ENGLISH PROFICIENCY AND ENGLISH LEARNING STRATEGIES IN ENGLISH CAMP OF MASTER STUDENTS (PREMIUM 1) IN MATHEMATICS EDUCATION, INTERNATIONAL COLLEGE, SUAN SUNANDHA RAJABHAT UNIVERSITY

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ABSTRACT

Abstract—The purpose of this study aimed to investigate English learning achievement and English learning strategies of 22 PSMT students (Premium 1), International College, Suan Sunandha Rajabhat University during three-month English camp in Asian University, Chonburi. The research instruments in this study were scores of English achievement tests and questionnaire of English learning strategies (Oxford’s Strategy Inventory for Language Learning (SILL) version 7.0). The researcher analyzed data by calculating percentage, mean and standard deviation. The findings showed that pre-test and post-test scores of students’ English learning achievement were significantly different at the significance level of 0.05 (p=0.000). According to the results of scores in each part of listening, grammar, and reading, there were significantly different between pre-test and post-test score in the part of grammar and reading (0.000 and 0.033). There was no difference between pre-test and post-test score in the part of listening (0.398). Students gained the most progressive achievement in the part of grammar, followed by reading and listening, respectively. Besides, students used English learning strategies before the camp more than after the camp. Students who were higher and lower English achievement employed English learning strategies differently. Students who were higher English achievement tended to apply Cognitive Strategies the most.

Keywords—English achievement, English learning strategies, English proficiency.

INTRODUCTION

The Institute for the Promotion of Teaching Science and Technology (IPST) is the independent authority under the Ministry of Education, responsible for the development of national curriculum, educational media and tools, standard and quality assessment on science, mathematics and technology education from elementary to upper secondary schools. IPST is also tasked with re-training teachers and students, promoting science talents and advising science education policy.

IPST works closely with a wide range of stakeholders including government education authorities, teachers, principals, students, community and general public to ensure the comprehensive, efficient and sustainable science learning and teaching, and cultivate the scientific thinking culture in our children.

IPST partners and collaborates with regional and international organizations as well as individual science and mathematics educators and professionals in sharing knowledge and best practices to continuously improve Thailand's science education to world-class standard. International College, Suan Sunandha Rajabhat University is one of IPST’s partners providing the program of Mathematics Education for students who are awarded scholarships from the Thai government to study in a two-year Master of Mathematics Education
Program This program is under the management of the Project for the Promotion of Science and Mathematics Talented Teachers (PSMT), a Thai government agency concerned with the development of national science and mathematics curricula, sponsorship of science education, and the promotion of science in general. The main objective of this project is to produce highly qualified science teachers for teaching gifted students in Enrichment Science Classrooms within Thai secondary schools. Before beginning the Master of Science Education Program, the students had completed a bachelor degree in science, but neither had prior experience with science teaching.

Due to the importance of English language particularly in the context of teaching and learning, students have to meet the requirement of this project, especially English exit examination. They have to pass, the easiest option, the Chulalongkorn University Test of English Proficiency (CU-TEP) score at 62 or above. It is not easy for students to gain that score. Therefore, IPST offered English camp for students for approximately three months. The research would like to investigate English learning achievement and English learning strategies of 22 PSMT students (Premium 1), International College, Suan Sunandha Rajabhat University during three-month English camp in Asian University, Chonburi.

LITERATURE & THEORY

1.1 Classification of Language Learning Strategies

Oxford’s (1990) categorization of language learning strategies included two main types, direct strategies and indirect strategies. Direct strategies consist of memory, cognitive, and compensation strategies while indirect strategies include metacognitive, affective, and social strategies.

1.1.1 Direct strategies are divided into three categories as follows:

A Memory strategies relate to how students remember language in order to store and retrieve new information.

(a) Creating mental linkages (grouping, associating/elaborating, placing new words into a context)
(b) Applying images and sound (using imagery, semantics mapping, using keywords, representing sounds in memory)
(c) Reviewing well (structured reviewing)
(d) Employing action (using physical response or sensation, using mechanical techniques)

B Cognitive strategies relate to how students think about their learning, and comprehend and perform new language by various methods ranging from repeating to analyzing and summarizing.

(a) Practicing (repeating, formally practicing with sounds and writing systems, recognizing and using formulas and patterns, recombining, practicing naturally)
(b) Receiving and sending (getting the idea quickly, using resources for receiving and sending messages)
(c) Analyzing and reasoning (reasoning deductively, analyzing expressions, analyzing contrastively, translating, transferring)
(d) Creating structure for input and output (taking notes, summarizing, highlighting)

C Compensation strategies enable students to make up for their limited knowledge and overcome limitations in target language skills.

(a) Guessing intelligently (using linguistics clues, using other clues)
(b) Overcoming limitation in speaking and writing (switching to the mother tongue, getting help, using mime or gesture, avoiding communication partially or totally, selecting the topic, adjusting or approximating the message, coining words, using a circumlocution or synonym)

1.1.2 Indirect strategies include three categories as follows:
A. Metacognitive strategies involve the ways students manage their learning, establish their cognition, arrange plan and evaluate their progress.
   (a) Centering your learning (overviewing and linking with already known material)
   (b) Arranging and planning your learning (finding out about language learning, organizing, setting goals and objectives, identifying the purpose of a language task, planning for a language task, seeking practice opportunities)
   (c) Evaluating your learning (self-monitoring, self-evaluating)

B. Affective strategies relate to students' feelings, emotional reaction and anxiety.
   (a) Lowering your anxiety (using progressive relaxation, deep breathing, or meditation, using music, using laughter)
   (b) Encouraging yourself (making positive statements, taking risks wisely, rewarding yourself)
   (c) Taking your emotional temperature (listening to your body, using a checklist, writing a language learning diary, discussing your feelings with someone else)

C. Social strategies involve learning interaction with others.
   (a) Asking questions (asking for clarification or verification, asking for correction)
   (b) Cooperating with others (cooperating with peers, cooperating with proficient users)
   (c) Empathizing with others (developing cultural understanding, becoming aware of others' thoughts and feelings)

RELATED WORKS OR DISCUSSION

There are a number of studies relevant to language learning strategy use, including the factors that affect the use of strategies. Those studies investigated language learning strategy use of the second and foreign learners from many countries, including Germany, New Zealand, Iran, China, Japan, Korea, Taiwan, and Thailand. The researchers employed the Strategy Inventory for Language Learner (SILL) to measure strategy use and examine the effect of variables such proficiency level, motivation, and ethnicity. Many studies explored the relationship between strategy use and language proficiency level. Some researchers placed a greater emphasis on motivation. They pointed out that motivation is an important factor that influences learners' choice of language learning strategy use. Overall, those studies demonstrated a positive relationship.

Some studies focused on proficiency level of English. The findings revealed that students in different levels of language proficiency employed different learning strategies. The results of many studies such as Anderson (2005), Hong-Nam & Leavell (2006), Rahimi et al. (2008), Plylek (2012), Thu (2009), Yang (2010) and Zhao (2009) showed that high language proficiency students use language learning strategy more widely and frequently. These studies investigated the differences of language learning strategy use among different effective language learners. The students who had effective use of language learning strategies tended to match the appropriate strategies with the particular task requirements. Additionally, some factors such as more confidence and less anxiety were found to be involved with task performance.

METHODS

1.1 Participants

The participants of this study were 22 PSMT students (Premium 1), International College, Suan Sunandha Rajabhat University attending three-month English camp in Asian University, Chonburi.

1.2 Instruments
The instruments applied in this study included students’ scores of CU-TEP, pretest and posttest, and questionnaire relating to English language learning strategies.

1.2.1 Scores of CU-TEP, Pretest and Posttest

A. Scores of CU-TEP and Pretest before Attending English Camp

The researcher collected students’ scores of CU-TEP before attending English camp that they took the test on July 19, 2015. Also, the researcher obtained students’ scores of placement test or pretest conducted by this camp.

B. Scores of CU-TEP and Posttest after Attending English Camp

The researcher collected students’ scores of CU-TEP after attending English camp that they took the test on October 11, 2015 or November 8, 2015. The researcher also received students’ scores of posttest conducted by this camp.

1.2.2 Questionnaire Relating to English Language Learning Strategies

A. Part I

Part I questionnaire consisted of the questions about personal information, GPA, class level and CU-TEP scores before and after attending English camp.

B. Part II

Part II questionnaire was developed by Rebecca Oxford (1990), Oxford’s Strategy Inventory for Language Learning (SILL) version 7.0 that the researcher adapted by translating into Thai and rewriting some words appropriate for Thai context. The questionnaire had 50 items scored on 5-point Likert scale ranging from ‘never or almost never true of me’ to ‘always or almost always true of me’. All 50 items were divided into six scales: Memory Strategies (item no. 1-9), Cognitive Strategies (item no. 10-23), Compensation Strategies (item no. 24-29), Metacognitive Strategies (item no. 30-38), Affective Strategies (item no. 39-44), and Social Strategies (item no. 45-50).

1.3 Data Collection

1.3.1 The researcher collected students’ scores of CU-TEP that students took on July 19, 2015 as well as pretest.
1.3.2 The researcher asked students for completing the questionnaire before attending the camp.
1.3.3 The researcher collected students’ scores of CU-TEP that students took on October 11 or November 8, 2015 as well as posttest.
1.3.4 The researcher asked students for completing the questionnaire after attending the camp.
1.3.5 The researcher analyzed data, make conclusion and discuss the results.

1.4 Data Analysis

The researcher analyzed data by calculating the data as percentage, mean, and standard deviation. According to the first objective, the researcher compared students’ scores of CU-TEP before and after attending English camp as well as pretest and posttest by using mean, standard deviation and t-test dependent. For the second objective, the researcher analyzed data from the questionnaire of English language learning strategies by calculating percentage, mean and standard deviation following to student’s English proficiency level.

RESULTS

1.1 English Language Proficiency before and after Attending English Camp
The researcher analyzed students' English language proficiency before and after attending English camp by collecting the scores of CU-TEP that they took on July 19, and October 11 or November 8, 2015 as well as pretest and posttest. The findings were demonstrated in Table 1.

<table>
<thead>
<tr>
<th>CU-TEP score</th>
<th>No. of students</th>
<th>Average score (120)</th>
<th>S.D.</th>
<th>Sig. (2-tailed)</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before camp</td>
<td>22</td>
<td>49.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After camp</td>
<td>22</td>
<td>58.14</td>
<td>9.43</td>
<td>.000</td>
<td>-12.77 - 4.41</td>
</tr>
</tbody>
</table>

Tables 1 showed that students' CU-TEP scores before and after attending the camp were significantly different at .05 level (.000). The average scores of CU-TEP before and after camp were 49.55 and 58.14 respectively. In addition, the researcher analyzed students' scores of pretest and posttest conducted by this camp. The results were divided into three parts, listening, grammar, and reading shown in Table 2.

<table>
<thead>
<tr>
<th>Part</th>
<th>Score</th>
<th>No. of students</th>
<th>Average (%)</th>
<th>S.D.</th>
<th>Sig. (2-tailed)</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listening</td>
<td>Pretest</td>
<td>22</td>
<td>39.95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>22</td>
<td>41.64</td>
<td>9.15</td>
<td>.398</td>
<td>-5.74 - 2.37</td>
</tr>
<tr>
<td>Grammar</td>
<td>Pretest</td>
<td>22</td>
<td>47.18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>22</td>
<td>59.49</td>
<td>10.95</td>
<td>.000</td>
<td>-17.16 - 7.45</td>
</tr>
<tr>
<td>Reading</td>
<td>Pretest</td>
<td>22</td>
<td>42.45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>22</td>
<td>47.06</td>
<td>9.48</td>
<td>.033</td>
<td>-8.81 - 0.41</td>
</tr>
<tr>
<td>Total</td>
<td>Pretest</td>
<td>22</td>
<td>42.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>22</td>
<td>47.34</td>
<td>6.15</td>
<td>.002</td>
<td>-7.36 - 1.91</td>
</tr>
</tbody>
</table>

According to Table 2, the results showed that students' pretest and posttest scores were significantly different at .05 level (.002). The average scores of pretest and posttest were 42.71 % and 47.34 % respectively. Additionally, the findings of students' scores from pretest and posttest consisting of three parts, listening, grammar and reading revealed that the scores of grammar and reading parts in pretest and posttest showed significant difference at the level of .05 (.000 and .033). Average scores of pretest and posttest were 47.18% and 59.49% in grammar part and 42.45% and 47.06% in reading part. In listening part, there was no significant difference (.0398) between pretest and posttest. Average scores of pretest and posttest in listening part were 39.95% and 41.64%. Moreover, the results showed that average scores between pretest and posttest in the part of grammar were different most, followed by the part of reading and listening, respectively.

12 English Learning Strategies before and after Attending English Camp
The researcher analyzed the results from questionnaire relating to English language learning strategies before and after attending English camp and compared the results by dividing the results of CU-TEP scores into three levels, beginner (1-32 points), intermediate (33-68 points) and advanced (69-120).

Table 3
English language learning strategies

<table>
<thead>
<tr>
<th>English Learning Strategies</th>
<th>No. of students</th>
<th>Mean ( \bar{x} ) Pre/Post</th>
<th>S.D. Pre/Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory Strategies</td>
<td>22</td>
<td>2.92</td>
<td>.51593</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.35</td>
<td>.32220</td>
</tr>
<tr>
<td>Cognitive Strategies</td>
<td>22</td>
<td>2.97</td>
<td>.41448</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.13</td>
<td>.34639</td>
</tr>
</tbody>
</table>

Table 4
Comparison of English Learning Strategies before and after Attending English Camp

<table>
<thead>
<tr>
<th>Level</th>
<th>Strategy 1</th>
<th>Strategy 2</th>
<th>Strategy 3</th>
<th>Strategy 4</th>
<th>Strategy 5</th>
<th>Strategy 6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginner</td>
<td>2.72</td>
<td>2.70</td>
<td>2.25</td>
<td>2.94</td>
<td>2.29</td>
<td>2.67</td>
<td>2.64</td>
</tr>
<tr>
<td></td>
<td>Number</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Intermediate</td>
<td>2.95</td>
<td>2.98</td>
<td>3.22</td>
<td>3.43</td>
<td>2.89</td>
<td>3.02</td>
<td>3.08</td>
</tr>
<tr>
<td></td>
<td>Number</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Advanced</td>
<td>3.22</td>
<td>3.93</td>
<td>4.00</td>
<td>4.33</td>
<td>2.33</td>
<td>4.33</td>
<td>3.74</td>
</tr>
</tbody>
</table>

From Table 3, the findings presented the frequency of using English learning strategies after attending English camp was higher than that before attending the camp. Before attending the camp, students most frequently applied Metacognitive strategies (3.38), followed by Compensation strategies (3.08), Social strategies (3.02), Cognitive strategies (2.97), Memory strategies (2.92) and Affective strategies (2.76). After attending the camp, students most frequently applied Metacognitive strategies (3.60), followed by Compensation strategies (3.39), Memory strategies (3.35), Social strategies (3.30), Affective strategies (3.14) and Cognitive strategies (3.13).
### Table 4: Applied Strategies by Level

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Total</th>
<th>Intermediate</th>
<th>Advanced</th>
<th>5th</th>
<th>Average</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory strategy</td>
<td>292</td>
<td>3.33</td>
<td>19</td>
<td>3.55</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Cognitive strategy</td>
<td>297</td>
<td>3.10</td>
<td>19</td>
<td>3.72</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Social strategy</td>
<td>308</td>
<td>3.40</td>
<td>19</td>
<td>3.70</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Metacognitive strategy</td>
<td>338</td>
<td>3.59</td>
<td>19</td>
<td>3.70</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Affective strategy</td>
<td>276</td>
<td>3.08</td>
<td>19</td>
<td>3.67</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>302</td>
<td>3.29</td>
<td>19</td>
<td>3.50</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Metacognitive strategy</td>
<td>303</td>
<td>3.29</td>
<td>19</td>
<td>3.33</td>
<td>3</td>
<td>22</td>
</tr>
</tbody>
</table>

The results form Table 4 showed that before attending the camp, students mostly applied Metacognitive strategies (3.38), followed by Compensation strategies (3.08), Social strategies (3.02), Cognitive strategies (2.97), Memory strategies (2.92), and Affective strategies (2.92), respectively. According to each level of English proficiency, the findings revealed that the students who were in beginner level mostly applied Metacognitive strategies (2.94), followed by Memory strategies (2.72), Cognitive strategies (2.70), Social strategies (2.67), Affective strategies (2.29), and Compensation strategies (2.25), respectively. The students who were in intermediate level mostly applied Metacognitive strategies (3.43), followed by Compensation strategies (3.22), Social strategies (3.02), Cognitive strategies (2.98), Memory strategies (2.95), and Affective strategies (2.89), respectively. The students who were in advanced level mostly applied Metacognitive and social strategies (4.33), followed by Compensation strategies (4.00), Cognitive strategies (3.93), Memory strategies (3.22), and Affective strategies (2.33), respectively.

After attending the camp, students mostly applied Metacognitive strategies (3.60), followed by Compensation strategies (3.39), Memory strategies (3.35), Social strategies (3.30), Affective strategies (3.14), and Cognitive strategies (3.13), respectively. According to each level of English proficiency, the findings revealed that after attending the camp students were in only the level of intermediate and advanced. The students who were in intermediate level mostly applied Metacognitive strategies (3.59), followed by Compensation strategies (3.40), Memory strategies (3.33), Social strategies (3.29), Cognitive strategies (3.10), and Affective strategies (3.08), respectively. The students who were in advanced level mostly applied Metacognitive strategies (3.67), followed by Affective strategies (3.50), Memory strategies (3.44), Compensation and social strategies (3.33), and Cognitive strategies (3.29), respectively.

It can be concluded that students differently used English language learning strategies and the students who were in different levels of English proficiency differently employed English language learning strategies.

### CONCLUSION AND FUTURE WORK

The results of this study showed that students who were in advanced level of English proficiency mostly applied Metacognitive strategies. As a result, lecturers should integrate this strategy in teaching and learning. Metacognitive strategies refers to methods used to help students understand the way they learn; in other words, it means processes designed for students to ‘think’ about their ‘thinking’ (Fogarty, 1994). Lecturers who use metacognitive strategies can positively impact students who have learning disabilities by helping them to develop an appropriate plan for learning information, which can be memorized and eventually routine. As students become aware of how they learn, they will use these processes to efficiently acquire new information, and consequently, become more independent thinkers, for example, a student learns about what things help
him or her to remember facts, names, and events; a student learns about his or her own style of learning; and a student learns about which strategies are most effective for solving problems.

Recommendations for further study are that the researcher should study English learning strategies in other programs of study and compare with other variables such as individual learning styles, culture, and context. The researcher should investigate English language learning in four skills. Furthermore, the researcher should conduct this study as qualitative and long term research in order to examine how English language learning strategies can improve students’ English proficiency effectively.

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