ENGLISH LEARNING STRATEGY USE BY ELEMENTARY SCHOOL STUDENTS

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Abstract

This study investigates the effects of gender, parents' education level and learning experience out of school on English learning strategy use. The subjects are 82 sixth grade elementary school students in Tao-Yuan county. The instrument is an English learning questionnaire modified from Oxford's Strategy Inventory for Language Learning. According to the results, the elementary school students do use learning strategies to assist their English learning. Their frequencies of using learning strategy are much higher than those of 2-year junior college students. Females use learning strategies significantly more often than males do. Also, female students adopt affective and social strategies more frequently. The higher the parents' education level is, the higher the frequency of overall strategy use is. The increase in learning experience out of school helps students use learning strategy. The first two often used learning strategies are "I pay attention when someone is speaking English." and "I practice English pronunciation."

Keywords: Learning strategy; ANOVA; Elementary school

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國小學生英語學習策略之研究

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摘要

本文探討桃園縣國小六年級學生在學習英語時所使用之學習策略，並考慮性別、父母教育程度及曾在校外學英語之時間對於學習策略應用之影響。研究結果顯示國小學生已懂得運用學習策略來協助學習英語。女學生對於學習策略之應用明顯高於男學生，尤其是情意策略及社會策略。家長學歷較高的學生對於學習策略的運用較純熟。在校外補習班學習的時間愈久，愈懂得運用學習策略。使用頻率最高的前兩項策略分別為「當別人說英語時，我會注意聽」及「我會練習英語發音」。

關鍵字：學習策略、變異數分析、國民小學

1. Introduction

Because people communicate internationally, English ability is important for all of us. In childhood, the brain cell is plastic and capable of studying harmonious pronunciation. The cognitive ability at this stage is not only suitable for building and constructing the new language, but can shift the experience of first language acquisition (石素錦, 民 81). In order to improve the whole people's English ability, we begin learning English in the fifth grade for better learning proficiency.

There are many factors to affect learning proficiency including teaching method, teaching materials, family and school level, intelligence, characteristic, learning motivation, learning behavior, etc. One of the most important factors is learning strategy use other than intelligence. Good language learners often make use of appropriate learning strategies to facilitate their learning (Nyikos, 1987). As a result, studies on various language learning strategy uses are important. In general, elementary school students are not skilled in applying learning strategies due to their few experiences in studying. To find out effective learning strategies for elementary school students, teach them, and set up their own English learning method may be useful. Up to the present, the research in this respect in our country is still quite scarce.

2. Literature Review

The study of language learning strategies attracts the researcher's attention since 1970s. One of the best definition of language learning strategies provided by Oxford (1992/1993) is "Language learning strategies are specific actions, behaviors, steps, or techniques that students (often intentionally) use to improve their progress in developing L2 skills." The learning strategies can facilitate the internalization, storage, retrieval, or use of the new language. Rubin (1975) indicated that the "good language learner has much to teach us about learning strategies". Then Rubin (1981) adopted various procedures to identify learning strategies, including observations and videotaping of classrooms. Considerable researchers further investigate variables that may influence learners' strategy use (MacIntyre & Noels, 1996; Oxford & Nyikos, 1989). Concerning strategy applications, many efforts for learning strategy applications in second language attributed to Oxford and Ehrman (1987). They concluded that greater uses of learning strategy have been among more successful learners. (Oxford and Nyikos, 1989; Oxford and Burry-Stock, 1995). "Even within the same culture, strategy use may differ" (Oxford, Hollaway, & Murillo, 1992).

In addition, researchers in the last two decades have regarded gender as one of the

salient variables that result in the differences in strategy use. The study of Politzer (1983) revealed that the difference of strategy use favored females on the interaction behavior scale which consisted of a number of social language learning strategies. Oxford, Nyiko and Ehrman (1988) reviewed four studies with regard to gender differences in strategy use and interpreted why sex differences had a great influence on the results of these studies. Ehrman and Oxford (1988) also studied sex differences in language learning strategy use. Their results showed that women definitely reported more use of strategies than men did due to their psychological types. Oxford and Ehrman (1993) suggested that the researchers and teachers should keep trying to understand gender differences in language learning strategy use when they appear.

Several studies have investigated the English learning strategy use of students in schools at all levels such as elementary school (簡曉琳, 民 93; Lan & Oxford, 2003), junior high school (廖彥棻, 民 88; Shi, 2004), senior high school (Liu, 1996; Peng, 2002), junior college (Hsu, 2003), college (Teng, 2000), and university (Sy, 1996; 吳俊達, 民 96) in Taiwan. Yang (1993) adopted a modified version of Oxford's Strategy Inventory for Language Learning (SILL) to survey over five hundred college students. In six learning strategy categories, she found that these EFL students using the compensation strategies and affective strategies more often. 簡曉琳(民 93) indicated that significant differences of the frequencies of strategies use in learning English were found among the students of different genders as well as the students with different backgrounds. Liu (1996) investigated the learners' learning strategy use and its relationship to their achievement. The results support the relationship between learning strategies and learning outcomes in terms of Stern's model.

From the previous studies, a rough idea about Taiwanese students' strategy use in learning English can be obtained. Nevertheless, studies on English learning strategy use by elementary school students are insufficient and inclusive. The author intends to investigate it further.

3. Methodology

The research method is quantitative. A revised English learning questionnaire adapted from Oxford's SILL (Oxford, 1990) was adopted. The revised inventory consists of 30 items in Chinese. They are classified into six categories and each category has 5 items. The 5-point scale of the SILL ranges from "never or almost never true of me" (point 1) to "always or almost always true of me" (point 5). The number indicates how often the learner uses the strategy. The subjects were the sixth grade students of Wen Huah elementary school in Taoyuan county. A total number of

90 students took part in this study.

The results of the questionnaire were analyzed based on the effective responses from 82 students, including 40 males and 42 females. The author used the SPSS 11.0 statistical package to compute the collected data. There are three independent variables including gender, parents' education level and learning experience out of school. The only dependent variable is the frequency of the learners' strategy use. Descriptive statistics, including means and standard deviations, were obtained. A three-way analysis of variance (ANOVA) method was used to detect the effects of gender (male/female), parents' education level (low/high) and learning experience out of school (less than one year / more than one year) on learning strategy use of these subjects. And then, the author ranked all of the revised SILL items. The probability level of significance for t-test and ANOVA analysis is set at 0.05.

4. Results and Discussion

The definition and benefit of six categories of language learning strategies are described as follows. Affective strategies are the strategies for regulating emotions, attitudes, and motivations. Cognitive strategies enable learners to manipulate or transform the target language in many different ways. Compensation strategies allow learners to use the new language by either guessing or using synonyms despite the limitations in knowledge. Memory strategies help the learner store and retrieve new information. Metacognitive strategies help the learner control their own cognition. Social strategies help learners develop language skills through communication and interaction with others.

The rank of six learning strategy category use by elementary school students is listed in Table 1. Affective strategies are the most often used strategies in learning English. The others are metacognitive, cognitive, social, memory and compensation strategies in order. Compared with the previous study, it is found that the types of learning strategy use are quite different. The compensation strategies are the most often used strategies by 2-year junior college students (Hsu, 2003). Moreover, elementary school students put learning strategies in use more often than 2-year junior college students do. The mean score of 30 learning strategies use by elementary school students is 3.04 which is much higher than that of 2-year junior college students. Maybe because the subject school is one of the best elementary schools in Tao-Yuan, the author surprises to get the result.

According to Oxford (1990), strategies that had a mean value lower than 2.4 were regarded as strategies with low frequent use. The present results show that the elementary school students do use learning strategies to assist their English learning.

Table 1. Rank of the learning strategy category use.

Rank	Elementary School Student		Two-year Junior College Student (Hsu, 2003)	
	Strategy Category	Mean	Strategy Category	Mean
1	Affective	3.30	Compensation	2.33
2	Metacognitive	3.18	Affective	2.18
3	Cognitive	3.06	Social	2.09
4	Social	2.96	Metacognitive	1.99
5	Memory	2.92	Cognitive	1.88
6	Compensation	2.82	Memory	1.72

Figure 1 shows the effect of parents' education level on the mean of overall strategy use. It is apparent that the higher the parents' education level is, the higher the mean of overall learning strategy use is. It is because parents with higher education level respect children's education more. In order to make a comparison, parents' education level is recoded as "low" when the parents' education level is equal or below senior high school. It is recoded as "high" when the parents' education level is Junior College or higher. Table 2 lists the mean and standard deviation of overall learning strategy use by the subjects in various groups.

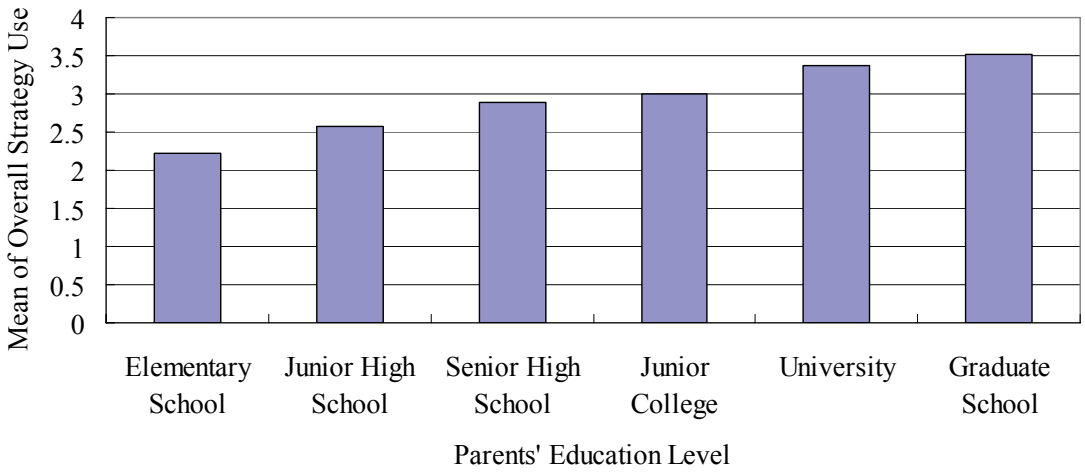

Figure 1. The effect of parents' education level on the mean of overall strategy use.

Figure 2 shows the effect of students' learning experience out of school on the mean of overall strategy use. It is obvious that the increase in learning experience out of school helps overall learning strategy use.

The effect of gender on the overall learning strategy use is shown in Table 2. Females tend to use learning strategies more often than males do. The tendency is opposite to that of 2-year junior college students (Hsu, 2003). The possible reason to explain it is that elementary female students are usually more mature.

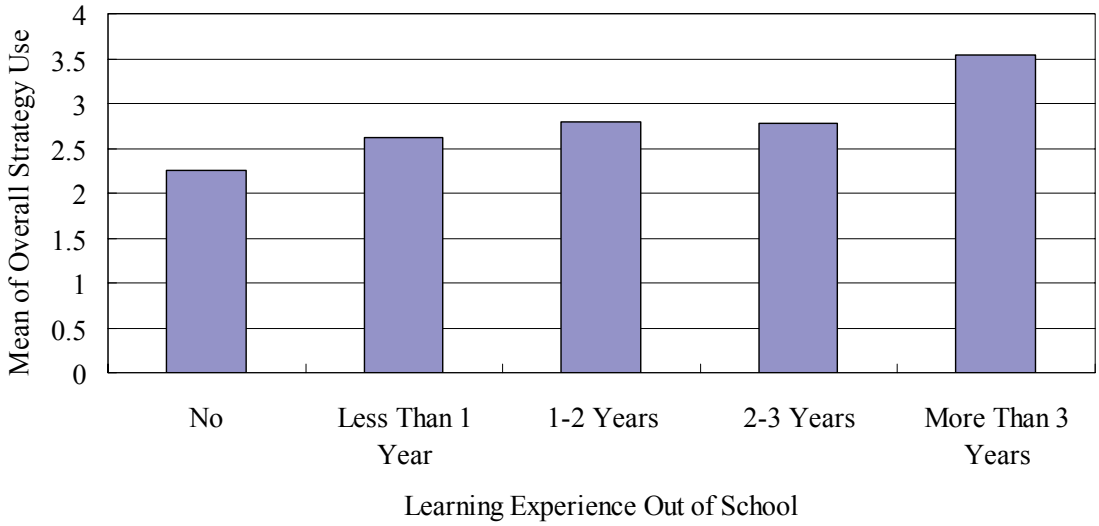

Figure 2. The effect of learning experience out of school on the mean of overall strategy use.

Table 2. Mean and standard deviation of overall strategy use by the subjects in various groups.

Source		Number of Subjects	Mean	Standard Deviation
Gender	Male	40	2.77	0.86
	Female	42	3.30	0.68
Parents' Education Level	Low	41	2.79	0.85
	High	37	3.32	0.68
Learning Experience out of School	Less than one year	20	2.51	0.68
	More than one year	62	3.21	0.78

The author examined the normality and the homogeneity of the data of each group before t-test and ANOVA analysis. Kolmogorov-Smirnov goodness of fit test was used to assess the normality of learning strategy scores for six groups. Based on the results of the statistical test as shown in Table 3, the distribution of mean of learning strategy use by various groups were judged to be normal ($p > 0.05$). It meets with the assumption in t-test and ANOVA analysis.

Table 3. Normality test on the mean of overall strategy use.

Group		Kolmogorov-Smirnov Statistic	p
Gender	Male	0.53	0.94
	Female	0.62	0.84
Parents' Education Level	Low	0.47	0.98
	High	0.84	0.48
Learning Experience out of School	Less than One Year	0.59	0.88
	More than One Year	0.73	0.66

The homogeneity of variances was assessed by Levene's test. Table 4 lists the results of Levene's test. The p values are equal to 0.22, 0.25 and 0.65 for gender, parents' education level and learning experience out of school respectively. Since these values are greater than 0.05, we can retain the null hypothesis for this test. Therefore, the test confirmed that the data meet with the equality of variance assumption. Table 4 also shows the results of t-test on overall learning strategy use by various groups. The data indicate the following. 1. The students of two genders use different learning strategies significantly. 2. There are also significant differences in frequencies of the strategy use by the elementary students with different parents' education levels and learning experiences out of school.

Table 4. Levene's test and t-test on the mean of overall strategy use.

Variable	Levene's Test		T-Test	
	F	p	t	p
Gender	1.56	0.22	-3.10	0.003**
Parents' Education Level	1.37	0.25	-3.04	0.003**
Learning Experience out of School	0.21	0.65	-3.57	0.001**

** $p < 0.01$

Table 5 shows the results of three-way ANOVA of overall strategy use by gender, parents' education level and learning experience out of school. The interaction effect between gender and parents' education level on the overall strategy use is significantly different ($p < 0.05$). The other interaction effects are not significantly different.

Table 5. Three-way ANOVA of overall strategy use by gender, parents' education level and learning experience out of school.

Source	SS	Df	F	p
Gender	1.41	1	3.20	0.078
Parents' Education Level	1.22	1	2.78	0.100
Learning Experience out of School	4.82	1	10.96	0.001**
Interaction:				
Gender * Parents' Education Level	4.38	1	9.97	0.002**
Gender * Learning Experience out of School	0.27	1	0.62	0.434
Parents' Education Level * Learning Experience out of School	0.67	1	1.51	0.223
Gender * Parents' Education Level * Learning Experience out of School	0.35	1	0.80	0.374
Error	30.78	70		

** $p < 0.01$

In order to understand whether gender, parents' education level and learning experience out of school play an important role in individual strategy category use, further analysis of variance was performed. The outcome is listed in Table 6. Females adopt affective and social strategies more frequently. Students with high

parents' education level adopt cognitive and social strategies more often. And, learning experience out of school helps students adopt more cognitive and compensation strategies.

Table 6. ANOVA of the individual strategy category use by gender, parents' education level and learning experience out of school.

Source	Strategy Category	SS	Df	F	p
Gender	Memory	3.68	1	4.11	0.046*
	Cognitive	1.84	1	2.07	0.154
	Compensation	1.58	1	1.88	0.174
	Metacognitive	7.65	1	8.00	0.006**
	Affective	15.81	1	15.33	0.000***
	Social	9.49	1	10.56	0.002**
Parents' Education Level	Memory	3.30	1	3.70	0.058
	Cognitive	7.41	1	8.94	0.004**
	Compensation	4.98	1	6.40	0.013*
	Metacognitive	6.15	1	6.47	0.013*
	Affective	4.37	1	3.68	0.059
	Social	6.83	1	7.23	0.009**
Learning Experience out of School	Memory	6.14	1	7.11	0.009**
	Cognitive	11.29	1	14.69	0.000***
	Compensation	11.08	1	15.41	0.000***
	Metacognitive	6.56	1	6.76	0.011*
	Affective	3.82	1	3.23	0.076
	Social	6.57	1	7.04	0.010*

* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

Table 7 shows the top ten English learning strategies. They are distributed among six strategy categories. In the overall 30 learning strategies, the first two often used strategies are "I pay attention when someone is speaking English." and "I practice English pronunciation." These two strategies have a mean value higher than 3.5 and are regarded as strategies with high frequent use.

Table 7. The top ten English learning strategies.

Rank	Strategy Category	Strategy Item	Mean	Standard Deviation
1	Metacognitive	I pay attention when someone is speaking English.	3.62	1.19
2	Cognitive	I practice English pronunciation.	3.62	1.22
3	Metacognitive	I try to find a better way to learn English.	3.49	1.34
4	Affective	I notice if I am tense or nervous when I am studying or using English.	3.44	1.34
5	Affective	I encourage myself to try my best in English learning.	3.38	1.31
6	Affective	I encourage myself to speak English even when I am afraid of making a mistake.	3.35	1.30
7	Memory	I memorize new words by thinking of their applications.	3.34	1.28
8	Compensation	I try many ways to use the English I have learned.	3.28	1.30
9	Cognitive	I repeat a new English word many times.	3.24	1.28
10	Compensation	To understand unfamiliar English words, I make guesses.	3.24	1.34

5. Conclusions

The main purpose of this study is to investigate the effects of gender, parents' education level and learning experience out of school on English learning strategy use by elementary school students. According to the results of the investigation, the conclusions are as follows. The elementary school students do use learning strategies to assist their English learning. Their mean of learning strategy use is much higher than that of 2-year junior college students. Females use learning strategies more often than males do. Also, females adopt affective and social strategies more frequently. The higher the parents' education level is, the higher the score of overall learning strategy use is. Students with high parents' education level adopt cognitive and social strategies more frequently. The increase in learning experience out of school helps

students use learning strategy. Learning experience out of school also helps students adopt more cognitive and compensation strategies especially. The first two often used learning strategies are "I pay attention when someone is speaking English." and "I practice English pronunciation."

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