

Language Learning Strategies used by Thai Engineering Student Freshmen among Different English Academic Achievement Levels at Kasetsart University

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***Abstract:** This study aimed to investigate English language learning strategies employed by Thai engineering student freshmen to look for the frequency of language learning strategies they use and to compare language learning strategies (LLSs) use among different English academic achievement levels and terminal grades. The relationship between the use of LLSs and English academic achievement levels is also examined. The samples were purposively selected 163 engineering freshmen. The research instruments were Oxford's (1990) Strategy Inventory for Language Learning (SILL) and structured in-depth interviews. The descriptive statistics were used to describe level of frequency of strategy, while the One-Way ANOVA was used to find the difference in the LLSs. Furthermore, the Pearson's product moment correlation coefficient was used to determine the relationship among the LLSs and English terminal grades. The findings of this study indicated that the students used overall LLSs at a medium level. In addition they most frequently used metacognitive strategies. There is no a difference between LLSs among high, medium, and low achievers. Moreover, the research result also indicated non-correlation of a relationship between English LLSs and the English terminal grades. The interview data revealed that e most of the students employed gesture or mime with their speaking.*

Keywords: English language learning strategies, Thai engineering freshmen, English academic achievement levels

Background of the study

English is the working and the official language of the AEC (Asean Economic Community) from 31st December, 2015 onwards. This means that proficiency, or at least competence in English has become more crucial in ASEAN. With more job candidates, employers will have stricter standards for hiring new employees. According to the Thailand Development Research Institute in 2013 (TDRI, 2013), a Mutual Recognition Arrangement (MRAs) was established to facilitate the advancement and development of professional-level labor, which pertains primarily to professional workers with qualifications that meet the standards specified in the MRA of ASEAN member nations. The AEC members have signed MRAs for seven professions: **physician, dentist, nurse, engineer, architect, surveyor and accountant**. Since the occupation of engineering directly relates to the growth of the Thai economy, fluency in English becomes essential. In preparation for the development

of ASEAN collectively, the labor market of the member countries has to be investigated in order to prepare manpower in terms of quality and quantity, and furthermore to study the labor terms and conditions in the target nations for both MRAs and the quality of the professions required. The English-language proficiency of Thai professionals as well as skills in information technology are their weaknesses that has been determined to need great attention. The root problem for Thailand is the lack of good educational planning and inefficient information technology training. (TDRI, 2013).

This study was conducted to investigate the language learning strategies employed by Thai engineering freshmen. Most of the engineering freshmen at Kasetsart University (Sriracha Campus) have received alarmingly low scores on the Ordinary National Education Test (O-NET) between 0-30 points out of 100 in the 2014 academic year (Information Dept. 2014). These scores indicated a low proficiency level and a need to address the study habits and the focus of the students.

Language learning strategies refers to the specific actions, behaviors, steps, or techniques students use to improve their progress in second or foreign language learning (Oxford, 1990). There are six language learning strategies to be investigated in this study, they are: memory strategies, cognitive strategies, compensation strategies, meta-cognitive strategies, affective strategies, and social strategies. Memory strategy is the activity to create mental linkages such as grouping, associating, or placing new words into a context. Cognitive strategy is the activity to practice such as repeating, formally practicing with sounds and writing systems, or recombining. Compensation strategy is the activity to guess intelligently such as using linguistic clues, or using other clues. Meta-cognitive strategy is the mental activity such as over viewing and linking with already known material, or paying attention. Affective strategy is the activity for lowering your anxiety such as using progressive relaxation, deep breathing, or meditation. and Social strategy is the strategy of asking questions such as asking for clarification or verification.

Language learning strategies are an important factor of planning or designing a language lesson by teachers. Key features of language learning strategies expand the role of the teacher as facilitator, helper, guide, consultant, adviser, coordinator, diagnostician, and co-communicator. As Oxford (1990) suggested, the new teaching capacities also include identifying students' learning strategies, conducting training on learning strategies, and helping learners become more independent. When students take more responsibility, more learning occurs, and both teacher and learners feel more successful. The students must be engaged in their language study to be aware or understand the language learning strategies or the learning-to-learn skills in order to adequately acquire language for communication.

Language learning strategies encourage greater overall self-direction for the learner. Self-direction is particularly important for language learners, because they will not always have a teacher around to guide them as they use the language outside the classroom. Moreover, self-direction is essential to active proficiency in a new language. Language learning strategy is defined as "a specific process that a learner consciously selects in order to help him/her in his/her English learning" (Tan, 2001, p.37).

Statement of the problem

Most of engineering students who have passed the university entrance exam to Kasetsart University in the Academic year of 2014, students on average attained low English scores on the Ordinary National Education Test (O-Net) of around 60%, between 0-30 points out of

100 (Information Dept., 2014). The scores indicated that the students were not proficient to communicate in English. So, it is the problem that this study went to investigate.

Purpose of the study

The purposes of this study were as follows:

1. To investigate the use of English language learning strategies of Thai engineering freshmen among different English academic achievement levels at Kasetsart University at Sriracha Campus.
2. To compare the use of English language learning strategies by high and medium, medium and low, and high and low English academic achievement levels of Thai engineering freshmen at Kasetsart University at Sriracha Campus.
3. To find the relationship between the uses of English language learning strategies and English academic achievement levels of Thai engineering freshmen at Kasetsart University at Sriracha Campus.

Research questions

Three research questions were posed as follows:

1. What are the main English language learning strategies employed by Thai engineering freshmen with different English academic achievement levels at Kasetsart University (Sriracha Campus)?
2. Do high-medium, medium-low and high-low achievers use language learning strategies differently in learning English?
3. Are there any relationships between the English language learning strategies employed by Thai engineering freshmen between high, medium, and low English academic achievement levels?

Significance of the study

As the 'Model of the All-inclusive Methodology of ELT (MAMELT) for Thailand' (Brudhiprbha, 2015) indicated that it is an effective model for overall teaching and learning English language in Thailand. The language learning strategies are an important part of the development process of teaching and learning. The different language learning strategies may affect different learning English academic achievement levels. According to a course description of English Fundamental II subject at Kasetsart University (Kasetsart University, 2014), the Thai engineering freshmen are studying an English Fundamental II course as a General Education subject in order to improve their proficiency of English language skills. Following this course, they will study the next course or next level until the fourth year for more ability in English language that is related to the school's curriculum. The objectives of the English course were to improve the ability of students so that they are able to understand and use the English to communicate to meet the target of their English academic achievement. These English skills are particularly important after the students have graduated from the university because have to use the English language in the workplace.

Research design

This study adopted a mixed methods approaches to investigate learners' use of language learning strategies in a foreign language learning environment and to find out the relationship

among different English academic achievement levels by using a quantitative research approach. Then the qualitative research, i.e., structured in-depth interviews was employed to collect data and counter check the use of strategies.

Population and samples

The population consisted of 283 Engineering freshmen who were studying Fundamental English II as the compulsory subject at Kasetsart University at Sriracha Campus of the 2014 Academic Year (Kasetsart University, 2014). Based on Krejcie and Morgan (1970) an estimate of formula for the samples, the samples size of this study were 163 students. The purposive sampling method was used for selecting the participants in this study. Based on the criteria set regarding the high, medium, and low English academic achievement levels, students who received grades A, B⁺, or B (4.0, 3.5, or 3.0) were classified as high achievers, students who were given a C⁺ or C (2.5 or 2.0) were classified as medium achievers, and students who received D⁺, D or F (1.5, 1.0 or 0) were classified as low achievers (high achievers = 43, medium achievers = 60 and low = 60).

Research instruments

In this study, a Strategy Inventory for Language Learning (SILL) questionnaire version 7.0 (50 items) (Oxford, 1990 p.294-296) was employed as the main data collection instrument to measure the frequently used language learning strategies among different English academic achievement levels.

The SILL was applied in three sections: the first presents a personal data part to identify the respondents' English grades, the second poses 50 items of close-ended question. The questionnaire included three direct language learning strategies and three indirect language learning strategies namely, memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies. In addition, the third elicits one open-ended question in order to know about any strategies students have been using but exclude on SILL or other perspectives of respondents about language learning strategies respectively.

The structured in-depth interview was the instrument for collecting data in the qualitative study and was employed to explore in depth the ways which students used English language learning strategies. There are nine questions of the structured in-depth interview for data collection in this study.

Data collection

The researcher collected the data on September 7th -11th, 2015 at Kasetsart University at Sriracha Campus after the final grades of the second semester of 2014 academic year were retrieved. The questionnaires were distributed to participants through the help of teachers and staffs in each English class.

After the data from the questionnaires were gathered and analyzed, seven students who answered and shared their ideas in the open-ended questions part of the questionnaire were purposefully selected.

Data analysis and findings

Results from quantitative Study

There were three parts of the analytic findings for the quantitative data as follows:

1. To investigate the use of English language learning strategies of Thai engineering freshmen among different English academic achievement levels.

Table 4-1 The Mean Scores and Standard Deviations of English LLS Use

Strategies	(n = 163)		Level
	\bar{X}	SD	
1. Memory Strategies	2.99	0.68	Medium
2. Cognitive Strategies	3.05	0.67	Medium
3. Compensation Strategies	3.10	0.68	Medium
4. Metacognitive Strategies	3.21	0.77	Medium
5. Affective Strategies	3.11	0.69	Medium
6. Social Strategies	3.01	0.68	Medium
Total Average	3.07	0.64	Medium

From table4-1, the findings indicated that all engineering freshmen were medium users because they used overall English language learning strategies at a medium level ($\bar{X} = 3.07$). The most frequently used strategy category was meta-cognitive strategies ($\bar{X} = 3.21$), followed by affective strategies ($\bar{X} = 3.11$), and compensation strategies ($\bar{X} = 3.10$). The other strategies were also at a medium level.

Table 4-2 The Mean Scores and the Standard Deviations of English LLS used by High Achievers, Medium Achievers, and Low Achievers

Strategies	High Achievers (n = 43)		Medium Achievers (n = 60)		Low Achievers (n = 60)		Level
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	
	1. Memory Strategies	3.00	0.67	2.97	0.61	2.99	
2. Cognitive Strategies	3.03	0.70	3.05	0.56	3.07	0.76	Medium
3. Compensation Strategies	3.05	0.75	3.11	0.56	3.11	0.74	Medium
4. Metacognitive Strategies	3.20	0.83	3.20	0.69	3.23	0.82	Medium
5. Affective Strategies	3.08	0.70	3.15	0.66	3.10	0.73	Medium
6. Social Strategies	2.96	0.62	2.06	0.70	3.00	0.71	Medium
Total Average	3.04	0.64	3.07	0.57	3.08	0.71	Medium

From table 4-2, the high achievers used overall English language learning strategies at a medium level ($\bar{X} = 3.04$). The metacognitive strategies were the most frequency of use ($\bar{X} = 3.20$), followed by affective strategies ($\bar{X} = 3.08$), compensation strategies ($\bar{X} = 3.05$), and cognitive strategies ($\bar{X} = 3.03$). The other strategies were also employed at a medium level as the mean values respectively.

The medium achievers used overall English language learning strategies at a medium level ($\bar{X} = 3.07$). The metacognitive strategies were the most frequency of use ($\bar{X} = 3.20$), followed by affective strategies ($\bar{X} = 3.15$), compensation strategies (Mean = 3.11), and cognitive strategies ($\bar{X} = 3.05$). The other strategies were also used at a medium level as the mean value respectively.

The low achievers used overall English language learning strategies at a medium level ($\bar{X} = 3.08$). The metacognitive strategies were the most frequency of use ($\bar{X} = 3.23$), followed by compensation strategies ($\bar{X} = 3.11$), affective strategies ($\bar{X} = 3.10$), and cognitive strategies ($\bar{X} = 3.07$). The other strategies were also employed at a medium level as the mean value respectively.

To compare the use of English language learning strategies by high- medium, medium-low and high-low English academic achievement levels of Thai engineering freshmen. There was no significant difference in the English language learning strategies use among them. The findings were presented in Table4-3.

Table 4-3 The Comparison of English LLS Use among High-medium Achievers, Medium-low Achievers, and High-low Achievers

Strategies		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
1. Memory Strategies	Between Groups	2	0.03	0.01	0.03	0.96
	Within Group	160	75.53	0.47		
	Total	162	75.56			
2. Cognitive Strategies	Between Groups	2	0.04	0.02	0.04	0.95
	Within Group	160	74.42	0.46		
	Total	162	74.46			
3. Compensation Strategies	Between Groups	2	0.10	0.05	0.11	0.89
	Within Group	160	75.69	0.47		
	Total	162	75.80			
4. Metacognitive Strategies	Between Groups	2	0.04	0.02	0.03	0.96
	Within Group	160	97.47	0.60		
	Total	162	97.51			
5. Affective Strategies	Between Groups	2	0.11	0.05	0.11	0.88
	Within Group	160	78.47	0.49		
	Total	162	78.59			
6. Social Strategies	Between Groups	2	0.26	0.13	0.28	0.75
	Within Group	160	75.57	0.47		
	Total	162	75.84			

To find the relationship between the uses of language learning strategies and English academic achievement levels. The value of Pearson correlation between overall strategies use and English terminal grades were at ($r = 0.00$) and also memory strategies ($r = 0.00$), metacognitive strategies ($r = 0.04$) and affective strategies ($r = 0.02$) It indicated no discernible correlation of a positive relationship. Moreover, the results showed that there was no statistical significance among negative relationship of cognitive strategies ($r = -0.00$), compensation strategies ($r = -0.01$), and social strategies ($r = -0.00$) usage and the English academic achievement levels or terminal grades. The results were presented in Table 4-4.

Table 4-4 The Correlation between Engineering Freshmen's English LLSs and English Final Grades

Strategies	English Final Grades	
	Correlation (r)	Sig. (2tailed)
1. Memory Strategies	0.00	0.96
2. Cognitive Strategies	-0.00	0.95
3. Compensation Strategies	-0.01	0.89
4. Metacognitive Strategies	0.04	0.56
5. Affective Strategies	0.02	0.76
6. Social Strategies	-0.00	0.95

Results from qualitative Study

Referring to the structured in-depth interview, the informants of high, medium and low academic achievement levels employed both English language learning strategies including and excluding the SILL, or an additional English language learning strategy that can't be grouped into one of Oxford's classifications. Of the strategies incorporated (compensation strategies), the students used body language or gestures to communicate including with their speaking, specifically if they do not know some English words or the listener does not quite understand their message. Moreover, the students often asked the speaker to repeat or better explain in order to get the right information as the social strategies (asking questions, cooperating with others). Furthermore, the students applied understanding by using the internet for various modes of research and clarity (social media, translation application, entertainment application, games online, etc.) to help them in their learning.

Conclusions, discussions and recommendations

Conclusions and discussions

1. According to past research Aljuaid (2010), the findings reveal that the Engineering freshmen used the metacognitive strategies as the most frequent strategy. The engineering freshmen used the metacognitive strategies as their most important strategy to logically examine the learning to do their assignment independently. Additionally, it is likely that the students will employ the learning style of their respective engineering field to their English studies. These findings were in line with the result of Aljuaid (2010), who observed the patterns of language learning strategies use among a group at a major Saudi Arabian university. Furthermore, the results of the study corresponded with the findings of Patil and Karekatti (2012), who investigated language learning strategies employed by sixty

engineering students in Ratnagiri district (Maharashtra, India). The most frequently used method among all the aforementioned groups was the metacognitive strategies.

Referring to the survey, all of the high, medium, and low achievers employ relatively the same methods of study as those who were designated as medium achievers. Zhao (2007) investigated the use of language learning strategies by undergraduate students and the relationship between the use of language learning strategies and English proficiency, with similar results. In this study, Zhao determined that the students were medium users of overall strategies. Just like previous studies in other countries, he discovered that the most frequently used strategy category was the metacognitive strategy. In contrast, the most of previous studies (Wu 2008; Ylmazaa 2009; Anugkakul 2011; Boonsoong 2012) determined that the use of language learning strategies among different proficiency levels or academic achievement levels revealed that the higher level students used these strategies more frequently than the lower level students.

2. There was no significant difference in the using of English language learning strategies among the high, medium and low achievers. It implies that the engineering freshmen might be not instructed to be aware of using English language learning strategies. They employ the English language learning strategies as the medium levels. Patil and Karekatti (2012) pointed out that the engineering students are totally unaware of benefits of LLSs and how they could be employed in learning English.

In addition, the use of the Internet increased the popularity of English education or learning for all students (Guzer and Caner, 2013). It provides greater access to English language learning material, and it allows students to interact with the English language content.

3. Other findings of this study include the relationship among the English language learning strategies and the use of English academic achievement levels and terminal grades. The value of the Pearson correlation between overall strategy usage and English terminal grades were at $r = 0.00$, indicating no correlation between English language learning strategy usage and the English academic achievement levels. The probable explanation was all high, medium and low achievers seldom employ all of the previously discussed strategies. The high terminal grade students might implement the other methods or factors to help them of English learning, but the other levels, in theory, might be lacking in the proper preparatory work and usage of strategy. Brown (cited in Cohen 1998) says that learning strategies do not operate by themselves, but rather are directly tied to the learner's underlying learning styles and other personality related variables in the learner. In addition, Khamkhien (2010) attempted to investigate the relationship between three variables (gender, motivation and experience in study English) and language strategy usage by Thai and Vietnamese university students using Oxford's SILL 80 items. The analysis revealed that, among these three factors, motivation is the most significant factor affecting the choice of the strategies, followed by experience in studying English, and gender, respectively.

Recommendations

As the findings of the present study indicated that the engineering freshmen employed the full range of English language learning strategies at a medium level, so should they be trained to understand how to employ appropriate English language learning strategies. The instructor should design or provide lessons with various kinds of activity and media in English such as the Internet, English speaking films, games, radio, and television programs. Based on the engineering freshmen surveyed in this study, they tended to employ the

metacognitive strategies the most frequently. Therefore, language teachers must provide lessons or activities that are connected with this strategy. Moreover, the other strategies including memory, cognitive, compensation, affective, and social strategies could be incorporated in classes and also the assignment for them practicing English language.

For further studies on the English language learning strategies, it could be conducted with other majors, campuses of the university and also investigated the relationship with other factors: age, gender, learning style, motivation or other factors. Moreover, some English language learning strategies from other researchers could be included in the questionnaire to offer a wider range of language learning strategies.

Finally, further research to investigate the use of English language learning strategies should also be conducted among other AEC member countries (Brunei Darussalam, Indonesia, Cambodia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, and Vietnam).

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