table 5.

Table 5 Norms for scoring the Life Skills

(provided by Erawan & Luang-Ungkoon, 2003)

Items	Components of life skills	Low	Normal	High
1-10	Critical thinking	<21	21-25	>25
11-20	Creative thinking	<16	16-20	>20
21-32	Self-awareness	<25	25-30	>30
33-46	Empathy	<33	33-39	>39
47-60	Self-esteem	<30	30-35	>35
61-74	Social responsibility	<34	34-39	>39
75-91	Interpersonal relationship and communication skills	<34	34-41	>41
92-108	Decision making and problem solving	<35	35-42	>42
109-120	Cope with emotion and stress skill	<22	22-28	>28
	Total	<269	269-314	>314

However, there are exclusive items that were contrarily calculated: 3 points = never true for me, 2 points = somewhat true for me, and 1 point = always true for me. the excluded items are as follows: items 5,6,10,13, 15, 17 (cognitive domain), items

25, 36, 41, 43, 46, 47, ,49, 51, 59, 60, 64, 65, 73, 74 (affective domain), and items 81, 82, 84, 86, 87, 89, 94, 95, 97, 99, 100, 104, 106, 114, 117, 120 (psychomotor domain).

Validity of Life Skills Test

Life Skills Test had a high validity as it was examined by five experts: two psychological experts, two life skills experts, and one expert in educational testing (Erawan & Luang-Ungkoon, 2003). The test developers also revealed that content validity which examined the consistency between operational definition of life skills and questions on the test the experts was .6-1.0. Construct validity of the test was established by using confirmatory factor analysis and found goodness of fit index (GFI) was .97.

Reliability of Life Skills Test

Life Skills Test had a high reliability (Erawan & Luang-Ungkoon, 2003). The Alpha coefficient of Life Skills Test was .92 at the 99% confidence that was considered as a high reliability (Erawan & Luang-Ungkoon, 2003). The component of life skills which had highest reliability was social responsibility whereas critical thinking had lowest reliability. However, there was significant reliability of all life skills component. The reliability of this study was .92 similarly to Erawan and Luang-Ungkoon (2003).

3.3 Data collection procedures

A set of questionnaires was distributed to the subjects during the English classes and outside classes. Before responding to the questionnaires, the subjects were informed that there was no right or wrong answers and their responses had no effect on their course grades and examinations. Then, the subjects were given time to complete the questionnaire. Consequently, all the questionnaires were collected to the researcher and analyzed by the program of Statistic Package for Social Science (SPSS) for Windows.

3.4 Data analysis and statistics devices

The program SPSS was used to analyzed data obtained from the questionnaire returned from the participants. The data were systematically coded for analyzing. The returned questionnaires were subsequently coded by using SPSS as follows: 1= male

and 2= female, for gender; 1= SI, 2= RA, 3=BM, 4= PI, 5= DT, 6= PY, 7= MT, 8= RT, 9= PT, 10= SC, 11= PH, 12 =OT, 13= TT, 14= NS, 15= NR, 16= SS, 17= EG, 18= AR, 19= RS, 20= VS, 21= EN, 22= PO, 23= MG, and 24= CRS, for major of study; 1= never true for me, 2= somewhat true of me, and 3= always true of me, for Life Skills Test; 1= never or almost never true of me, 2= usually not true for me, 3= somewhat true of me, 4= usually true of me, and 5= always or almost always true of me, for the SILL. Then the data from the questionnaire were calculated by the following statistics.

3.4.1 Descriptive statistics

Arithmetic mean (M)

The mean is simply the arithmetic average of all the scores (McMillan & Schumacher, 1997). It is the most commonly used to measure the central tendency because it takes all scores into account (Hatch & Farhady, 1982, p. 55). The mean is calculated by summing all scores and then divided the sum by the number of scores. If the scores are distributed along a scale, the mean will fall exactly at the balance point (Hatch & Farhady, 1982, p. 55).

Standard deviation (SD)

The standard deviation is a numerical index that indicates the average variability of the scores (McMillan & Schumacher, 1997). In other words, *SD* indicates how much scores deviate from the mean. If there is larger standard variation, it means that there is more variability from the central point in the distribution (Hatch & Farhady, 1982, p. 57). On the other hand, the smaller the standard deviation, the closer the distribution is to the central point. Therefore, *SD* is used to compare the distribution of scores that have the same mean but there is different range. In this study, the standard deviation indicated the distribution of strategy use among students in both language learning strategies and life skills.

3.4.2 Correlation Statistics

Spearmean rho (p)

Spearman rho is commonly used to describe the relationship between two variables (McMillan & Schumacher, 1997). The Spearman rho is used when the variables are measured on ordinal scale (Hatch & Farhady, 1982, p. 205). To find the correlation, the scores of the two variables are arranged in a rank of order from high to

low and then the scores are computed. The obtained coefficient will inform how the ranking of scores on the two variables are related. The correlation coefficient is a number between +1 and -1 (Archambault, 2001). This number indicates the magnitude and direction of the association between two variables. The magnitude is the strength of the correlation. The closer the correlation is to either +1 or -1, the stronger the correlation. If the correlation is 0 or very close to 0, there is no association between the two variables.

Pearson Product-Moment Coefficient (r)

The Pearson product-moment coefficient is the most common correlation technique, which indicates the direction and strength of the relationship between two or more variables (McMillan & Schumacher, 1997). The Pearson product-moment coefficient is used when the variables are measured on interval and ratio scales (Katter, 2004). Correlation coefficients (*r*) are always ranged from -1.00 to 1.00. Directions of the relationships are divided into three types: positive, negative, and no relationship. In other word, if *r*-values closer to 1.00 indicate a positive relationship, whereas *r* –values closer to -1.00 indicate a negative relationship.

The following diagram (Figure 3) presents the direction offered as a guideline to interpret the degree and direction of relationships between two variables.

	-.5			+.5		
Correlation coefficient:	-1 ⟵		0	⟶		+1
Strength of relationship:	high	moderate	low	low	moderate	high
Direction:			negative		positive	
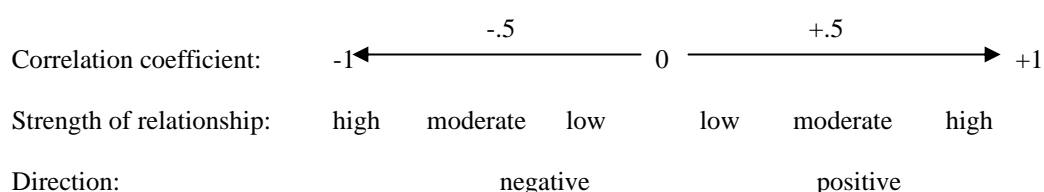
Figure 3 Relationship of strength and direction of correlations
     (McMillan & Schimacher, 1997, p. 226)

This study used the Spearman rho and the Pearson product-moment coefficient to find the strength of relationship between the language learning strategies and the psychomotor domain of life skills. However, these correlation values did not indicate how much components of language learning strategies can predict the degree of psychomotor domain. Therefore, this study used the multiple regression to

determine which of the language learning strategies best predict the scores of the psychomotor domain.

Multiple regression (MR)

Multiple regression analysis is a statistic method widely used in social science to study the relationships between a single dependent variable and one or more independent variables (Allison, 1999, p. 1). The multiple regression indicates how well this statistic value can predict the score on the dependent variable from two or more independent variables (Hatch & Farhady, 1982, p. 233). Multiple regression is a popular method because it combines the relationships of many variables to produce optimal prediction of the dependent variable in the prediction studies (Allison, 1999, p. 3). For causal analysis, it separates the effects of independent variables on the dependent variable.

Applying the multiple regression to the data is frequently misused (Allison, 1999, p.49). The researchers have to answer the question "which variables are important?" (Dallal, 2003). In other words, it is important for the researchers to think about which variables are the main focuses of the study. In this study, the researcher selected the language learning strategies as the independent variables and the psychomotor domain of life skills as the dependent variable for the following reasons. As the present study was conducted in the field of applied linguistics, English teachers taught students how to improve their English proficiency by using language learning strategies. The English teachers could teach life skills to students while teaching strategies for learning. Therefore, the language learning strategies were identified as the independent variables and the life skills were identified as the dependent variables.

In the present study, the language learning strategies were considered as the independent variables (IV) and the psychomotor domain of life skills was identified as the dependent variables (DV). The language learning strategies were indicated as the independent variables because we are the English teachers who want to integrate life skills in the English class. Therefore, the present research aims to investigate the effects of language learning strategies on life skills.

The procedure of multiple regression can be briefly described. First, a set of independent and dependent variables were identified as presented in Table 6.

Table 6 A list of independent variables and dependent variables

Independent variables (IV)	Dependent variables (DV)
ME = Memory strategies	IC = Interpersonal relationship and communication skill
CG = Cognitive strategies	
CO = Compensation strategies	DP = Decision making and problem solving
MT = Metacognitive strategies	CS = Coping with emotion and stress skill
AF = Affective strategies	
SO = Social strategies	

Second, Spearman rho correlations were used to examine relationships among independent variables for multicollinearity diagnosis because they must be independent. Third, the researcher used stepwise method and standard method to select predictor variables in a linear equation.

3.5 Operative definitions

1. *Language learning strategies* refers to techniques which learners used for increasing their language scores. The language learning strategies involve six subcategories: memory, cognitive, compensation, metacognitive, affective, and social strategies.

Memory strategies are techniques which learners employed for remembering information and then recalling it when the learners need to use it for comprehension. The memory strategies include creating mental linkages, applying images and sound, reviewing well, and employing action.

Cognitive strategies refer to the ways the learners associate new information to the existing knowledge in order to understand the target language. The cognitive strategies include four subcategories as follows: practicing, receiving and sending messages, analyzing and reasoning, and creating structure for input and output.

Compensation strategies refer to skills which the learners use the target language despite their limitation. The compensation strategies enable learners communicate in four skills with the missing or limitation of knowledge. The

compensation strategies include two subcategories that are guessing intelligently in listening and reading, and overcoming limitations in speaking and writing.

Metacognitive strategies refer to learners' management of their learning. Metacognitive strategies consist of centering your own learning, arranging and planning your learning, and evaluating your learning.

Affective strategies are techniques which learners use to manage their emotions, motivations, and attitudes in language learning. Affective strategies consist of three subcategories: lowering your anxiety, encouraging yourself, and taking your emotional temperature.

Social strategies refer to actions learners take to interact with other people in the context of learning languages and related culture. Social strategies include asking questions, cooperating with others, and empathizing with others.

2. *Life skills* refer to ability that people use for living happily in a society. People use life skills to adjust themselves when they face the difficulty situations.

3.6 Chapter summary

This chapter describes the systematical design of the present study. The study was designed according to quantitative research methodology. The target population, sample size and simple random sampling, research instruments, data collection procedures, and data analysis were described. In addition, the chapter explains a reason indicating independent variables and dependent variables. After analyzing the data, the results of this study are illustrated in the next chapter.

CHAPTER IV
RESULTS

This chapter presents the finding of the study. To establish the finding, the characteristics of the sample were described first. The total participants of this study comprised 570 first-year students from 24 study programs at Mahidol University. They were 447 science students (78.42%) and 123 non-science students (21.58%). The participants included 406 females (71.2%) and 164 males (28.8%) with ages ranging from 17 to 27 years ($M = 18.83$). The participants' answers were analyzed to answer three research questions:

1. Is there any relationship between language learning strategies and the psychomotor domain of life skills among first-year undergraduate students at Mahidol University?

2. Are there relationships between two strategy classes (direct and indirect strategies) and the psychomotor domain (interpersonal relationship, communication, decision making, problem-solving, coping with emotion, and coping with stress skills)?

3. Are there relationships between six categories (memory, cognitive, compensatory, metacognitive, affective, and social) and the psychomotor subdomain (interpersonal relationship, communication skill, decision making, problem solving, coping with emotion, and stress skill)?

Then three correlation statistics were selected to analyze data for answering these research questions. Those statistics values included in this study were descriptive statistics, Pearson product moment and Spearman rho correlation statistics, and multiple regression. Consequently, the results of the quantitative analysis were discussed in relation to the research questions.

4.1 Finding One

Research question one: Is there any relationship between learning strategies and the psychomotor domain for first-year undergraduate students at Mahidol University?

After calculating the descriptive statistics of each variable, Pearson product moment coefficient (r) and Spearman rho (ρ) were employed to investigate the relationship between language learning strategies and the psychomotor domain of life skills. The coefficient correlations from both statistic correlation techniques were not different. Spearman rho correlation statistics were selected as major discussion because the variables of this study were ordinal variables (Hatch, & Farhady, 1982). The Pearson product-moment correlations were presented in Appendix A.

According to the Spearman rho correlation coefficient, there was a statistically significant relationship between language learning strategies and the psychomotor domain of life skills ($r = .185$, $p < .01$) as presented in Table 7.

Table 7 Summary of Intercorrelations between Language Learning Strategies and the Psychomotor Domain of Life Skills

	Psychomotor domain
Language learning strategies	.185**

** Correlation is significant at the 0.01 level ($p < .01$)

According to the research question 1, there was a positive relationship between language learning strategies and the psychomotor domain of life skills. This relationship ($r = .185$, $p < .01$) was low but it was a statistically significant.

4.2 Finding Two

Research question two: Are there relationships between two strategy classes (direct and indirect strategies) and the psychomotor domain (interpersonal relationship, communication, decision making, problem-solving, coping with emotion, and coping with stress skills)?

According to the finding 1, further analysis also indicated that two subclasses of language learning strategies were positively correlated with three subdomains of the psychomotor domain as presented on Table 8.

Table 8 Summary of Intercorrelation among Two Subclasses of Language Learning Strategies and Three Psychomotor Subdomains of Life Skills ($N = 570$)

	Interpersonal relationship and communication skills	Decision making and problem solving skills	Coping with emotion and stress skills
Direct strategies	.209**	.105*	.135**
Indirect strategies	.202**	.108*	.058

** Correlation is significant at the 0.01 level (2-tailed).

*   Correlation is significant at the 0.05 level (2-tailed).

The finding was confirmed that two subclasses of language learning strategies were positively correlated with three subdomains of the psychomotor domain. The direct strategies were significantly correlated with interpersonal relationship and communication skills at $r = .209$, $p < .01$; with decision making and problem solving skills at $r = .105$, $p < .05$; and with coping with emotion and stress skills at $r = .135$, $p < .01$. The indirect strategies were significantly correlated with interpersonal relationship and communication skills at $r = .202$, $p < .01$; with decision making and problem solving skills at $r = .108$, $p < .05$.

The specific analysis indicated that all six categories of language learning strategies consisting of memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies were significantly correlated with the psychomotor subdomains: interpersonal relationship and communication skills, decision making and problem solving skills, and coping with emotion and stress skills. All relationships among these categories were positive correlations, especially between metacognitive strategies and interpersonal relationship and communication skills, which was the highest correlation at $r = .216$, $p < .01$. In addition, within the psychomotor domain of life skills, interpersonal relationship and communication skills were more significantly correlated with five

categories of language learning strategies, and other two subdomains were significantly correlated with three categories of language learning strategies. The detail of the correlations was presented on Table 9.

Table 9 **Summary of Intercorrelation among Six Categories of Language Learning Strategies and Three Psychomotor Subdomains of Life Skills** ($N = 570$)

	Interpersonal relationship and communication skills	Decision making and problem solving skills	Coping with emotion and stress skills
Memory strategies	.185**	.068	.123**
Cognitive strategies	.180**	.092*	.119**
Compensation strategies	.123**	.115**	.108**
Metacognitive strategies	.216**	.154**	.076
Affective strategies	.087	.003	.024
Social strategies	.138**	.042	.021

**Correlation is significant at the 0.01 level ($p < .01$)

*   Correlation is significant at the 0.01 level ($p < .05$)

To explore these relationships deeper, the multiple regression was employed to predict the influence of direct strategies and indirect strategies on three subdomains of the psychomotor domain. Direct strategies and indirect strategies were specified as predictors or independent variables and three subdomains of the psychomotor domain were specified as criterions or dependent variables.

The multiple regression model indicated that the direct and indirect strategies of language learning strategies accounted for 4.4% of variance in interpersonal relationship and communication skills ($R^2 = .047$, $F_{2, 567} = 14.077$, $p = .000$). In addition, there was a significant correlation between direct strategies and interpersonal relationship and communication skills ($\beta = .15$, $t(567) = 2.335$, $p < .05$). Accordingly, direct strategies influenced the degree of using interpersonal relationship and communication skills. For indirect strategies, there was no significant correlation

between indirect strategies and interpersonal relationship and communication skills. The information of this model was briefly presented on Table 10.

Table 10   Statistical Power of Two Language Learning Strategy Subcategories on Interpersonal and Communication Skills ($N = 570$)

	β	t	p
(Constant)		30.827	.000
Direct strategies	.150	2.335	.020
Indirect strategies	.080	1.241	.215
$R = .217, R^2 = .047,$ _Adjusted $R^2 = .044, F_{2,567} = 14.077, SE = .257, p = .000$_			

For decision making and problem solving skills, although there were positive correlations between two language learning strategy subcategories and decision making and problem solving skills, there was no statistical significance among these relationships. Consequently, direct and indirect strategies could not predict the use of decision making and problem solving of life skills. The detail of these relationship was presented on Table 11.

Table 11 Statistical Power of Two Language Learning Strategy Subcategories on Decision Making and Problem Solving Skills ($N = 570$)

	β	t	p
(Constant)		38.091	.000
Direct strategies	.045	.681	.496
Indirect strategies	.044	.664	.507
$R = .083, R^2 = .007,$ _Adjusted $R^2 = .003, F_{2,567} = 1.968, SE = .244, p = .141$_			

For coping with emotion and stress skills, direct strategies also influenced the degree of using coping with emotion and stress skills of the first-year students. The direct and indirect strategies accounted for 1.9% of variance in coping with emotion and stress skills ($R^2 = .023, F_{2, 567} = 6.615, p = .001$). Additionally, there was a positive significant correlation between direct strategies and coping with emotion and stress skills ($\beta = .221, t (567) = 3.392, p = .001$).   In contrast, indirect strategies were

negatively correlated with the use of interpersonal relationship and communication skills. The information of these correlations was presented on Table 12.

Table 12 Statistical Power of Two Language Learning Strategy Subcategories on Coping with Emotion and Stress Skills ($N = 570$)

	β	*t*	*p*
(Constant)		26.116	.000
Direct strategies	.221	3.392	.001
Indirect strategies	-.115	-1.774	.077
$R = .151, R^2 = .023$, *Adjusted* $R^2 = .019, F_{2,567} = 6.615, SE = .311, p = .001$			

The test for relationships between learning strategies subclasses and psychomotor subdomains (research question 2) showed that there was a positive relationship between two subclasses of language learning strategies and three subdomains of the psychomotor domain. The relationship of these subcategories was low but were statistically significant except for the relationship between indirect strategies and coping with emotion and stress skills. Moreover, only direct strategies could predict the use of interpersonal relationship and communication skills and the use of coping with emotion and stress skills.

4.3 Finding Three

Research question three: Are there relationships between six categories of language learning strategies (memory, cognitive, compensatory, metacognitive, affective, and social) and the psychomotor skill subdomains (interpersonal relationship, communication skill, decision making, problem solving, coping with emotion, and stress skill)?

According to the finding of research question 1, there was significant correlation between language learning strategies and the psychomotor domain ($r = .185, p < .01$). The finding indicated that all six categories of language learning strategies and three subdomains of the psychomotor domain were positively correlated (See Table 1). Metacognitive strategies were most correlated with interpersonal relationship and communication skills ($r = .216, p < .01$). There was no significant

correlation between affective domain and three subdomains of the psychomotor domain. As the correlation was significantly low, the following section revealed the predictors of language learning strategies for three sub-psychomotor domains.

The multiple regressions were operated to analyze an influence of six categories of language learning strategies on three sub-psychomotor domains. Six categories of language learning strategies were specified as the independent variables, and three sub-psychomotor domains were specified as the dependent variables, like Finding 2.

The results indicated that two categories of language learning strategies comprised memory strategies and metacognitive strategies could predict the degree of using interpersonal relationship and communication skills. Memory and metacognitive strategies accounted for 5.9% of variance in interpersonal and communication skills (R^2 = .068, $F_{6,\ 563}$ = 6.897, p = .00). In addition, there was a significant positive correlation between memory strategies and interpersonal and communication skills (β = .124, t (563) = 2.274, p < .05). Metacognitive strategies were correlated with interpersonal relationship and communication skills at β = .200, t (563) = 3.199, p < .01. Consequently, memory and metacognitive strategies could predict the degree of using interpersonal relationship and communication skills. Even though there was a positive correlation between cognitive strategies, this relationship was not statistically significant. In contrast, there were negative correlation between compensation, affective, and social strategies of language learning strategies and interpersonal relationship and communication skills as shown on Table 13.

Table 13 Statistical Power of Six Language Learning Strategy Subcategories on Interpersonal and Communication Skills (N = 570)

	β	t	p
(Constant)		28.738	.000
Memory strategies	.124	2.274	.023
Cognitive strategies	.048	.681	.496
Compensation strategies	-.032	-.596	.551
Metacognitive strategies	.200	3.199	.001
Affective strategies	-.070	-1.418	.157
Social strategies	-.029	-.487	.627
R = .262, R^2 = .068, $Adjust\ R^2$ = .059, $F_{6,563}$ = 6.897, SE = .255, p = .000			

For decision making and problem solving skills, compensation and metacognitive strategies were positively correlated with decision making and problem solving skills, but other four categories were negatively correlated with decision making and problem solving skills. Additionally, only metacognitive strategies influenced the degree of using decision making and problem solving skills. Metacognitive strategies accounted for 2% of variance in decision making and problem solving skills (R^2 = .031, $F_{6,563}$ = 2.968, p < .01). There was a significant correlation between memory strategies and coping with emotion and stress skills (β = .207, t (563) = 3.238, p = .001) as presented on Table 14.

Table 14 Statistical Power of Six Language Learning Strategy Subcategories on Decision Making and Problem Solving Skills (N = 570)

	β	t	p
(Constant)		35.333	.000
Memory strategies	-.012	-.222	.824
Cognitive strategies	-.022	-.302	.762
Compensation strategies	.053	.968	.334
Metacognitive strategies	.207	3.238	.001
Affective strategies	-.085	-1.677	.094
Social strategies	-.061	-1.000	.318
R = .175, R^2 = .031, $Adjust\ R^2$ = .020, $F_{6,563}$ = 2.968 , SE = .242, p = .007			

For coping with emotion and stress skills, four categories of language learning strategies: memory, cognitive, compensation, and metacognitive strategies were positively correlated with coping with emotion and stress skills whereas other two categories were negatively correlated with this sub-psychomotor domain. The result showed that only memory strategies could predict the use of coping with emotion and stress skills. Memory strategies accounted for 1.9% of variance in coping with emotion and stress skills ($R^2 = .03$, $F_{6,563} = 2.869$, $p = .00$). Additionally, there was a significant correlation between memory strategies and coping with emotion and stress skills ($\beta = .119$, $t(563) = 2.128$, $p < .05$) as presented on Table 15.

Table 15 Statistical Power of Six Language Learning Strategy Subcategories on Coping with Emotion and Stress Skills ($N = 570$)

	β	t	p
(Constant)		23.464	.000
Memory strategies	.119	2.128	.034
Cognitive strategies	.108	1.509	.132
Compensation strategies	.027	.490	.625
Metacognitive strategies	.017	.262	.794
Affective strategies	-.010	-.201	.840
Social strategies	-.141	-2.318	.021
$R = .172$, $R^2 = .030$, *Adjust $R^2 = .019$*, $F_{6,563} = 2.869$, $SE = .311$, $p = .009$			

To answer the research question 3, the finding revealed that memory strategies were the best predictors of two sub-psychomotor domains: 1) interpersonal relationship and communication skills, and 2) coping with emotion and stress skills. Metacognitive strategies were the best predictors for interpersonal relationship and communication skills, and decision making and problem solving skills. For better understanding, the standardized coefficients (β) from the multiple regression analysis indicated correlations among six categories of language learning strategies and three sub-psychomotor domains are presented on Figure 4.

Independent variables: **Dependent variables:**

Language learning strategies   **Psychomotor domain of life skills**

Figure 4 Diagram of the Significant Relationship between Six Categories of Language Learning Strategies and the Three Sub-psychomotor Domains of Life Skills

4.4 Summary of Findings

According to the purpose of this study which aimed to investigate the relationship between six categories of language learning strategies and the psychomotor domain of life skills among 570 first-year Mahidol University students, the data were analyzed through the Statistical Package for Social Science (SPSS). The data were analyzed to gain descriptive statistics, Speaman rho correlation coefficient, Pearson product moment correlation coefficient, and multiple regression. After analyzing the data, the results were summarized as follows:

1. There was a significant positive relationship between language learning strategies and the psychomotor domain of life skills at $r = .185$, $p < .01$ in general. Five categories of language learning strategies – memory, cognitive, compensation, metacognitive, and social strategies were significantly correlated with interpersonal relationship and communication skills ($p < .01$). Three categories of language learning strategies – cognitive, compensation, and metacognitive strategies were significant

correlated with decision making and problem solving skills. Memory, cognitive, and compensation strategies were significant correlated with coping with emotion and stress skills.

2. Direct and indirect strategies of language learning strategies were significantly positively correlated with three subdomains of the psychomotor domain. However, there was no significant correlation between indirect strategies and coping with emotion and stress skills. Direct strategies were correlated with three sub-psychomotor domains: interpersonal relationship and communication skills ($p < .01$), decision making and problem solving skills ($p < .05$), and coping with emotion and stress skills ($p < .01$). Indirect strategies were correlated with interpersonal relationship and communication skills ($p < .01$); with decision making and problem solving skills ($p < .05$). Direct strategies was the best predictor for interpersonal relationship and communication skills ($R^2 = .047$, $F_{2,567} = 14.077$, $p = .00$) and coping with emotion and stress skills ($R^2 = .023$, $F_{2,567} = 6.615$, $p = .00$).

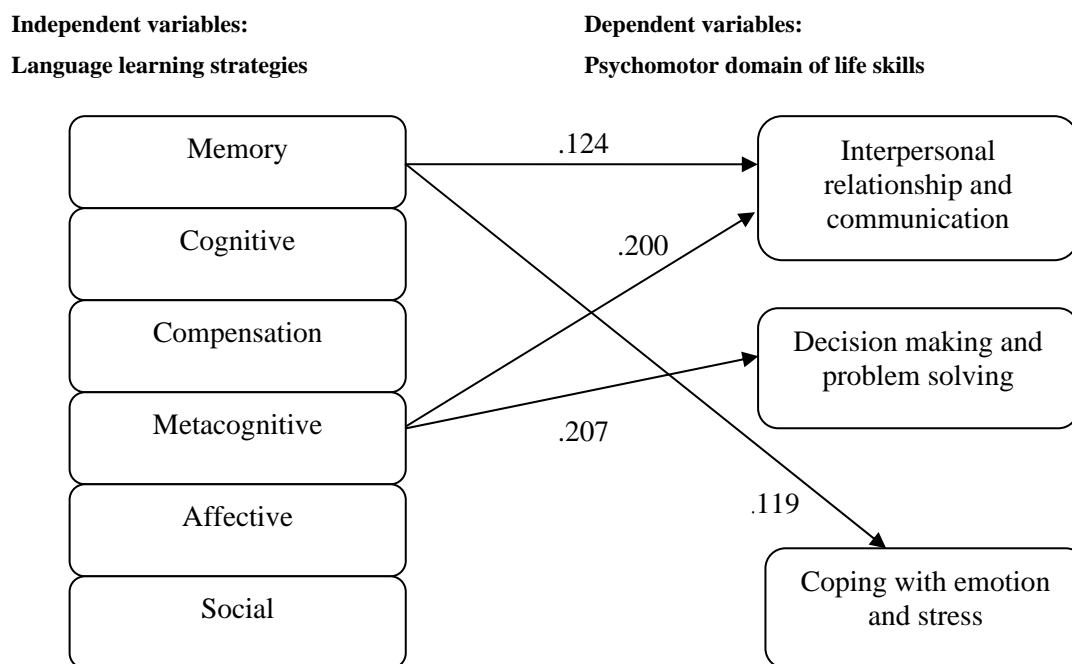3. There were positive correlations among six categories of language learning strategies and three sub-psychomotor domains of life skills. The significant correlations among six categories of language learning strategies and three sub-psychomotor domains of life skills were presented as follows:

- Memory strategies were correlated with interpersonal relationship and communication skills at $r = .185$, $p < .01$ and coping with emotion and stress skills at $r = .123$, $p < .01$.

- Cognitive strategies were correlated with interpersonal relationship and communication skills at $r = .180$, $p < .01$, decision making and problem solving at $r = .092$, $p < .05$ and coping with emotion and stress skills at $r = .119$, $p < .01$.

- Compensation strategies were correlated with interpersonal relationship and communication skills at $r = .123$, $p < .01$, decision making and problem solving at $r = .115$, $p < .01$ and coping with emotion and stress skills at $r = .108$, $p < .01$.

- Metacognitive strategies were correlated with interpersonal relationship and communication skills at $r = .216$, $p < .01$ and decision making and problem solving at $r = .154$, $p < .01$.

- Social strategies were correlated with interpersonal relationship and communication skills at r = .138, p < .01.

In addition, memory strategies were the best predictors for interpersonal relationship and communication skills (β = .124, t (563) = 2.274, p < .05) and coping with emotion and stress skills (β = .119, t (563) = 2.128, p < .05). Metacognitive strategies were the best predictors for interpersonal relationship and communication skills (β = .2, t (563) = 3.199, p = .00) and decision making and problem solving skills (β = .207, t (563) = 3.238, p = .00).

CHAPTER IV
DISCUSSION

In the previous chapter, the findings of this study were analyzed and discussed in three aspects according to the research questions. The implications of this study are presented in this chapter. Therefore, this chapter includes four parts of discussion as the following:

1. Relationship between language learning strategies and the psychomotor domain of life skills among first-year undergraduate students at Mahidol University.

2. Relationships between direct and indirect strategies of language learning strategies and three sub-psychomotor domain of life skills (interpersonal relationship, communication, decision making, problem-solving, coping with emotion, and coping with stress skills).

3. Relationships between six categories of language learning strategies and sub-psychomotor subdomain of life skills (interpersonal relationship, communication, decision making, problem-solving, coping with emotion, and coping with stress skills).

4. Implication

5. Suggestions for further study

5.1 Discussion of Finding One

Relationship between language learning strategies and the psychomotor domain of life skills among first-year undergraduate students at Mahidol University.

The finding of this study derived from two instruments: the SILL version 7.0 translated in Thai by Kaotsombat (2003) and the Department of Mental Health's Life Skills Test (Erawan & Luang-Ungkoon, 2003). High reliability of the SILL (Cronbach's alpha = .94) and high reliability of the Life Skills Test (Cronbach's alpha = .91) were found in the present study.

The findings revealed that first-year undergraduate students at Mahidol University used language learning strategies at the moderate level (*M* = 3.03). This finding was consistent with finding from previous studies, which included Ehrman and

Oxford (1995) in U.S.A., Goh and Foong (1997) in Hong Kong, Wharton (2000) in Singapore, Ok (2003) in Korea, Shamis (2003) in Palestine, and Raizi and Rahimi (2005) in Iran. In addition, by ranking of six categories of language learning strategies, compensation strategies were the most used ($M = 3.27$) among students, which was consistent with Kaosombat (2003) in Thailand and Ok (2003) in Korea. The next most employed strategy was metacognitive strategies ($M = 3.26$) followed by cognitive strategies ($M = 2.95$), affective strategies ($M = 2.92$), memory strategies ($M = 2.91$), and social strategies ($M = 2.84$). The finding of this study corresponded with Bremner (1999) which found that compensation and metacognitive strategies were the most frequently used strategies.

Another measurement, the Life Skills Test, revealed that the students had a moderate level of life skills (M = 283.62). This finding was consistent with Saimai (2003), Termsrirat (2003), Supphakun (2005), Luksamijarulkul, Thongvichien, and Triamchaisri (2007) which revealed that Thai adolescents had scores in the moderate level of life skills. Among three domains of life skills, creative thinking in the cognitive domain was ranked at the highest level whereas all other subdomains were ranked at the moderate level.

Then the relationship between language learning strategies and the psychomotor domain were examined through Spearman rho and Pearson product-moment correlation coefficient. The results revealed that there were positive relationship between language learning strategies and the psychomotor domain ($r = .185$) and this relationship was statistically significant ($p < .01$). Sharing the same goal is a reason of this relationship.

Effective communication involves both verbal language and non-verbal interactions, and an understanding of the other person's cognitive and emotional state (Smith, 2001). On the other hand, both language competence and the psychomotor domain are required for the effective communication. Oxford (1990) stated that the appropriate language learning strategies are oriented to the broad goal of communicative competence. Therefore, language learning strategies were correlated with the psychomotor domain of life skills as they focus on the effectiveness of the communication. Language learning strategies emphasize language competence while the psychomotor domain emphasizes interpersonal relationship skills. Employing

language learning strategies can encourage learners to develop their language proficiency which leads to effective communication. Moreover, the components of the psychomotor domain are necessary for effective communication because they involves abilities to communicate with others and skills to understand others' cognitive and emotional state. Therefore, creating the effective communication demands both language learning strategies and skill in the psychomotor domain.

5.2 Discussion of Finding Two

Relationships between direct and indirect strategies of language learning strategies and three psychomotor subdomains of life skills [(a)interpersonal relationship and communication, (b) decision making and problem-solving, and (c) coping with emotion and coping with stress skills)].

Since the relationship between language learning strategies and the psychomotor domain was found, deeper analysis of this relationship confirmed that direct and indirect strategies were positively correlated with three components of the psychomotor domain. These relationships were statistically significant except the relationship between indirect strategies and the skills for coping with emotion and stress. The direct strategies were significantly correlated with interpersonal relationship and communication skills at $r = .209$, $p < .01$; with decision making and problem solving skills at $r = .105$, $p < .05$; and with coping with emotion and stress skills at $r = .135$, $p < .01$. The indirect strategies were significantly correlated with interpersonal relationship and communication skills at $r = .202$, $p < .01$; with decision making and problem solving skills at $r = .108$, $p < .05$. Moreover, all six language learning strategies – memory, cognitive, compensation, metacognitive, affective, and social strategies were positively correlated with three sub-psychomotor domains. These relationships could be explained that language learning is a complex interaction of a number of intelligences including interpersonal and intrapersonal intelligences (Gardner, 1993). In other words, language learning requires interpersonal and intrapersonal intelligences which were considered as the psychomotor domain.

In addition, the second research question aimed to investigate the influence of direct and indirect strategies on the psychomotor domain. The results revealed that only direct strategies can predict the use of two sub-psychomotor domains –

interpersonal relationship and communication skills and coping with emotion and stress skills. Therefore, based on this finding, it can be implied that students who used direct strategies may develop skills for communication and interaction with the others and develop skills for coping with emotion and stress. In addition, language learning closely correlated with emotion because language express emotions and emotions affect language (Smith, 2001).

5.3 Discussion of Finding Three

Relationships between six categories of language learning strategies and sub-psychomotor subdomain of life skills (interpersonal relationship, communication, decision making, problem-solving, coping with emotion, and coping with stress skills)

The finding indicated that two language learning strategies – memory and metacognitive strategies – affected the use of the psychomotor domain. Memory strategies could be a predictor of interpersonal relationship and communication skills (β = .124, t (563) = 2.274, p < .05) and coping with emotion and stress skills (β = .119, t (563) = 2.128, p < .05). From this finding, memory strategies play an important role in students' abilities to interact and communicate with others. Oxford (1990) stated that memory strategies helped learners to store verbal material and then retrieve it when needed for communication. When learners communicate with another person, they use information from their memories to consider persons they communicate with. After considering, learners will appropriately create conversation, because they understand the emotional states of persons they communicate with. For this reason, learners can create effective communication with less anxiety or stress. Therefore, memory strategies can help learners to make and keep friendly relationships with others. Moreover, using memory strategies also help learners to cope with their emotion and to reduce stress.

Metacognitive strategies could be a predictor of interpersonal relationship and communication skills (β = .200, t (563) = 3.199, p < .01) and decision making and problem solving skills (β = .207, t (563) = 3.238, p = .001). In metacognitive strategies, learners control their learning process. Oxford (1990) stated that metacognitive strategies stimulated the growth of communicative competence because learners control their own cognition, plan, and evaluate their learning progress. In

other words, when students use metacognitive strategies, they may develop their communication skills. Additionally, metacognitive strategies may help students to increase their problem solving skills when students faced the difficulties in their learning. Students may develop their decision making skills when they take responsibility to their language learning. Moreover, memory strategies are clearly more effective when learners simultaneously uses with metacognitive strategies such as paying attention and reducing anxiety while they are learning a target language (Oxford, 1990). Then when students use memory and metacognitive strategies, they may develop three sub-psychomotor domains of life skills.

In conclusion, the finding indicated that memory and metacognitive strategies influenced the psychomotor domain of life skills. Language teachers also need to explicitly train their students to practice and use other strategies – cognitive, compensation, affective, and social strategies. The explicit training can help students to become proficient language learners and to acquire the psychomotor domain of life skills. Consequently, students can apply language learning strategies to any situation in daily life and life skills can help them to translate knowledge from classes to actual situations (WHO, 1997).

5.4 Implication

The findings that language learning strategies were correlated the psychomotor domain of life skills provides useful information for further studies on language learning strategies and life skills in the particular area of English as a foreign language. The implication may be applied to other EFL contexts that share the similar background and level of students' language proficiency. According to the findings of this study, the suggestions in this part can be used as a guidance to develop English learning and teaching especially for first-year undergraduate students at Mahidol University. The suggestions are proposed as follows:

5.4.1   Implication for Strategy Training in Language Classroom

According to Oxford (1990), language learning strategies are effective tools facilitating learners to succeed in their learning. Language teachers should train their students to use appropriate strategies for facilitating language and coping with

difficulties. Before training the language learning strategies, teachers need to know which strategies that students prefer to use and which strategies need to be improved. To discover the information, teachers can use several methods such as questionnaire, interview, diaries, or think-aloud protocol to identify strategies students use. After that, teachers will use the information to design and organize learning activities and materials suiting for students' learning styles.

Identifying and training learning strategies to students explicitly can be advantage for teachers and students. Teachers will use students' information for preparing their teaching and students will recognize which strategies suit to their learning styles. In addition, students' experiences from learning strategy training will help them to choose appropriate strategies for coping with difficulties in any situations. Moreover, not only language teachers can train language learning strategies to their students, but also teachers of other subjects can apply strategy training to suit the particular characteristics of the subjects.

5.4.2 Implication for Integrating the Psychomotor Domain into Language classroom

The findings of the present study imply that teachers can train students to acquire skills in the psychomotor domain through the language class. Teachers may teach students by creating an interdisciplinary lesson for language teaching and psychomotor training. The interdisciplinary lesson can encourage students to relate the knowledge from the language class to other subjects. The connection between subjects can help students to apply the knowledge from classrooms to actual situations. Therefore, language teachers should create the interdisciplinary lesson for their students. For example, teachers teach students about social problems through a reading passage. Teachers employ the passage to teach reading, vocabulary, grammar, and other linguistics features. According to the passage, students can practice speaking skills through group discussion. Then, they can practice their writing skills by writing how to prevent or avoid social problems. When they generate ideas for avoiding social problems, they use higher level of thinking skills as synthesis is the higher order of thinking skills. In addition, students may learn science, social science, political science, and physical education from this lesson. Moreover, the learning activities can

help students to improve the psychomotor domain of life skills while they are working with their peers.

5.4.3 Implication for Integrating Life Skills into Language Curriculum

World Health Organization (WHO) has emphasized the importance of life skills education since 1994. WHO (1994) stated that life skills education must be addressed at the country level, or in a more local context. In Thai context, life skills education was considered as an important skill for Thai adolescent. It was introduced in National Education Act of B. E. 2542 (1999) and Basic Education Curriculum (2001). However, life skills education in Thai context mostly conducted in basic education levels: primary and secondary levels. Moreover, life skills education in Thai context is a particular lesson. This study provided fundamental information for integrating life skills education into other subjects, especially English language. The finding also indicated that first-year undergraduate students at Mahidol University have life skills at the moderate level. For this reason, life skills level of first-year undergrad students need to be improved to a high level. In conclusion, life skills education in Thailand should be integrated with other subjects and should be practiced at all levels: primary, secondary, and higher education levels.

5.5 Suggestions for Further Study

This study aimed to study the relationship between language learning strategies and the psychomotor domain of skills. The results showed that there was the relationship between these two variables. Consequently, a further study should include other research methods such as interviews and observation in order to gain deeper information of this relationship. Additionally, further studies should be conducted with other groups such as primary school students, secondary school students, high school students, undergraduate students, and graduate students. Moreover, an educational endeavor should conduct an interdisciplinary lesson and an interdisciplinary curriculum which includes contents of language learning strategies and life skills. The interdisciplinary lesson and curriculum should involve contents from several subject areas to develop students' multiple intelligences. Then the interdisciplinary lesson and curriculum will be used in language classes for finding the effectiveness of such lesson

and curriculum. After that, the results of employing such lessons will be used as fundamental information for improving lesson, curriculum, and teaching that is advantageous for students and their personal development.

CHAPTER VI
CONCLUSION

This chapter is the last chapter of the study. It aims to summarize all crucial contents from previous chapters.

Conclusion

In the globalization era, there are two important skills for Thai students. First variable is English language, the international language, used by residents around the world. People use English for reasons of daily life, education, and occupation. Therefore, it is necessary for Thai students to be proficient in English in order to survive for their life in the globalization. Another crucial skill is life skills. Life skills are necessary for Thai students because they can facilitate students to live with the others happily and to survive in this era. Consequently, it is necessary to examine whether there is a relationship between these two skills.

The purpose of this study was to investigate the relationship between six language learning strategies (memory, cognitive, compensatory, metacognitive, affective, and social) and psychomotor subdomains (interpersonal relationship, communication skill, decision making, problem solving, coping with emotion, and stress skill) of life skills among first-year undergraduate students at Mahidol University, during the academic year 2006. The participants were 570 students from 24 programs including 447 science students and 123 non-science students.

Two structured questionnaires were used as research instruments for gathering data: the Strategy Inventory Language Learning (SILL) version 7.0 translated into Thai by Kaotsombat (2003), and Department of Mental Health's Life Skill Test (Erawan & Luang-Ungkoon, 2003). The SILL including 50 items which each item used a choice of five Likert-scale responses. This instrument was used to examine the frequency of language learning strategies used by students. The Life Skills Test was a questionnaire that used 120 Likert-scale items. It was used to investigate the life skills level of the participants. Then three correlation statistics

(Spearman rho, Pearson product-moment coefficient, and Multiple regression) were employed to investigate the relationship between language learning strategies and the psychomotor domain.

The results showed the significant statistic correlations between these two variables ($r = .185$, $p < .01$). All six language learning strategies - memory, cognitive, compensatory, metacognitive, affective, and social - were positively correlated with interpersonal relationship and communication skills, decision making and problem solving skills, and coping with emotion and stress skills. The maximum value was the correlation between metacognitive strategies and interpersonal relationship and communication skills which was the highest correlation at $r = .216$, $p < .01$. In addition, it was also found that memory and metacognitive strategies influenced the used of psychomotor subdomains. Memory strategies were the best predictors of two psychomotor subdomains: 1) interpersonal relationship and communication skills, and 2) coping with emotion and stress skills. Metacognitive strategies were the best predictors for interpersonal relationship and communication skills, and decision making and problem solving skills.

According to the finding of this study, the language teachers can use this information to prepare suitable lessons, teaching methods, and teaching materials suitable for their students. The teachers can create an interdisciplinary lesson which can help their students to enhance the English proficiency and life skills level through language learning strategies training. Besides, teachers from other subjects can apply strategy training to suit the particular characteristics of the subjects. Additionally, the implications of integrating life skills into classrooms should be promoted to every level: primary school, secondary school, high school, and universities. It will be better if there is a curriculum and educational policy which emphasize the importance of life skills.

For further study, the duplicated research should include other research methods such as interviews and observation in order to gain deeper information of this relationship. Additionally, further studies should be conducted with other groups of the sample such as primary school students, secondary school students, high school students, undergraduate students, and graduate students. Moreover, teachers can develop such interdisciplinary lesson after using with their students.

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APPENDIX

APPENDIX A

Questionnaires: The Strategy Inventory for Language Learning (SILL Thai version) and Life Skills Test

แบบสอบถาม

เรื่องความสัมพันธ์ระหว่างกลยุทธ์การเรียนภาษาอังกฤษและทักษะชีวิตด้านทักษะพิสัยของนักศึกษาชั้นปีที่ 1 มหาวิทยาลัยมหิดล

โปรด ทำเครื่องหมายกากบาท (x) ลงบนข้อความที่ตรงกับสภาพความเป็นจริงของท่านในปัจจุบัน

ส่วนที่ 1 ข้อมูลส่วนบุคคล

ชื่อ_____สกุล_____สาขาวิชา/ คณะ_____

ID _____ อายุ_____ เพศ _____E-mail _____

ส่วนที่ 2 ยุทธวิธีการเรียนภาษาอังกฤษ

ระดับความคิดเห็น: ① = ใช้น้อยที่สุดถึงไม่เคยใช้เลย   ② = ใช้น้อย   ③ = ใช้ปานกลาง

④ = ใช้มาก   ⑤ = ใช้มากที่สุด

ข้อความ	ระดับความเห็น
1. ท่านคิดเชื่อมโยงความสัมพันธ์ระหว่างสิ่งที่เรียนรู้มาแล้วกับสิ่งที่เรียนรู้ใหม่	①②③④⑤
2. ท่านนำเอาคำใหม่ ๆ ในภาษาอังกฤษใช้ในประโยค เพื่อให้จำได้ดียิ่งขึ้น	①②③④⑤
3. ท่านเชื่อมโยงเสียงของคำใหม่ในภาษาอังกฤษกับภาพของคำนั้น เพื่อช่วยให้จำได้	①②③④⑤
4. ท่านจดจำคำใหม่ โดยการคิดถึงภาพของเหตุการณ์ซึ่งคำเหล่านั้นอาจจะถูกใช้	①②③④⑤
5. ท่านใช้คำพ้องเสียงเพื่อช่วยในการจำคำใหม่ในภาษาอังกฤษ	①②③④⑤
6. ท่านใช้บัตรคำซึ่งด้านหนึ่งของบัตรเป็นคำศัพท์ส่วนอีกด้านหนึ่งเป็นคำแปล เพื่อช่วยในการจำคำใหม่ในภาษาอังกฤษ	①②③④⑤
7. ท่านแสดงท่าทางประกอบ เพื่อช่วยในการจำคำใหม่ในภาษาอังกฤษ เช่น drink = ดื่ม ท่านจึงทำท่าทางดื่มน้ำไปด้วย	①②③④⑤
8. ท่านทบทวนบทเรียนภาษาอังกฤษบ่อย ๆ	①②③④⑤
9. ท่านจดจำคำหรือวลีใหม่ ๆ ในภาษาอังกฤษ โดยการจำว่าคำเหล่านั้นอยู่หน้าใดของ หนังสือ ส่วนใดของกระดาน หรือ ตามป้ายต่าง ๆ บนท้องถนน	①②③④⑤
10. ท่านพูดหรือเขียนคำใหม่ ๆ ในภาษาอังกฤษซ้ำแล้วซ้ำอีกหลาย ๆ ครั้ง	①②③④⑤
11. ท่านพยายามพูดให้มีสำเนียงใกล้เคียงกับเจ้าของภาษา	①②③④⑤
12. ท่านฝึกฝนการออกเสียงภาษาอังกฤษ	①②③④⑤

13. ท่านใช้คำศัพท์ในภาษาอังกฤษที่ท่านรู้ในสถานการณ์ที่แตกต่างกันออกไป เช่น ใช้ในการพูด หรือ ใช้ในการเขียน	① ② ③ ④ ⑤

ข้อความ	ระดับความเห็น
14. ท่านเริ่มต้นบทสนทนากับผู้อื่นโดยใช้ภาษาอังกฤษ	① ② ③ ④ ⑤
15. ท่านดูรายการโทรทัศน์หรือภาพยนตร์ภาคภาษาอังกฤษ	① ② ③ ④ ⑤
16. ท่านอ่านสิ่งพิมพ์ภาษาอังกฤษต่าง ๆ ที่ทำให้ท่านเพลิดเพลิน	① ② ③ ④ ⑤
17. ท่านใช้ภาษาอังกฤษในการจดโน้ต ข้อความ จดหมาย หรือ รายงาน	① ② ③ ④ ⑤
18. ท่านอ่านบทความต่าง ๆ ที่เป็นภาษาอังกฤษ โดยอ่านแบบผ่าน ๆ ในครั้งแรก เพื่อหาใจความสำคัญ และกลับมาอ่านทบทวนอีกครั้งอย่างละเอียด	① ② ③ ④ ⑤
19. ท่านค้นหาคำในภาษาไทยที่มีความหมายใกล้เคียงกับคำศัพท์ใหม่ในภาษาอังกฤษ	① ② ③ ④ ⑤
20. ท่านศึกษารูปแบบการเรียงประโยคในภาษาอังกฤษเพื่อนำไปใช้ได้อย่างถูกต้อง	① ② ③ ④ ⑤
21. ท่านหาความหมายของคำในภาษาอังกฤษโดยการแบ่งคำนั้น ๆ ออกเป็นส่วน ๆ เพื่อให้เกิดความเข้าใจ เช่น แบ่งตามรากศัพท์	① ② ③ ④ ⑤
22. ท่านหลีกเลี่ยงการแปลภาษาอังกฤษแบบคำต่อคำ	① ② ③ ④ ⑤
23. ท่านทำสรุปข้อมูลต่าง ๆ ที่ท่านได้ฟังหรืออ่านเป็นภาษาอังกฤษ	① ② ③ ④ ⑤
24. ท่านใช้วิธีการเดา เพื่อให้เข้าใจคำในภาษาอังกฤษที่ไม่คุ้นเคย	① ② ③ ④ ⑤
25. ท่านใช้ท่าทางประกอบระหว่างการสนทนาภาษาอังกฤษ เมื่อท่านนึกคำภาษาอังกฤษไม่ออก	① ② ③ ④ ⑤
26. ท่านใช้คำอื่นแทน เมื่อท่านไม่รู้คำที่ถูกต้องในภาษาอังกฤษ	① ② ③ ④ ⑤
27. ท่านอ่านภาษาอังกฤษ โดยไม่ต้องค้นหาคำใหม่ทุกคำ	① ② ③ ④ ⑤
28. ท่านพยายามเดาหรือคาดการณ์เป็นภาษาอังกฤษว่าผู้สนทนาชาวต่างชาติจะพูดอะไร ต่อไป	① ② ③ ④ ⑤
29. ถ้าท่านไม่สามารถคิดถึงคำในภาษาอังกฤษได้ ท่านจะใช้คำหรือวลีที่มีความหมาย เหมือนหรือใกล้เคียงกับคำที่ท่านต้องการ	① ② ③ ④ ⑤
30. ท่านพยายามหาวิธีการต่าง ๆ เท่าที่ท่านจะทำได้เพื่อได้ใช้ภาษาอังกฤษ	① ② ③ ④ ⑤
31. ท่านสังเกตข้อผิดพลาดต่าง ๆ ในการใช้ภาษาอังกฤษ และใช้ข้อผิดพลาดเหล่านั้นเป็น บทเรียนเพื่อช่วยให้ท่านเรียนได้ดีขึ้น	① ② ③ ④ ⑤
32. ท่านให้ความสนใจ เมื่อมีใครก็ตามพูดภาษาอังกฤษ	① ② ③ ④ ⑤
33. ท่านพยายามที่จะหาวิธีการที่จะทำให้ท่านเรียนภาษาอังกฤษได้ดีขึ้น	① ② ③ ④ ⑤
34. ท่านจัดตารางเวลา เพื่อให้มีเวลาเพียงพอที่จะศึกษาภาษาอังกฤษ	① ② ③ ④ ⑤
35. ท่านมองหาคนที่ท่านสามารถพูดภาษาอังกฤษกับเขาได้	① ② ③ ④ ⑤
36. ท่านหาโอกาสที่จะอ่านภาษาอังกฤษให้ได้มากที่สุดเท่าที่จะทำได้	① ② ③ ④ ⑤
37. ท่านมีเป้าหมายชัดเจนในการปรับปรุงทักษะภาษาอังกฤษของท่าน	① ② ③ ④ ⑤
38. ท่านคาดหวังในความก้าวหน้า/การพัฒนาในการเรียนภาษาอังกฤษของท่าน	① ② ③ ④ ⑤

ข้อความ	ระดับความเห็น
39. ท่านพยายามผ่อนคลาย เมื่อรู้สึกกลัวที่จะต้องใช้ภาษาอังกฤษ	① ② ③ ④ ⑤
40. ท่านให้กำลังใจตนเอง เมื่อต้องพูดภาษาอังกฤษ แม้ว่าในใจจะกลัวความผิดพลาด	① ② ③ ④ ⑤
ข้อความ	**ระดับความเห็น**
41. ท่านให้รางวัลกับตนเองเมื่อใช้ภาษาอังกฤษได้ดี	① ② ③ ④ ⑤
42. ท่านพบว่าตัวเองเป็นกังวลหรือเครียดในขณะที่กำลังเรียนหรือใช้ภาษาอังกฤษ	① ② ③ ④ ⑤
43. ท่านเขียนบรรยายความรู้สึกของท่านเป็นภาษาอังกฤษในสมุดบันทึกประจำวัน	① ② ③ ④ ⑤
44. ท่านพูดคุยกับผู้อื่นถึงความรู้สึกของท่านในการเรียนภาษาอังกฤษ	① ② ③ ④ ⑤
45. ท่านขอร้องให้ผู้พูด พูดช้าลงหรือพูดซ้ำ ถ้าท่านไม่เข้าใจภาษาอังกฤษที่เขาพูดอยู่ในขณะนั้น	① ② ③ ④ ⑤
46. ท่านขอให้ผู้ที่ใช้ภาษาอังกฤษช่วยแก้ไขภาษาอังกฤษของท่าน เมื่อท่านพูดผิด	① ② ③ ④ ⑤
47. ท่านฝึกฝนภาษาอังกฤษกับเพื่อนนักศึกษาคนอื่น ๆ	① ② ③ ④ ⑤
48. ท่านขอความช่วยเหลือจากอาจารย์/เพื่อนนักศึกษาต่างชาติ ในการใช้ภาษาอังกฤษ	① ② ③ ④ ⑤
49. ท่านมักจะถามคำถามเป็นภาษาอังกฤษกับผู้ที่อยู่ในแวดวงเดียวกับท่าน	① ② ③ ④ ⑤
50. ท่านพยายามศึกษาวัฒนธรรมของคนที่ใช้ภาษาอังกฤษเป็นภาษาประจำชาติ	① ② ③ ④ ⑤

ส่วนที่ 3 ทักษะชีวิต

ระดับความคิดเห็น: ① = ไม่จริง   ② = ค่อนข้างจริง   ③ = จริง

ข้อความ	ระดับความเห็น		
1. ฉันมักจะมองอะไรหลาย ๆ แง่มุม	①	②	③
2. ฉันบอกได้ว่าการกระทำของฉันดีหรือไม่ดี	①	②	③
3. เมื่อพบปัญหาฉันจะพยายามคิดหาสาเหตุ	①	②	③
4. ฉันเป็นคนไม่เชื่ออะไรง่าย ๆ	①	②	③
5. ถ้าเพื่อนบอกว่าดี ฉันก็เชื่อว่าดี	①	②	③
6. ฉันเบื่อที่จะทำอะไรแล้วต้องมานั่งคิดวางแผน	①	②	③
7. ฉันชอบคิดคาดการณ์สิ่งต่าง ๆ ล่วงหน้า	①	②	③
8. ฉันคิดเลือกสิ่งที่เป็นประโยชน์มากกว่าสิ่งที่ชอบ	①	②	③
9. ฉันคิดโดยใช้เหตุผลมากกว่าความเคยชิน	①	②	③
10. ฉันมักจะสรุปสิ่งหนึ่งสิ่งใด โดยใช้เหตุผลส่วนตัว	①	②	③
11. ฉันชอบเรียนรู้สิ่งใหม่	①	②	③
12. ฉันชอบเสนอความคิดใหม่	①	②	③
13. ฉันชอบทำตามสิ่งที่มีผู้ทำมาก่อน	①	②	③
14. ฉันไม่กลัวการเปลี่ยนแปลง	①	②	③
15. ฉันชอบสภาพแวดล้อมที่มีระเบียบแบบแผน	①	②	③

	ระดับความเห็น		
16. ฉันสามารถขยายความคิดได้มากมาย	①	②	③
17. ฉันไม่ชอบคิดต่อจากสิ่งที่คนอื่นคิดไว้	①	②	③
ข้อความ	**ระดับความเห็น**		
18. ฉันชอบคิดค้นหาวิธีการใหม่ ๆ	①	②	③
19. ฉันชอบคิดแตกต่างจากคนอื่น	①	②	③
20. ฉันคิดอย่างรอบคอบก่อนทำ	①	②	③
21. ฉันบอกความรู้สึกที่แท้จริงได้ว่าชอบหรือไม่ชอบอะไร	①	②	③
22. ฉันรู้ตัวเสมอว่ากำลังมีอารมณ์อย่างไร	①	②	③
23. ฉันรู้สาเหตุที่ทำให้ฉันผิดหวังหรือเสียใจ	①	②	③
24. ฉันปรับอารมณ์ให้เป็นปกติได้เร็ว	①	②	③
25. หากมีคนโต้แย้งฉันมักแสดงออกอาการไม่พอใจ	①	②	③
26. ฉันมีจุดเด่นในตัวเอง	①	②	③
27. ฉันมีจุดที่ต้องปรับปรุงในตัวเอง	①	②	③
28. ฉันใส่ใจในการหาจุดบกพร่องและปรับปรุงตนเองเสมอ	①	②	③
29. ฉันรู้ความสามารถของตนเอง	①	②	③
30. ฉันมักทำในสิ่งที่ตรงกับความสามารถ	①	②	③
31. ฉันบอกได้ว่าสิ่งที่ฉันทำ ฉันทำได้ดีหรือไม่ดี	①	②	③
32. ฉันยินดีที่จะรับฟังคำวิจารณ์จากคนอื่น	①	②	③
33. ฉันยอมรับว่าคนเรามีความแตกต่าง	①	②	③
34. ฉันยอมรับผู้อื่นที่มีความแตกต่างจากฉัน	①	②	③
35. ฉันสามารถสังเกตอารมณ์ผู้อื่นจากสีหน้าและแววตา	①	②	③
36. ฉันไม่ใส่ใจกับความต้องการของผู้อื่น	①	②	③
37. ฉันยินดีรับฟังความทุกข์ร้อนของเพื่อน	①	②	③
38. ฉันรู้สึกไม่สบายใจเมื่อเพื่อนประสบปัญหา	①	②	③
39. ฉันรู้สึกเห็นใจผู้ที่กำลังเดือดร้อน	①	②	③
40. ฉันชอบช่วยเหลือคนอื่นเมื่อมีโอกาส	①	②	③
41. ฉันรู้สึกเป็นภาระเมื่อต้องรับผิดชอบงานของคนอื่น	①	②	③
42. ฉันชื่นชมกับความสำเร็จของเพื่อน	①	②	③
43. ฉันไม่สนใจกับความรู้สึกของคนรอบข้าง	①	②	③
44. ฉันเป็นที่พึ่งของเพื่อน ๆ ได้	①	②	③
45. ฉันอยากเห็นผู้อื่นมีความสุข	①	②	③
46. ฉันไม่อยากยุ่งกับเรื่องของคนอื่น	①	②	③
47. เมื่อฉันทำผิดพลาดฉันจะขาดความมั่นใจ	①	②	③
48. ฉันชื่นชมกับความสำเร็จของตัวเอง	①	②	③

49. ฉันรู้สึกว่าตัวเองไร้ค่า	①	②	③
50. ฉันพอใจในสิ่งที่ฉันมีอยู่	①	②	③

ข้อความ	**ระดับความเห็น**		
51. ฉันรู้สึกไม่เป็นตัวของตัวเอง	①	②	③
52. ฉันมีความรู้สึกที่ดีต่อตัวเอง	①	②	③
53. ฉันรู้ว่าตัวเองมีคุณค่าไม่น้อยไปกว่าคนอื่น	①	②	③
54. การได้รับคำวิจารณ์จากผู้อื่นเป็นโอกาสที่จะพัฒนาตัวเอง	①	②	③
55. ฉันเชื่อว่าตัวเองมีความสามารถ	①	②	③
56. ฉันรับผิดชอบต่อผลที่เกิดขึ้นจากการตัดสินใจของฉัน	①	②	③
57. ฉันสามารถเอาชนะอุปสรรคในชีวิตได้	①	②	③
58. ฉันกล้าแสดงความคิดเห็นในเรื่องต่าง ๆ	①	②	③
59. ฉันมักจะคล้อยตามความคิดเห็นของคนอื่น	①	②	③
60. ฉันจะทำสิ่งใดก็ต่อเมื่อคนอื่นยอมรับ	①	②	③
61. ฉันเป็นคนมีวินัยในตนเอง	①	②	③
62. ฉันเป็นคนตรงต่อเวลา	①	②	③
63. ฉันรู้สึกผิดถ้าทิ้งขยะไม่เป็นที่เป็นทาง	①	②	③
64. กฎระเบียบเป็นสิ่งที่ฝ่าฝืนได้	①	②	③
65. การปฏิบัติตามกฎระเบียบเป็นสิ่งที่เสียเวลา	①	②	③
66. ฉันยินดีเสียสละหากทำให้สังคมดีขึ้น	①	②	③
67. ฉันยินดีให้ความร่วมมือกับส่วนรวม	①	②	③
68. ฉันเต็มใจให้ความร่วมมือกับกลุ่มเพื่อให้งานสำเร็จ	①	②	③
69. ฉันรู้สึกผิดเมื่อแสดงความเห็นแก่ตัว	①	②	③
70. ฉันรู้สึกผิดเมื่องานส่วนรวมไม่สำเร็จ	①	②	③
71. ฉันยินดีรับผิดชอบหากการกระทำของฉันมีผลกระทบต่อส่วนรวม	①	②	③
72. ฉันรู้สึกไม่สบายใจหากคนอื่นเดือดร้อนจากการกระทำของฉัน	①	②	③
73. ฉันคิดว่าการรับผิดชอบต่อสังคมเป็นเรื่องไกลตัว	①	②	③
74. ฉันคิดว่าการรับผิดชอบต่อสังคมไม่ใช่เรื่องของเด็ก	①	②	③
75. คนอื่นมักเห็นคล้อยตามในสิ่งที่ฉันพูด	①	②	③
76. เวลาที่ต้องติดต่อกับผู้อื่น เพื่อน ๆ มักให้ฉันเป็นผู้นำ	①	②	③
77. คนอื่นมักบอกว่าฉันพูดเข้าใจง่าย ชัดเจน	①	②	③
78. ฉันสามารถฟังและจับใจความได้ดี	①	②	③
79. ฉันชอบทำงานร่วมกับผู้อื่น	①	②	③
80. หากทำงานร่วมกับผู้อื่นฉันมักทำได้ดี	①	②	③
81. ฉันไม่ค่อยอยากรู้จักกับคนอื่นมากนัก	①	②	③

82. คนอื่นมักบอกว่าฉันเป็นคนหยิ่ง	①	②	③
83. ฉันมีความเป็นกันเองกับทุกคน	①	②	③

ข้อความ	**ระดับความเห็น**		
84. ฉันรู้สึกลำบากใจเมื่อต้องคุยกับคนไม่รู้จัก	①	②	③
85. ฉันปฏิเสธคนอื่นไม่ค่อยเป็น	①	②	③
86. เมื่อมีความขัดแย้งฉันมักหลบไปห่าง ๆ	①	②	③
87. ฉันมักกังวลเมื่อต้องไปพบปะกับคนที่ไม่รู้จัก	①	②	③
88. ฉันรู้สึกว่าเป็นที่ไว้วางใจของเพื่อน ๆ	①	②	③
89. ฉันชอบมองโลกในแง่ร้ายไว้ก่อน	①	②	③
90. ฉันเป็นคนจริงใจกับคนอื่น	①	②	③
91. เพื่อนส่วนมากชอบฉัน	①	②	③
92. ก่อนตัดสินใจฉันมักจะคิดอย่างรอบคอบ	①	②	③
93. ฉันชอบมองอะไรหลาย ๆ มุม	①	②	③
94. ฉันชอบการตัดสินใจที่ฉับไวหากมีปัญหาค่อยแก้เอาข้างหน้า	①	②	③
95. ฉันชอบตัดสินใจตามเพื่อน ๆ หรือตามคนส่วนใหญ่	①	②	③
96. ฉันสามารถแก้ปัญหาเฉพาะหน้าได้ดี	①	②	③
97. ฉันชอบตัดสินใจเสี่ยง ๆ เพื่อให้เกิดความตื่นเต้น	①	②	③
98. เมื่อต้องทำสิ่งใด ฉันอยากรู้ที่มาที่ไปของสิ่งนั้นก่อน	①	②	③
99. ฉันชอบทำงานตามคำสั่งมากกว่าให้ตัดสินใจเอง	①	②	③
100. เมื่อทำสิ่งใดแล้วเกิดปัญหา ฉันจะเลิกทำสิ่งนั้น	①	②	③
101. เมื่อทำสิ่งใดแล้วเกิดปัญหา ฉันจะค้นหาสาเหตุให้พบ	①	②	③
102. เมื่อต้องแก้ไขปัญหา ฉันมักค้นหาทางเลือกหลาย ๆ ทาง	①	②	③
103. ฉันเชื่อว่าทุกปัญหามีทางออกเสมอ	①	②	③
104. ฉันชอบแก้ปัญหาด้วยตนเอง โดยไม่ต้องปรึกษาใคร	①	②	③
105. หากไม่มั่นใจ ฉันมักปรึกษาคนอื่นก่อนตัดสินใจ	①	②	③
106. เมื่อฉันตัดสินใจแล้ว ผลจะเกิดอย่างไรฉันไม่สนใจ	①	②	③
107. ฉันชอบคาดการณ์ล่วงหน้าในสิ่งที่จะลงมือทำ	①	②	③
108. ฉันยอมรับผลที่จะเกิดจากการตัดสินใจของฉัน	①	②	③
109. ฉันเป็นคนใจเย็น ไม่ค่อยโกรธใครง่าย ๆ	①	②	③
110. ฉันแสดงออกอย่างเหมาะสมเมื่อมีอารมณ์โกรธ	①	②	③
111. คนอื่นมักบอกว่าฉันเป็นคนเก็บอารมณ์ได้ดี	①	②	③
112. ฉันเป็นคนไม่กลัวความผิดหวัง	①	②	③
113. ฉันเป็นคนที่ไม่จมอยู่กับอดีต	①	②	③
114. ฉันไม่กล้าเผชิญหน้ากับความผิดหวังหรือความเสียใจ	①	②	③

115. เมื่ออยู่ในภาวะที่ตึงเครียดฉันมักหาทางออกได้	①	②	③
116. เมื่อรู้สึกเครียดฉันมักหากิจกรรมอย่างอื่นทำ	①	②	③
ข้อความ	**ระดับความเห็น**		
117. เมื่อมีเรื่องไม่สบายใจฉันมักอยู่คนเดียว	①	②	③
118. ฉันเป็นคนอารมณ์มั่นคง ไม่เปลี่ยนแปลงง่าย	①	②	③
119. คนอื่นมักบอกว่าฉันเป็นคนร่าเริง อารมณ์ดี	①	②	③
120. ฉันเป็นคนเคร่งเครียดและจริงจังกับทุกเรื่อง	①	②	③

APPENDIX B

Research Instruments in English and Thai

Strategy Inventory for Language Learning (SILL)
For Speakers of Other Languages Learning English

The Strategy Inventory for Language Learning (SILL) is designed to gather information about how you, as a student of English as a foreign language, go about learning English language.

There are 50 statements in this questionnaire, please read each statement and choose that response (5, 4, 3, 2 or 1) that tells how true the statement is in terms of <u>what you actually do when you are learning English</u>. The criteria for the response are as follows:

1 = Never or almost never true of me
2 = Usually not true of me
3 = Somewhat true of me
4 = Usually true of me
5 = Always or almost always true of me

Never or almost never true of me means that the statement is very rarely true of you.

Usually not true of me means that the statement is true less than half the time.

Somewhat true of me means that the statement is true of you about half the time.

Usually true of me means that the statement is true more than half the time.

Always or almost always true of me means that the statement is true of you always.

(Adapted from SILL –Version 7.0 [EFL/ESL]—R. L. Oxford, 1990)

Part I

1. Sex

     [   ]   Male   [   ]   Female

2. Age _____

3. When did you start your English study?

     [   ]   Before Grade VII   [   ]   During Grade VII- XII

     [   ]   Others _____

4. Field/Major of Study

_____

5. Name of Institute

_____

Part II

     Answer in terms of how well the statement describes you by putting a cross on the response number (5, 4, 3, 2, or 1). In each item only one number can be selected. Please do not answer how you think you should be, or what other people do. There is no right or wrong answer to these statements. Work as quickly as you can without being careless. This usually takes about 20-30 minutes to complete. If you have any question, please let the researcher know immediately.

Strategy Inventory for Language Learning	Always or almost always true of me	Usually true of me	Somewhat true of me	Usually not true of me	Never or almost never true of me
1. I think of relationships between what I already know and new things I learn in English.	5	4	3	2	1
2. I use new English words in a sentence so I can remember them.	5	4	3	2	1
3. I connect the sound of a new English word and an image or picture of the word to help me remember the word.	5	4	3	2	1
4. I remember a new English word by making a mental picture of a situation in which the word might be used.	5	4	3	2	1
5. I use rhymes to remember new English words.	5	4	3	2	1
6. I use flashcards to remember new English words.	5	4	3	2	1
7. I physically act out new English words.	5	4	3	2	1
8. I review English lessons often.	5	4	3	2	1
9. I remember new English words or phrases by remembering their location on the page, on the board, or on a street sign.	5	4	3	2	1
10. I say or write new English words several times.	5	4	3	2	1
11. I try to talk like native English speakers.	5	4	3	2	1
12. I practice the sounds of English.	5	4	3	2	1
13. I use the English words I know in different ways.	5	4	3	2	1
14. I start conversations in English.	5	4	3	2	1
15. I watch English language TV shows spoken in English or go to movies spoken in English.	5	4	3	2	1
16. I read for pleasure in English.	5	4	3	2	1

Strategy Inventory for Language Learning	Always or almost always true of me	Usually true of me	Somewhat true of me	Usually not true of me	Never or almost never true of me
17. I write notes, messages, letters, or reports in English.	5	4	3	2	1
18. I first skim an English passage (read over the passage quickly) then go back and read carefully.	5	4	3	2	1
19. I look for words in my own language that are similar to new words in English.	5	4	3	2	1
20. I try to find patterns in English.	5	4	3	2	1
21. I find the meaning of an English word by dividing it into parts that I understand.	5	4	3	2	1
22. I try not to translate word-for-word.	5	4	3	2	1
23. I make summaries of information that I hear or read in English.	5	4	3	2	1
24. To understand unfamiliar English words, I make guesses.	5	4	3	2	1
25. When I cannot think of a word during a conversation in English, I use gestures.	5	4	3	2	1
26. I make up new words if I do not know the right ones in English.	5	4	3	2	1
27. I read English without looking up every new word.	5	4	3	2	1
28. I try to guess what the other person will say next in English.	5	4	3	2	1
29. If I cannot think of an English word, I use a word or phrase that means the same thing.	5	4	3	2	1
30. I try to find as many ways as I can to use my English.	5	4	3	2	1

Strategy Inventory for Language Learning	Always or almost always true of me	Usually true of me	Somewhat true of me	Usually not true of me	Never or almost never true of me
31. I notice my English mistakes and use that information to help me do better.	5	4	3	2	1
32. I pay attention when someone is speaking English.	5	4	3	2	1
33. I try to find out how to be a better learner of English.	5	4	3	2	1
34. I plan my schedule so I will have enough time to study English.	5	4	3	2	1
35. I look for people I can talk to in English.	5	4	3	2	1
36. I look for opportunities to read as much as possible in English.	5	4	3	2	1
37. I have clear goals for improving my English skills.	5	4	3	2	1
38. I think about my progress in learning English.	5	4	3	2	1
39. I try to relax whenever I feel afraid of using English.	5	4	3	2	1
40. I encourage myself to speak English even when I am afraid of making a mistake.	5	4	3	2	1
41. I give myself a reward or treat when I do well in English.	5	4	3	2	1
42. I notice if I am tense or nervous when I am studying or using English.	5	4	3	2	1
43. I write down my feelings in a language learning diary.	5	4	3	2	1
44. I talk to someone else about how I feel when I am learning English.	5	4	3	2	1
45. If I do not understand something in English, I ask the other person to slow down or say it again.	5	4	3	2	1

Strategy Inventory for Language Learning	Always or almost always true of me	Usually true of me	Somewhat true of me	Usually not true of me	Never or almost never true of me
46. I ask English with other students.	5	4	3	2	1
47. I practice English with other students.	5	4	3	2	1
48. I ask for help from English speakers.	5	4	3	2	1
49. I ask questions in English.	5	4	3	2	1
50. I try to learn about the culture of English speakers.	5	4	3	2	1

APPENDIX C

Permission Letters

The SILL ESL/ EFL version

-- Original Message--

From: Jaruwan Maharachpong <jaruwan.mh@gmail.com>
Subject: Letter of Consent for SILL (ESL/EFL version)
To: rebecca_oxford@yahoo.com
Date: Sunday, July 27, 2008, 10:52 PM

Dear Professor,

I am a master's student in the Applied Linguistics Program, Faculty of Arts, Mahidol University, Thailand. I am conducting a study on the topic of "RELATIONSHIP BETWEEN LANGUAGE LEARNING STRATEGIES AND THE PSYCHOMOTOR DOMAIN OF LIFE SKILLS AMONG FIRST YEAR STUDENTS AT MAHIDOL UNIVERSITY". The purpose of the study is to investigate the relationship between six categories of language learning strategies and the psychomotor domain of life skills consisting of six categories (interpersonal relationship, communication, decision making, problem solving, coping with emotion, coping with stress skills) used by the students. Therefore, to explore the frequency of language learning strategies use among the students, I will use the SILL version 7.0, which you developed in 1989 as the research instrument.

According to this, I would like to ask for your permission to use the ESL/EFL SILL version 7.0 in my study.

Looking forward to your reply and thank you very much for your consideration of my request.

Your faithfully,

Jaruwan Maharachpong

From: Rebecca Oxford rebecca_oxford@yahoo.com
Subject: Re: Letter of Consent for SILL (ESL/EFL version)
To: Jaruwan Maharachpong <jaruwan.mh@gmail.com>
Date: Thu, Aug 14, 2008 at 10:58 AM

Dear Jaruwan Maharachpong,
You have my permission to use the SILL for your Master's study.
Best wishes
Dr. Rebecca Oxford

Rebecca L. Oxford
Professor, Second Language Education and Culture
University Distinguished Scholar-Teacher
Senior Fellow, Confucius Institute at the University of Maryland
2311 Benjamin Building
University of Maryland
College Park, MD 20742

Email addresses:

roxford@umd.edu, rebeccaoxford@gmail.com, rebecca_oxford@yahoo.com

The SILL Thai version

--Original Message—

Date: Mon, 28 Jul 2008 09:56:52 +0700
From: jaruwan.mh@gmail.com
To: joynaruemol_k@hotmail.com
Subject: Letter of Consent for SILL (Thai version)

Dear Khun Naruemol Kaotsombat

I am a master's student in the Applied Linguistics Program, Faculty of Arts, Mahidol University, Thailand. I am conducting a study on the topic of "RELATIONSHIP BETWEEN LANGUAGE LEARNING STRATEGIES AND THE PSYCHOMOTOR DOMAIN OF LIFE SKILLS AMONG FIRST YEAR STUDENTS AT MAHIDOL UNIVERSITY". The purpose of the study is to investigate the relationship between six categories of language learning strategies and the psychomotor domain of life skills consisting of six categories (interpersonal relationship, communication, decision making, problem solving, coping with emotion, coping with stress skills) used by the students. Therefore, to explore the frequency of language learning strategies use among the students, I will use the SILL version 7.0, which you translated in Thai on your research study in 2003 as the research instrument.

According to this, I would like to ask for your permission to use the SILL Thai version in my study.

Lokking forward to your reply and thank you very much for your consideration of my request.

Your faithfully,

Jaruwan Maharachpong

From: joy naruemol joynaruemol_k@hotmail.com
Subject: RE: Letter of Consent for SILL (Thai version)
To: Jaruwan Maharachpong <jaruwan.mh@gmail.com>
Date: Mon, Jul 28, 2008 at 7:12 PM

Yes, you can use the SILL version that I've translated into Thai.

Good luck.

Best Wishes,
Naruemol K.

สาขาภาษาศาสตร์ประยุกต์

คณะศิลปะศาสตร์

มหาวิทยาลัยมหิดล

ถนนพุทธมณฑลสาย4 ตำบล

ศาลายา

อำเภอพุทธมณฑล นครปฐม 73170

โทร. 02-441-4401-4

25 พฤษภาคม 2551

เรื่อง ขออนุญาตใช้แบบประเมินทักษะชีวิตเพื่อวิทยานิพนธ์

เรียน อธิบดีกรมสุขภาพจิต

ด้วยดิฉันนางสาวจารุวรรณ มหารัชพงศ์ นักศึกษาปริญญาโท สาขาภาษาศาสตร์ประยุกต์ คณะศิลปะ ศาสตร์และบัณฑิตวิทยาลัย มหาวิทยาลัย ได้รับอนุมัติให้ทำวิจัยในหัวข้อเรื่อง การศึกษาความสัมพันธ์ระหว่างกล ยุทธ์การเรียนภาษาอังกฤษและทักษะชีวิตด้านทักษะพิสัยของนักศึกษาชั้นปีที่1 มหาวิทยาลัยมหิดล (RELATIONSHIP BETWEEN LANGUAGE LEARNING STRATEGIES AND THE PSYCHOMOTOR DOMAIN OF LIFE SKILLS AMONG FIRST-YEAR STUDENTS AT MAHIDOL UNIVERSITY) โดยมี รศ.ดร. ทรงศรี สรณสถาพรเป็นอาจารย์ที่ปรึกษาและควบคุมวิทยานิพนธ์ มีความประสงค์จะขออนุญาตใช้แบบประเมินทักษะชีวิตของกรมสุขภาพจิต ซึ่งเผยแพร่ในรายงานวิจัยเรื่อง การ สร้างแบบประเมินทักษะชีวิตในปี 2545 เพื่อนำไปประกอบการทำวิจัยในวิทยานิพนธ์เรื่องดังกล่าวข้างต้น

ดิฉันจึงเรียนมาเพื่อขออนุญาตใช้แบบประเมินทักษะชีวิตเพื่อวิทยานิพนธ์   ซึ่งดิฉันหวังเป็นอย่างยิ่งว่าจะ ได้รับการอนุญาตให้ใช้แบบประเมินในครั้งนี้จากท่าน และขอขอบคุณเป็นอย่างสูงมา ณ โอกาสนี้

ขอแสดงความนับถืออย่างสูง

จารุวรรณ มหารัชพงศ์

ผู้วิจัย

ติดต่อ

Email: jaruwan.mh@gmail.com

APPENDIX D

Descriptive Statistic Results on the Frequency of Strategy Use among 570 First-Year Students

The Overall Strategy Use of Six Strategy Group ($N = 570$)

Rank Order	Six Categories of Language Learning Strategies	*M*	*SD*	Frequency of Use	Level of Use
1	Compensation strategies	3.27	.68	Sometimes	Medium
2	Metacognitive strategies	3.26	.71	Sometimes	Medium
3	Cognitive strategies	2.95	.64	Sometimes	Medium
4	Affective strategies	2.92	.59	Sometimes	Medium
5	Memory strategies	2.91	.59	Sometimes	Medium
6	Social strategies	2.84	.73	Sometimes	Medium
	Overall Strategy Use	3.02	.52	Sometimes	Medium

APPENDIX E

Results on the Level of Life Skills of 570 First-Year Students

Domain	Life Skills Components	Minimum Scores	Maximum Scores	*M*	*SD*	Life Skills Level
Cognitive	Critical thinking	14.00	30.00	23.16	2.65	Moderate
	Creative thinking	12.00	30.00	21.52	2.90	High
Affective	Self-awareness	18.00	36.00	29.07	3.37	Moderate
	Empathy	23.00	42.00	36.34	3.54	Moderate
	Self-esteem	23.00	42.00	33.44	3.67	Moderate
	Social responsibility	20.00	42.00	35.59	3.70	Moderate
Psychomotor	Interpersonal relationship and communication skills	25.00	50.00	38.23	4.46	Moderate
	Decision making and problem solving	27.00	50.00	40.35	4.15	Moderate
	Cope with emotion and stress skill	14.00	36.00	25.92	3.76	Moderate
	Total Scores	226.00	344.00	283.62	21.50	Moderate

APPENDIX F

Results on Pearson' correlation coefficient

		MEM	COG	COM	MET	AF	SO	IC	DP	CS
MEM	Pearson correlation	1	.630**	.434**	.541**	.423	.549**	.203**	.040	.126**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.343	.003
COG	Pearson correlation		1	.641**	.708**	.451**	.630**	.197**	.075	119**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.075	.005
COM	Pearson correlation			1	.554**	.377**	.471**	.123**	.088*	.087*
	Sig. (2-tailed)			.000	.000	.000	.000	.003	.036	.038
MET	Pearson correlation				1	.455**	.633**	.233**	.137**	.079
	Sig. (2-tailed)				.000	.000	.000	.000	.001	.061
AF	Pearson correlation					1	.543**	.067	.018	.031
	Sig. (2-tailed)					.000	.109	.667	.455
SO	Pearson correlation						1	.143**	.030	.010
	Sig. (2-tailed)						.001	.482	.807
IC	Pearson correlation							1	.416**	.376**
	Sig. (2-tailed)							.000	.000
DP	Pearson correlation								1	.321**
	Sig. (2-tailed)								.000
CS	Pearson correlation									1
	Sig. (2-tailed)								

** Correlation is significant at the 0.01 level (2-tailed).

*   Correlation is significant at the 0.05 level (2-tailed).

a Listwise N= 570

BIOGRAPHY

NAME	Jaruwan Maharachpong
DATE OF BIRTH	25 March 1980
PLACE OF BIRTH	Krabi, Thailand
INSTITUTIONS ATTENDENTED	Chulalongkorn University, 1997-2000
	Bachelor of Education
	(General Science, Biology)
	Mahidol University, 2005-2008:
	Master of Arts (Applied Linguistics)
POSITIONS & OFFICE	2000-2001 Department of Science,
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	Position: Science and Biology Teacher
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