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Variations of Language Learning Strategy Use among Three Colleges at a Private Four-year Technology University in Taiwan

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Abstract

This study aims to examine the college students in Taiwan for the attributes of how their English test scores are being affected by language learning strategy use. The university is recognized as a second-tier technology university in Taiwan, as the students are considered to have low levels of English proficiency and learning motivation. A group of 156 students from three colleges (Engineering, Business and Management, and Humanity and Social Science) participated in the study. The result found that the students from Humanity and Social Science have the highest mean scores on their English tests and the highest level language learning strategies among the three colleges at the university. Cognitive strategy is found to be the only statistically significant difference among the study students from three colleges; the other five strategies are not found to be statisically significant. Compensation strategy is found to be most frequently used by all of the students. Cognitive and metacognitive strategies are found to be the least used among the study group.

Keywords: language learning strategy, engineering college, business and management college, college of humanity and Social Science, Taiwanese university students, SILL, ANOVA

1. Introduction

1.1 Background of the Study

In the past few decades, language learning strategies have been widely discussed among language teachers and researchers (Anderson, 2005, Cohen, 1998; Naiman et al., 1978, O'Malley & Chamot, 1990; Oxford, 1990a, 1996; Oxford & Burry-Stock, 1995; Oxford & Ehrman, 1995; Rubin, 1975; Stern, 1975; Wenden & Rubin, 1987; Wong & Nunan, 2011; Yeh, 2014). Language learning strategies have first been classified and defined by Oxford in 1990, and she (who? – state name of author) developed the first version of SILL to help study language learning strategies. Language learning strategies are being identified as distinct behaviors and mental processes used among learners to help assist language acquisition (Park, 2011; Weinstein & Mayer, 1986). Various studies have proven the language strategies impact learning L2 (Bialystok, 1981; Chamot & Kupper, 1989; Cohen, 1990; Naiman, Frohlich & Todesco, 1975). Good language learners are identified as the following: active and accurate guessers, strong-motivated communicators, mentally-independent individuals, brave persons who make mistakes, people who tend to analyzing language-patterns, and enjoy taking any opportunities to use the language, monitoring others' talks, and paying close attentions to meanings (Oxford, 1994; Rubin, 1975). However, Cohen (1997) argued that Rubin (1975) failed to take into individual difference into language learning process. Cohen (2003) offered a more comprehensive way to understand a variety of language learning strategies adapted among different individuals.

1.2 Explore Importance of the Problem

During globalization and internationalization during the 1980s, the general public in Taiwan developed a strong belief to make connections to the world; thus, the knowledge economy made a radical impact on Taiwan since then. The ever-increasing contact between people around the world made English communication skills more important than ever before. As a result, the English learning environment is prevalent in society, and remains so even today. (Yeh, 2014a). Most individuals believe that they need to learn English well to expand their life scope

and enrich their life experiences.

For most learners, the English-proficiency certificates are crucial not only to fulfill the English-proficiency requirement of college graduation, but also to identify their language abilities while searching for competitive jobs upon graduation. In general, Taiwanese students experience certain levels of frustration and challenges when they feel pressured to pass English-proficiency tests, such as GEPT, ILETS, TOEFL, and TOEIC. These English-proficiency certificates are most commonly used and accepted among schools and business industries. English proficiency certificates used to be the most recognized and commonly accepted index of individual's English proficiency levels; as a result, students, parents, teachers, and administrators set teaching goals to help students pass the English proficiency tests which are seen as a requirement of university graduation at all-level educational institutes in Taiwan.

1.3 The Relevant Studies of Language Learning Strategies

The purpose of studying the use of language learners' strategies is not only for the teachers and curriculum administrators, but also for language learners themselves. Many studies indicate the characteristics of good language learners. For example, they are individuals who are highly self-disciplined and aware of their learning strategy use and tasks. Wong and Nunan's study (2011) summarized that learning strategies are a complex set of mental and communicative procedures from the research previously done (Chamot, 2005; O'Malley & Chamot, 1990). A hypothesis of awareness and strategy-development was studied to improve enhancing the effectiveness of language acquisition (Macaro, 2001). There are five characteristics of good language learners identified by Wang (1992), in a study of 490 undergraduate English-majored students in China by using Reid's (1987) Perceptual Learning Style Preference Questionnaire (PLSPQ). These traits are listed as the following: *"(1)learning styles are one of the main aspects reflecting learner differences in English language learning; (2)the Chinese undergraduate students of English investigated preferred kinesthetic learning most and group learning least;(3) learning styles were affected by the length of time of English learning; (4) learning styles were related to EFL achievements; (5) students who are not good at listening and reading were more likely to prefer visual learning"* (Wang & Nunan, 2011, p. 147).

Furthermore, Oxford (1994) listed some important findings which support the effectiveness of using language learning strategies to enhance learners' proficiency. These findings are listed as following: (1) appropriate language learning strategy use can improve leaners' language proficiency (Oxford et al., 1993; Thompson & Rubin, 1993), (2) successful language learners are usually using language learning strategies tactically to reach the requirement for various language tasks (Chamot & Kupper, 1989), and they can easily explicate their various engaged language strategies (O'Malley & Chamot, 1990); (3) both cognitive and metacognitive strategies are often employed together to support each other. Combination of two or more strategies helps in language learning (O'Malley & Chamot, 1990); (4) certain language learning strategies are bonded together for specific language tasks (Chamot & Kupper, 1989); (5) language learners don't pay attention to their feelings and social relationships with others; thus, few studies on social and affective strategies are found in L2 research (Oxford, 1994).

Oxford (1995) reported that Strategy Inventory for Language Learning (SILL) was structured based on a statistical procedure of factor analysis grouping language learning strategies. The well-defined strategies in the SILL are memory, cognitive, compensation, metacognitive, affective, and social strategies. Memory strategies are grouping, imagery, rhyming, and structured reviewing. Cognitive strategies can be practiced as reasoning, analyzing, summarizing, and general practicing. Compensation strategies are taught through activities including guessing meanings, and using synonyms and gestures to express the unknown words. Metacognitive strategies are practiced by paying attention, searching for practice opportunities, scheduling for language learning tasks, self-monitoring own learning paths and progress, and self-checking own errors. Affective strategies could be trained via the listed activities of anxiety reduction, self-encouragement, and self-reward. Social strategies are practiced through asking questions, working together with native speakers, and being cultural aware of the language. In terms of four-language skills, listening refers to memory strategy, reading refers to cognitive strategy, and writing refers to metacognitive strategy. Speaking skills require more complex rules of compensation, affective, and social strategies used interchangeably (Abhakorn, 2008; Cohen, 2003; Oxford, 1995; Wu & Lin, 2009; Yeh, 2014.)

Strategy Inventory for Language Learning (SILL) is one of the most popular measures of language learning strategies. SILL has been commonly used to study L2 learners' overall learning strategy use, the relationships of

strategies used and L2 proficiency, the factors relating to learners' choice of adopting different strategies, and language training curriculum (Green & Oxford, 1995; Griffiths, 2003; Hong-Nam & Leavell, 2006; McMullen, 2009; Nisbet et al., 2005; Nyikos and Oxford, 1993; Park, 1977, 2011; Riazi and Rahimi, 2005; Wharton, 2000; Yang, 1999). SILL was being examined and proved its fair reliability with an acceptable alpha value of .60 and .70 in most of the previous research (Hair et al., 1998; Landau & Everitt, 2004; Park 2011). Hence, SILL is used for this study to study the group of 156 sophomore students enrolled at a private four-year technology university in Northern Taiwan. The study aims to investigate the difference among those students' language learning strategies adapted and their English proficiency levels within three colleges including Engineering, Business, and Humanity and Social Science.

A study done by Carol Mango in 2010 investigated 302 Korean students, aged between 14 and 18, at a high school in the Philippines. The students in the study were all Korean native-speakers who were studying English as their second language. Three research questions were asked in the study: "1) will the language learning strategies significantly contribute in increasing Korean students' English proficiency?; 2) do the number of months learning formal English increase the English proficiency of Korean students?; 3) will the overall relationship of the language learning strategies and English proficiency increase when length of formal study of English is added as a predictor of English proficiency?" (Mango, 2010, p. 48). Her study group had self-reported English-study which ranged from one to 144 months. The scores of student English proficiency ranged from 5 to 35, and the mean of English proficiency test was 18.48. The SILL scores ranged from 0.56 to 5, which meant the language learning strategies were from very low to high across the study group. The mean scores of SILL were memory (2.05), cognitive (2.05), compensation (3.48), metacognitive (3.34), affective (3.14) and social (3.51) strategies. From her (who?) study, the compensation strategy and period of studying English were found to be significant; and the rest of predictors were not significant.

1.4 The Hypotheses and Research Questions of the Study

This study had one main purpose: to explore the language learning characteristics among the students from three colleges at a private four-year Technology University in Northern Taiwan. The hypotheses and research questions are listed as the following.

Hypothesis one: "There is no statistical difference on language learning strategies used among the students from the three colleges of Engineering, Business, and Humanity and Social Science."

Hypothesis two: "There is no statistical difference on students' English test scores (proficiency) among the students from the three colleges of Engineering, Business, and Humanity and Social Science."

Research Questions are listed as the following.

1). What kinds of language learning strategies do the Engineering-College students use? What are the strategies used most frequently and least frequently by the students?

2). What kinds of language learning strategies do the Business-College students use? What are the strategies used most frequently and least frequently by the students?

3). What kinds of language learning strategies do the students at the College of Humanity and Social Science use? What are the strategies used most frequently and least frequently by the students?

4). Are there any statically significant differences in strategy use among the students from the three colleges? What are the strategies used most frequently and least frequently by the study students?

5). Are the mean scores of the students at the 3 colleges statistically different from each other on the English test?

2. Method

2.1 Study Participants

The study student group were the students enrolled in the fall semester of 2012. The total number of the study group was 156 as they were randomly chosen from each department. The mean of the study students' age is 19.26. The group has 46 (29.5%) female and 110 (70.5%) male students, and it represents the gender proportion of the study university.

2.2 English-proficiency Placement Test

Anglia Examinations (http://anglia.org/about-anglia) started at and are now based in Chichester College,

Chichester, England since 1994. Anglia Examinations has regional offices around the world, including Africa, Europe, Asia, and Ibero-American Network; the Greater China office covers the areas of Taiwan, Hong Kong, Macau, and Mainland China. The tests offer a variety of English proficiency tests and training programs from educational to business domains, from young children to adults in academe and business industries. The Anglia examination develops a test of comprehensive four-skill (listening, speaking, reading, and writing) based on the CEFR standard. Appendix 1 lists an equivalence table of CEFR, Anglia Examinations and other English proficiency tests. The placement test of the study was compiled by the staff of Anglia Examinations in Taiwan. A one-hour placement test with one-hundred multiple-choice questions including listening and reading was given to the students in class, along with the SILL survey. It took about almost two hours to complete both the placement test and SILL survey, along with clearly explained instructions for the students.

2.3 Revised Chinese SILL inventory (34-item)

The first version of 80-item SILL were tested and proved its reliability between 0.91 to 0.95 from the respondents given the survey in their native languages (Oxford, 1995.-) SILL given to ESL/EFL students, Cronbach's alpha values were proven to be high: 0.94 to a sample of 590 Taiwanese university EFL learners (Yang, 1992a); 0.92 to a sample of 255 Japanese university EFL learners (Watanabe, 1990); 0.91 to a group of 59 Korean university EFL learners (Oh, 1992); and 0.93 to another group of 332 Korean university EFL learners (Park, 1994); and 0.91 to a group of 374 EFL learners in Puerto Rico (Oxford, 1986, 1995; Oxford and Nyikos, 1989; Wildner-Bassett, 1992a; Bedell, 1993; Nyikos & Oxford, 1993; Oxford & Burry, 1993). The revised Chinese SILL inventory contained 34 questions, which were selected from the 80-item SILL (Oxford, 1990). The shorter version was created for the students in order to increase the survey-competition rates. The questions were selected based on the pretest result from a group of 50 students at the university. The pretest was given to randomly chosen students from the department. The reliability and validity remained statistically significant, Cronbach's alpha values were proven to be higher than 0.6 (Yeh, 2014). The survey was administrated to other groups of students at the university, which remained a good model (Yeh, 2014). It is suggested the acceptable values of individual item loadings should be greater than 0.5 (Chin, 1998; Shepherd, Tesch, & Hsu, 2006, p. 208). SILL has proven to be reliable and valid through different study groups around the world in the past three decades. The reliability of SILL was proven by Oxford and her associates (1986 & 1995), which it is 0.99. The internal consistency reliability of SILL is 0.94 from Yang's study (1993) of 505 participants, and 0.92 from Watanabe's study (1990) of 315 Chinese participants (Magno, 2010). SILL was being examined and proved to be fairly reliable with an acceptable alpha value of .60 and .70 in most of the previous research (Landau & Everitt, 2004; Park, 2011). Oxford (1996) reported the Chronbach's alpha of SILL is 0.93 to 0.98 as the SILL given in learner's language or in L2. Numerous studies have reported the high validity of SILL as a significant index to language learning performance (Landau and Everitt, 2004; Mango, 2010; Nisbet, Tindall, & Arroyo, 2005; Oxford, 1990b; Park, 2011).

2.4 Procedure of Data Collection & Coding

Survey data were collected along with an one-hour placement test was given in class. The students took about ten to twenty minutes to finish the adapted SILL survey, followed by the Anglia English Test. The tests were collected and graded by the team of Anglia Examination proctors based at Chichester College, Chichester, England; the SILL surveys were to be coded into an Excel file for further statistical analyses. The scores of test results were converted to TOEIC scores (see the Table 1). The reason for converting the test scores is for the analytical procedure, because the Anglia Examination only gives the results of letter grades based on the CEFR standard. 299 students were chosen to take the test, but only 156 students completed the tests and answered survey questions, which is a 52.174% completion rate for this study.

Table 1. Result of Pretest to the English-majored student based on the equivalence table of language proficiency on the CEFR standard

Anglia test result with level classification	N.	Percentage	English proficiency (Converted to TOEIC score based on CEFR standard)
0	10	6.4	0
A1/Low-elementary	37	23.7	0
A2/ Elementary	49	31.4	173
A2+/ Pre-Intermediate	33	21.2	280.5
B1/ Intermediate	19	12.2	388
B2/ Advanced	8	5.1	668
C1/ Proficiency	0	0	888
Total	156	100	

3. Result of the Study Analyses

3.1 Descriptive Results

Upon the completion of data entry, some important descriptive analyses are displayed to explore the background of the study group. The study group of 156 students included 46 (29.5%) female and 110 (70.5%) male students. Based on the responses on their perception of learning English, seventy one (71) students (45.5%) of the group think of English as very important, and 78 students (50%) express that English is important to them; there were only 7 (4.5%) students who reported learning English is a little important or not important. As the students reported their learning interests, sixty five (65/ 41.7%) said they have no interest in studying English, as 91 students (58.3%) reported themselves interested in learning English. The mean student age and test score (converted to TOEIC scores) are 19.25 and 195.08. The average period of studying English is 9.29 years.

The simple guideline is if that skewness is less than the absolute value of 1 (+/- 1), the variables are at least approximately normal (Hair et al., 2009). The Kurtosis values of language learning strategies in the study are all acceptable with an absolute value less than 3. Table 2 displays all the values of Skewness and Kurtosis which means a good distribution of normality. At the following table, the study students showed their most frequently used compensation strategy (M = 2.945), followed by memory strategy (M = 2.731), affective strategy (M = 2.630), social strategy (M = 2.614), metacognitive strategy (M = 2.578), and cognitive strategy (M = 2.559). The study students show very little above average level to equally using all six language learning strategies, which it is under an assumption that the students have the ability to self-report their used strategies.

Table 2. List of descriptive statistics of test scores and six language learning strategies

Factors	N	Min.	Max.	Mean	Std. Dev.	Skewness	Kurtosis
Test Score	156	0.000	668.000	195.080	171.274	.850	.809
Memory	156	1.170	4.330	2.731	.644	-.178	-.168
Cognitive	156	1.000	5.000	2.559	.730	.193	.559
Compensation	156	1.200	4.600	2.945	.605	-.018	.656
Metacognitive	156	1.000	5.000	2.578	.714	.024	.301
Affection	156	1.000	4.400	2.630	.737	-.090	-.386
Social	156	1.000	5.000	2.614	.734	-.165	.208
Valid N	156						

A one-way between subjects ANOVA (Table 3 and 4) was conducted to compare the effect of different language learning strategy use for three colleges: Engineering, Business, and Humanity and Social Science. There was a significant effect of different colleges on English test scores at the $p < .05$ level [$F (2, 153) = 3.9$, $p = 0.022$*]. Post hoc comparisons using the Tukey HSD test (Table 5) indicated that the mean score of the English test for the College of Humanity and Social Science (M = 259.890, SD = 204.195) was significantly different than the Business College (M = 156.120, SD = 177.321). However, the Business College did not significantly differ from both colleges of Engineering (M = 182.460, SD = 145.882), and Humanity and Social Science. The result answered the hypothesis one as it is rejected ($p < 0.022$, at two-tailed statistical significance) and the results determined that there is a statistical difference toward the test scores among three colleges (see Table 4.)

Table 3. Descriptive table of English test scores among three colleges

College	N	Mean Score of Eng. tests	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1. Engineering	85	182.460	145.882	15.823	150.99	213.920
2. Business	34	156.120	177.321	30.410	94.250	217.990
3. Humanity & Social Science	37	259.890	204.195	33.570	191.81	327.970
Total (3 colleges)	156	195.080	171.274	13.713	168	222.170

Note: Colleges of Engineering (coded as 1), Business (coded as 2), and Humanity & Social Science (coded as 3).

Table 4. ANOVA table of English Test scores among three colleges

	Sum of Squares	df	Mean Square	F	Sig.
Test scores vs. colleges	220575.714	2	110287.857	3.900	0.022*

*$p < 0.05$ at 2-tailed statistical significance level.

Table 5 lists the post hoc comparison by using the Tukey HSD test which shows a statistical significance between Colleges of Business and Humanity and Social Science. There is no statistical significance found comparing the Engineering College to both Colleges of Business and Humanity and Social Science.

Table 5. Post hoc comparisons using the Tukey HSD test on different colleges to English test scores

(I) college	(J) college	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Engineering	Business	26.341	34.122	.721	-54.420	107.100
	HSS	-77.433	33.119	.054	-155.820	.950
Business	Engineering	-26.341	34.122	.721	-107.100	54.420
	HSS	-103.774*	39.949	.028*	-198.320	-9.230
HSS	Engineering	77.433	33.119	.054	-0.950	155.820
	Business	103.774*	39.949	.028*	9.230	198.320

* The mean difference is significant at the 0.05 (2-tailed) level. HSS—Humanity & Social Science.

Table 6 lists all the descriptive statistics of language strategy used by college. It answers the research question 1 to 4. From the analysis, the students from Engineering College are found to use compensation strategy most often with a mean value of 2.938; whereas they are found to least often use social strategy with a mean value of 2.582. The students at Business College are found to most often use compensation strategy with a mean value of 2.900, and they least often use metacognitive strategy with a mean value of 2.485. The students at College Humanity and Social Science are found to most often use compensation strategy with a mean value of 3.000, and they least often use cognitive strategy with a mean value of 2.698.

Table 6. Descriptive statistics of language learning strategy use by colleges

Strategy	College	N	Mean	Std. Dev.	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
Memory	1	85	2.740	.596	.065	2.611	2.868
	2	34	2.588	.657	.113	2.359	2.817
	3	37	2.841	.728	.120	2.598	3.083
	Total	156	2.731	.644	.052	2.629	2.832
Cognitive	1	85	2.617	.670	.073	2.473	2.761
	2	34	2.265	.735	.126	2.008	2.521
	3	37	2.698	.800	.132	2.431	2.965
	Total	156	2.559	.730	.058	2.444	2.675
Compensation	1	85	2.938	.592	.064	2.811	3.066
	2	34	2.900	.608	.104	2.688	3.112
	3	37	3.000	.643	.106	2.786	3.214
	Total	156	2.945	.605	.048	2.849	3.040
Metacognitive	1	85	2.561	.696	.075	2.411	2.711
	2	34	2.485	.689	.118	2.245	2.726
	3	37	2.703	.776	.128	2.444	2.961
	Total	156	2.578	.714	.057	2.465	2.691
Affective	1	85	2.601	.719	.078	2.445	2.756
	2	34	2.601	.776	.133	2.330	2.871
	3	37	2.724	.755	.124	2.473	2.976
	Total	156	2.630	.737	.059	2.513	2.747
Social	1	85	2.582	.715	.078	2.428	2.736
	2	34	2.535	.774	.133	2.265	2.805
	3	37	2.761	.742	.122	2.514	3.009
	Total	156	2.614	.734	.059	2.498	2.730

Note: Colleges of Engineering (coded as 1), Business (coded as 2), and Humanity & Social Science (coded as 3).

Table 7 lists ANOVA test of language learning strategies by colleges. Among all six language learning strategies, cognitive strategy is only found to have a statistical significant difference among the three colleges. In terms of the study group, they found that compensation strategy (M = 2.945) is the most frequently used strategy;

whereas, the least used strategy among the study students is cognitive strategy with the mean value of 2.559 (See Table 6 and 7.) Table 9 lists all the strategies by rank and college.

Table 7. ANOVA Test of language learning strategies by colleges

Strategy	Sum of Squares	df	Mean Square	F	Sig.
Memory	1.144	2	0.572	1.387	0.253
Cognitive	3.947	2	1.974	3.843	**0.024***
Compensation	0.185	2	0.092	0.25	0.779
Metacognitive	0.893	2	0.446	0.875	0.419
Affective	0.433	2	0.216	0.395	0.674
Social	1.105	2	0.552	1.025	0.361

*p < 0.05 at 2-tailed significant level.

The test scores of the students from Engineering College have shown to be statistically different from those of the students at the College of Humanity and Social Science. The test scores of the students from the Business College were found to be significantly statisically different from those of the students at the Humanity and Social Science College. The students from the College of Humanity and Social Science showed statistically significant differences on English test scores compared to both the students from the Engineering and Business Colleges.

Table 8. Post Hoc test of comparing the used strategies among three colleges

Strategy	(I) college	(J) college	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Memory	1	2	0.151	0.130	0.479	-0.157	0.460
		3	-0.101	0.127	0.704	-0.401	0.198
	2	1	-0.151	0.130	0.479	-0.460	0.157
		3	-0.252	0.153	0.226	-0.614	0.109
	3	1	0.101	0.127	0.704	-0.198	0.401
		2	0.252	0.153	0.226	-0.109	0.614
Cognitive	**1**	**2**	**.352***	0.145	0.044	0.008	0.696
		3	-0.081	0.141	0.833	-0.415	0.253
	2	**1**	**-.352***	0.145	0.044	-0.696	-0.008
		3	**-.433***	0.170	0.032	-0.836	-0.031
	3	1	0.081	0.141	0.833	-0.253	0.415
		2	**.433***	0.170	0.032	0.031	0.836
Compensation	1	2	0.038	0.123	0.948	-0.254	0.330
		3	-0.062	0.120	0.864	-0.345	0.222
	2	1	-0.038	0.123	0.948	-0.330	0.254
		3	-0.100	0.144	0.768	-0.442	0.242
	3	1	0.062	0.120	0.864	-0.222	0.345
		2	0.100	0.144	0.768	-0.242	0.442

Metacognitive	1	2	0.075	0.145	0.861	-0.268	0.418
		3	-0.142	0.141	0.572	-0.475	0.191
	2	1	-0.075	0.145	0.861	-0.418	0.268
		3	-0.217	0.170	0.408	-0.619	0.184
	3	1	0.142	0.141	0.572	-0.191	0.475
		2	0.217	0.170	0.408	-0.184	0.619
Affective	1	2	0.000	0.150	1.000	-0.356	0.355
		3	-0.124	0.146	0.673	-0.469	0.221
	2	1	0.000	0.150	1.000	-0.355	0.356
		3	-0.124	0.176	0.762	-0.540	0.292
	3	1	0.124	0.146	0.673	-0.221	0.469
		2	0.124	0.176	0.762	-0.292	0.540
Social	1	2	0.047	0.149	0.947	-0.306	0.400
		3	-0.180	0.145	0.431	-0.522	0.163
	2	1	-0.047	0.149	0.947	-0.400	0.306
		3	-0.227	0.174	0.398	-0.639	0.186
	3	1	0.180	0.145	0.431	-0.163	0.522
		2	0.227	0.174	0.398	-0.186	0.639

* $p < 0.05$ at 2-tailed statistical significance level.

The students from Humanity and Social Science College demonstrated their averages to be higher than overall averages at all of the six language learning strategies. However, the Business College students showed their mean to be lower of all six strategies compared to overall averages among all three colleges. The Engineering-College students show that only cognitive and affective strategies are lower than overall (3 colleges) average means. Table 9 lists all the strategies' mean values and their ranks by college and overall value.

Table 9. Comparison and rank of language learning strategies used among three colleges

Rank of strategy use	Engineering College	Business College	College of Humanity and Social Science	Overall (3 colleges)
1 (most often used)	Compensation (M = 2.938)	Compensation (M = 2.900)	Compensation (M = 3.000)	Compensation (M = 2.945)
2	Memory (M = 2.740)	Affective (M = 2.601)	Memory (M = 2.841)	Memory (M = 2.731)
3	Cognitive (M = 2.617)	Memory (M = 2.588)	Social (M = 2.761)	Affective (M = 2.630)
4	Affective (M = 2.601)	Social (M = 2.535)	Affective (M = 2.724)	Social (M = 2.614)
5	Social (M = 2.582)	Metacognitive (M = 2.485)	Metacognitive (M = 2.703)	Metacognitive (M = 2.578)
6 (least often used)	Metacognitive (M = 2.561)	Cognitive (M = 2.265)	Cognitive (M = 2.698)	Cognitive (M = 2.559)

From the above analyses, both research hypotheses are rejected as language learning strategies and test cores are found to be statistically significant among the three colleges. Table 10 lists the research hypotheses' results. Cognitive strategy was found to have a statistically significant difference among all three colleges (Table 7 and 8.) The students from Business and Humanity and Social Science (HSS) are statistically significantly different on their test scores, as the students at HSS had better test scores (Table 5.)

Table 10. The result of research hypotheses

Hypothesis	Statement	Accepted	Rejected
1	There is no statistical difference on language learning strategies used among the students from the three colleges of Engineering, Business, and Humanity and Social Science.		●
2	There is no statistical difference on students' English test scores (proficiency) among the students from the three colleges of Engineering, Business, and Humanity and Social Science.		●

4. Discussion

The study has proven that students from different colleges have different concepts to conceptualize the received information and knowledge. If teachers want to make the learning effective in class, we should help our students become familiar with all the language learning strategies in order to make them practice these strategies outside the class. From the study result, the low test scores showed that the students suffered challenges and difficulties in language learning; yet the teachers might not know how to help them improve their language learning and test scores. Cognitive and metacognitive strategies are found to be the least used strategies among the students, which might confirm why the students failed to perform well in their English learning and test scores. Both cognitive and metacognitive strategies are often employed together to support each other. A combination of two or more strategies used is more effective in language learning (O'Malley & Chamot, 1990.) Oxford confirmed (1994, 1996, 1996a) that the language learners who apply both cognitive and metacognitive strategies more frequently tend to have better results in language performance. Cognitive strategy appears to be the only statistically significant difference to apply among the study students from the three colleges.

Students from HSS have the best test scores compared to the students from the other two colleges. Those students who have better test scores tend to have higher scores on their language learning strategies, which means that test scores are enhanced by using the learning strategies properly. In terms of the test scores, students from Business College have the lowest scores compared to the students from the other two colleges. The mean of the test score for the Business College students is 156.120, compared to the mean scores of both colleges of Engineering (M = 182.460) and Humanity and Social Science (259.890). All these scores were converted to TOEIC score, which implies the proficiency levels of students from Engineering and Business Colleges are at the elementary level. The proficiency level of Humanity and Social Science College students is at pre-intermediate level with a mean score of 259.890 (Table 1). It shows the current difficulties and challenges faced by college faculty as the students in general have an average low English proficiency, which will affect their learning motivation and goals. The average test score of the study student group is 195.08, which is a low proficiency level and students can't succeed in the real world.

A strong proof from the study result is that only 7 (4.5%) students out of 157 students reported learning English as a little or not important to them, as 95.5% of the study students said learning English is important to them. There is the big gap for students and faculty to fill, as we could help our students improve their language learning by introducing correct strategy usage of language learning strategies. Though 61 (41.7%) students express themselves as having no interest in learning English, it might give the teachers and program designers a way to rethink ideas to help improve students' test performance and enhance their learning motivation. I strongly believe that frustration from low test score discourage them from learning English, which in my knowledge is that the students with no interest to learn don't understand challenges they encounter, and are finding an excuse to avoid learning English. The era of globalization and a knowledge economy has already come with the advanced technology.. English is a communication tool for all educated individuals to access the world, and is a

must-learn language for all-level students.

The world has changed quickly and evolved with highly developed technology and diverse communications. Education is not only seen as academic degrees, but also as a way to give each individual with proper capabilities access to the world. Traditional teaching method are no longer useful and don't attract students today; we will need more proactive and interactive delivery methods to help our students gain their needed skills to succeed in the real world upon their graduation from schools. Strategies give the learners clear principles to follow when they encounter language learning which they will benefit from by practicing and mastering the language learning strategies; whereas they will greatly develop their learning styles and motivation. Education is now being redefined as to teachers supporting their students to learn and manage knowledge (Poham, 2001). Teachers should take advantage of applying enormous learning technologies to help students develop their abilities and increase their competitiveness.

On an earlier note in this paper, listening refers to memory strategy, as reading refers to cognitive strategy, and writing refers to metacognitive strategy. Speaking skills require more complex skills of compensation, affective, and social strategies used interchangeably (Abhakorn, 2008; Cohen, 2003; Oxford, 1995; Wu & Lin, 2009; Yeh, 2014). It might reveal an explanation why the study students reported their speaking skill much better than the other three language skills (listening, reading, and writing.) This study has also discovered important findings as why most Taiwanese students experience low levels in their English achievements and motivation, while it makes an urgent call for teachers and program administrators to rethink the issues. Most importantly, Taiwanese college students need well-instructed English curriculum to help them develop proper learning skills to make language learning efficient.

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Appendix A. Equalevance table of CEFR, Anglia Examinations and other English proficiency tests

CEFR	Ascentis Anglia	Cambridge YLE/ Main Suite	TOEIC	TOFEL -IBT	IELTS
C2/ Mastery	Masters	CPE			7.5-8.5
C1/ EOP	AcCEP T Proficiency	CAE	990-786	110-120	6.0-7.0
B2/ Vantage	advanced	FCE	785-551	87-109	4.5-5.5
B1/ Threshold	Intermediate Pre-intermediate	PET	550-226	57-86	3.0-4.0
A2/ Waystage	Elementary	KET Flyers	225-121		1.5-2.5
A1/ Breakthrough	preliminary	Movers	120-0		0-1.0
(Lower than A1)	Primary Junior First step	starters			

Note: Downloaded on March 22, 2014 adapted from http://tw.anglia.org/安格國際英檢簡介/cefr-對照表