英語聽力有效學習策略之研究

許淑真
應用外語系

摘要

在英語的聽、說、讀、寫四個項目中，聽力常是最容易被忽略的項目。因為「聽」是四種技能中最不易明顯表現其能力的，只有聽者較知道自己是否聽懂。而我國的大專院校入學考試中又不考英語聽力，高中生所受到的聽力訓練很少，直接影響到其在大專期間之聽力表現。本計畫之目的為探討國內技職院校應用外語系學生在英語聽力課程中所採用的學習策略，並歸納出達成良好學習成效之方法，幫助更多學生達成有效的學習。利用 T-檢定、皮爾森積差相關、多因子變異數分析及多元迴歸等統計分析方法來探討以下項目：(1)性別、學習成效及國外居住之經驗是否對學習策略之使用造成重要影響？ (2)在英語聽力練習過程中，那些學習策略是學生所經常使用的？(3)有效之英語聽力學習策略有那些？(4)英語聽力學習策略使用與學習成效間之關係為何？

研究結果顯示，女同學使用後設認知策略的頻度比男同學高。學習成效好的學生使用聽力策略的次數較頻繁。有住過國外的同學較常使用認知策略和社會/情意策略。學生最常採用的聽力策略為「在英聽的時候，我試著聽懂每一個字」。學習成效高的同學遇到問題會請教老師或同儕，而且較常自我省思。此外，本研究還求得學習成效與策略種類使用間之迴歸關係式。

關鍵字：英語聽力，聽力策略，學習成效

Effective Learning Strategies in English Listening Comprehension

Abstract

Most teachers are easy to neglect listening comprehension acquisition among four skills in English teaching because it’s not obvious enough. Only the listeners know what or how much they understand. Also, there is no listening comprehension training or examination included in high school or required in entrance examination of university. All of these deeply affect the EFL listening comprehension of technical college students.

The purpose of this article is to investigate what learning strategies used by technical students in listening comprehension, how they affect learning proficiency, and how both of them correlate with each other. The author found out a way of obtaining good learning proficiency to help students reach their goal of effective learning in listening comprehension. The subjects were five-year junior college students in the Department of Applied Foreign Languages. Statistics analysis methods, such as T-test, analysis of variance, Pearson product-moment correlation and multiple regression analysis were adopted.

The author investigates the following problems concerning listening comprehension. (1) Whether gender, proficiency level and abroad experience play an important role in listening strategy use? (2) What strategies do students prefer during the process of learning? (3) What are the effective learning strategies in listening comprehension? (4) What are the relationships of listening strategies and proficiency?

Key words: listening comprehension, listening strategy, learning proficiency

1. Introduction

English listening comprehension has been ignored for a long time. The main reason is that it was not included in entrance examinations for admission to senior high schools, colleges and universities in Taiwan. Most students and even their English teachers neglected the importance of this skill. Recently, the committee of College Entrance Exams Center has some English listening comprehension tests for students to take voluntarily, and some universities have also declared that they adopt listening comprehension scores as one of the required elements of admission to their schools. Therefore, students may take it more seriously.

Several factors affect the listening achievement of a second language acquisition. One of the most significant factors is learning strategy. A lot of researchers and teachers try hard to find out possible ways to help students listen successfully. Also, many studies have investigated the influence of listening strategies to EFL and other language learner. There are some positive results found by Paulauskas (1989), Herron & Seay (1991), and Thompson & Rubin (1996) et al. Good language learners often make use of appropriate learning strategies to facilitate their learning (Nyikos, 1987). Effective EFL listeners employed more learning strategies than ineffective listeners did (Oxford et al., 1993; Lu, 1996; Ku, 1998; Lin, 2000; Cheng, 2000). The differences in listening strategies use by efficient and inefficient learners were also investigated in their studies. Hosenfeld (1984) indicated that training less successful learners to use the strategies of their successful peers helps the learners perform the target language better. Therefore, teachers can teach learners strategy use to help them have effective learning.

As a result, studies on various language learning strategies are important. Although there are many studies on EFL learning strategies in Taiwan, few researchers pay attention to five-year junior college students' English learning strategy use. This study aims to understand the listening strategy use of junior college students and investigate the relationships between listening strategies and learning proficiency.

2. Literature Review

There are many studies on language learning strategies. 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. Wenden (1983) investigated self-directed learning among adult foreign language learners. Considerable researchers further investigate variables that may influence learners' strategy use (MacIntyre & Noels, 1996; Oxford & Nyikos, 1989). Concerning strategy applications, recent efforts for learning strategy applications in second language attributed to Oxford and Ehrman (1987). They concluded that greater use of learning strategies 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). On the side of the links between motivation and strategies, there is a significant correlation between learners' motivation and their strategy use (Schmidt, Boraie, & Kassabgy, 1996; Okada, Oxford, & Abo, 1996).

Different classifications of learning strategies were found in the previous studies. O'Malley & Chamot (1990) adopted the three-category learning strategies – metacognitive, cognitive, and Social/affective strategies: under each or the three main categories are their

subcategories. Another taxonomy of learning strategies that is very popular and has been used in many studies is Oxford's (1990) language learning strategy classification. She divided learning strategies into six categories: memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies.

Myrphy (1987) and O'Malley et al. (1989) pointed out that effective L2 listeners used inferential, self-monitoring, and elaboration strategies more frequently than less effective L2 listeners. Vandergrift (1992) concluded that the learning strategies used by successful and less successful listeners were different, and that the former made better use of metacognitive strategies including planning for learning, monitoring the learning process and self-evaluating learning after learning tasks. Vandergrift (1997) conducted a study examining listening comprehension strategy across level of language proficiency (novice level vs. intermediate level) and listening ability (successful vs. less successful listeners). Many effective/proficient listeners tend to use learning strategies that are suitable to the task, material, self-objective, needs, motivation and stage of learning (Oxford, 1990). Successful listeners usually possess abilities to succeed while others lack those abilities (Rubin & Thompson, 1994). They usually listen to oral messages, organize their aural input, and practice using the language. In addition, they usually use linguistic knowledge and contextual cues to help them in comprehension while they are listening.

In Taiwan, several studies have investigated the strategy use of college students in different contexts (Yang, 1993; Sy, 1996; Hsiao, 1997). Yang (1993) adopted a modified version of Oxford's SILL to survey over five hundred college students. In six learning strategy categories, she found that these EFL students using the compensation strategies, affective strategies, and metacognitive strategies more often. 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. Chung (1999) also indicated positive relationships between the use of learning strategies and the achievement. Chao (1999) studied the listening strategies used by English major students from six universities. Teng (1999) examined the EFL listening comprehension strategies used by technical college students and pointed out the urgent need to diagnose the students' listening problems. However, there are few studies on English listening strategy use of junior college students.

3. Methodology

The subjects were 74 five-year junior college students in Department of Applied Foreign Languages at Nanya Institute of Technology in 2004. Among 74 subjects, 12 were males and 62 were females. All of these subjects had the same training programs in English course. The questionnaire consists of 50 items with a 5-point likert scale ranging from "strongly disagree" (1 point) to "strongly agree" (5 points). It is a revised questionnaire based on the previous studies of the following: Bacon, 1992; O'Malley & Chamot, 1990; Teng, 1996; Vandergrift, 1997; Chao, 1999; Wang, 2001. The questionnaire includes four groups: student's background, metacognitive strategies, cognitive strategies, and social/affective strategies. Internal consistency reliability (Cronbach alpha) was analyzed to show how well a group of items measures the same concept. The proficiency was evaluated by the average of the scores of midterm and final examinations.

The author adopted SPSS 11.0 statistical package to compute collected data. There were three independent variables including metacognitive strategies, cognitive strategies, and social/affective strategies. The only dependent variable was learning proficiency. Mean value

and standard deviation of each item were analyzed by descriptive statistics. And then, the author ranked all of the items.

Independent-samples T-test was conducted to determine if there is a significant difference of listening comprehension strategy use for subjects with different sexes, proficiency levels and abroad experience. Pearson product-moment correlation coefficients were computed to understand relationships between three independent variables and a dependent variable.

A three-way analysis of variance (ANOVA) method was used to reveal the main and interaction effects of three strategy categories on proficiency of the subjects. Multiple linear regression analysis was adopted to determine the best combinations of three predicators. Also, it evaluated the relative importance of each predicator in the relationships between predictors and learning proficiency. The probability level of significance for T-test, ANOVA, correlation analysis and regression analysis was set at 0.05.

4. Results and Discussion

In this study, the author adopted O'Malley & Chamot's classification of learning strategies. The listening comprehension strategy categories include metacognitive, cognitive, and social/affective strategies. Based on the O'Malley & Chamot's taxonomy, metacognitive strategies refer to self-regulatory actions or techniques which learners use to plan, monitor, and evaluate their own learning processes. Cognitive strategies refer to operations or techniques that learners take to directly manipulate the incoming materials. This strategy category further includes 14 subcategories - Repetition, Resourcing, Translation, Grouping, Note-taking, Deduction, Recombination, Imagery, Auditory Representation, Keyword Method, Elaboration, Transfer, Inferencing, and Summarizing. Social/affective strategies refer to subjects' interactions with the teacher or per interactions to solve a problem, or subjects' emotional control over himself/herself, including subcategories such as cooperation, and question for clarification.

Internal consistency reliability of each group of this questionnaire was analyzed firstly. In the pilot test, the questionnaire was administered to 43 two-year junior college students. The results showed that Cronbach alpha values are 0.85, 0.92 and 0.72 for metacognitive, cognitive and social/affective strategies groups respectively. The overall Cronbach alpha reliability was 0.94. Nunnally (1978) provided a widely accepted rule of thumb that alpha should be at least 0.70 for a scale to demonstrate internal consistency. In this study, the Cronbach alpha values were all above 0.7. It shows that this questionnaire had a good internal consistency to evaluate student's listening comprehension strategy use.

Mean values and standard deviations of various independent and dependent variables are shown in Table 1. The mean value of overall strategies was 3.36 and those of three strategy categories were 3.41, 3.37, and 3.32 respectively. It meant that five-year junior college student's learning strategy use was positive toward listening comprehension. The differences among the employment of three listening comprehension strategy categories were small.

Table 1. Descriptive statistics for listening comprehension strategy categories

Rank	Strategy Category	Number of Items	Number of Subjects	Mean	Standard Deviation
1	Social/Affective	3	74	3.41	0.64
2	Metacognitive	18	74	3.37	0.47
3	Cognitive	29	74	3.32	0.49

In order to understand whether gender, proficiency level and abroad experience played an important role in individual strategy category use, further analysis of T-test was performed. The outcome was listed in Tables 2-4. The data in Table 2 indicate: 1. Females employed greater use of “metacognitive” strategies. It reflected that they planned, self-monitored, and self-regulated more frequently. 2. The general listening comprehension strategy use was almost the same, but the learning proficiency of female was superior to that of male.

Table 2. T-test of listening comprehension strategy use and proficiency for gender differences

Variable	Gender	Number of Subjects	Mean	Standard Deviation	t	p
Metacognitive Strategies	Male	12	3.32	0.56	-0.38	0.709
	Female	62	3.38	0.46		
Cognitive Strategies	Male	12	3.33	0.51	0.10	0.923
	Female	62	3.31	0.49		
Social/Affective Strategies	Male	12	3.47	0.70	0.37	0.716
	Female	62	3.40	0.64		
All Strategies	Male	12	3.34	0.51	-0.05	0.962
	Female	62	3.34	0.45		
Proficiency	Male	12	3.67	0.86	-0.23	0.821
	Female	62	3.72	0.68		

Regarding the subjects with different proficiency levels, the effective learners adopted more listening comprehension strategies than ineffective learners did as shown in Table 3. It existed significant difference in all strategy use ($p < 0.001$) for different proficiency levels.

Table 3. T-test of listening comprehension strategy use and proficiency for different proficiency levels

Variable	Proficiency Level	Number of Subjects	Mean	Standard Deviation	t	p
Metacognitive Strategies	Low	24	3.10	0.44	-5.06	0.000^{***}
	High	24	3.73	0.41		
Cognitive Strategies	Low	24	3.14	0.44	-3.59	0.001^{***}
	High	24	3.65	0.53		
Social/Affective Strategies	Low	24	3.10	0.56	-4.36	0.000^{***}
	High	24	3.85	0.63		
All Strategies	Low	24	3.13	0.41	-4.47	0.000^{***}
	High	24	3.69	0.46		
Proficiency	Low	24	2.96	0.42	-12.53	0.000^{***}
	High	24	4.46	0.42		

*** $p < 0.001$

Table 4 lists the results of T-test for students with different abroad experiences. The subjects with living abroad experience employed greater use of “cognitive” and “social/affective” strategies. It reflected that they had stronger social orientation, but they got worse grades.

Table 4. T-test of listening comprehension strategy use and proficiency for students with different abroad experiences

Variable	Abroad Experience	Number of Subjects	Mean	Standard Deviation	t	p
Metacognitive Strategies	No	60	3.37	0.45	0.12	0.908
	Yes	14	3.35	0.58		
Cognitive Strategies	No	60	3.30	0.47	-0.75	0.458
	Yes	14	3.41	0.58		
Social/Affective Strategies	No	60	3.38	0.60	-0.73	0.465
	Yes	14	3.52	0.82		
All Strategies	No	60	3.33	0.44	-0.48	0.632
	Yes	14	3.38	0.56		
Proficiency	No	60	3.73	0.73	-0.60	0.551
	Yes	14	3.60	0.63		

The listening comprehension strategy use of the subjects is ranked in Table 5. According to Oxford (1990), strategies that had a mean higher than 3.5 were regarded as strategies with high frequency of usage. The strategy use of top ten belonged to high frequency of usage and was distributed into metacognitive and cognitive strategy categories. In the overall 50 learning strategies, the most frequent used strategy item was “When I am listening to the text, I try to understand each word I listen to.” The second was “If I don’t understand, I continue listening seriously to clarify the following sentence.” The two least used learning strategy items were “When I am listening to the text, I use my linguistic knowledge to facilitate my understanding.” and “Before listening, I get ready for the task.” Both of the most frequent used strategies and the least one belonged to cognitive strategy category.

In Table 5, the top five listening strategies by effective learners and ineffective learners are compared. The author found that effective learners adopted ” When I am listening to the text, I evaluate my knowledge of the topic”, “After listening to the text, I evaluate how much I understand.” and “If I don’t understand what someone says to me in English, I would ask him/her for repetition.” most frequently. It showed that effective learners had more self-examination and they asked for help when they had problems.

Table 5. The rank of listening comprehension strategy use

Strategy Item	Strategy Category	All Subjects		Effective Subjects	Ineffective Subjects
		Mean	Rank	Rank	Rank
When I am listening to the text, I try to understand each word I listen to.	Cognitive	3.96	1	1	2
If I don’t understand, I continue	Metacognitive	3.95	2	2	1

listening seriously to clarify the following sentence.					
When I am listening to the text, I focus on my comprehension to make sure of the correctness.	Metacognitive	3.77	3	6	6
When I am listening to the text, I evaluate my knowledge of the topic.	Metacognitive	3.73	4	3	10
When I am listening to the text, I put parts of the detail together to comprehend the text.	Cognitive	3.66	5	10	3
If I lose my concentration temporarily, I try to recover it right away.	Metacognitive	3.66	6	9	7
After listening to the text, I evaluate how much I understand.	Metacognitive	3.65	7	4	13
When I am listening to the text, I guess unknown vocabulary from the context or intonation.	Cognitive	3.59	8	7	8
When I am listening to the text, I listen to the main idea first and then the detail.	Cognitive	3.57	9	-	4
When I am listening to the text, I am aware of my inattention and refocus my attention again.	Metacognitive	3.55	10	8	-
…	…	…	…	…	…
If I don't understand what someone says to me in English, I would ask him/her for repetition.	Social/Affective	3.51	12	5	14
…	…	…	…	…	…
Before Listening, I get ready for the task.	Metacognitive	2.85	49	-	-
When I am listening to the text, I use my linguistic knowledge to facilitate my understanding.	Cognitive	2.26	50	-	-

The results of Pearson product-moment correlation analyses between three predictors and proficiency are listed in Table 6. All of the metacognitive strategy use ($r = 0.432$, $p = 0.000$), cognitive strategy use ($r = 0.225$, $p = 0.050$), and social/affective strategy use ($r = 0.301$, $p = 0.009$) were significantly correlated to the listening proficiency. The bivariate correlation analysis also showed that three categories use were highly correlated, it should be noted in the linear regression analysis.

Table 6 Bivariate correlations between variables

Variable	Metacognitive Strategies	Cognitive Strategies	Social/Affective Strategies	Proficiency
Metacognitive Strategies	1.00	0.79^{**}	0.59^{**}	0.41^{**}
Cognitive Strategies	0.79^{**}	1.00	0.69^{**}	0.23^{*}
Social/Affective Strategies	0.59^{**}	0.69^{**}	1.00	0.30^{**}
Proficiency	0.41^{**}	0.23^{*}	0.30^{**}	1.00

* $p < 0.05$

** $p < 0.01$.

Table 7 shows the results of three-way ANOVA of learning proficiency for these subjects by three listening strategy categories use. The interactive effects among metacognitive strategy use, cognitive strategy use, and social/affective strategy use on learning proficiency were not significantly different. Therefore, the main effect of individual variable was more explainable.

Table 7. Three-way ANOVA of learning proficiency by three strategy categories

Source	SS	df	F	p
Metacognitive Strategies	1.44	2	1.80	0.175
Cognitive Strategies	1.99	2	2.50	0.091
Social/Affective Strategies	3.33	2	4.17	0.021
Interaction:				
Metacognitive* Cognitive	0.34	3	0.28	0.837
Metacognitive * Social/Affective	0.30	2	0.37	0.691
Cognitive*Social/Affective	1.10	3	0.92	0.437
Metacognitive*Cognitive*Social/Affective	1.07	2	1.34	0.271
Error	22.34	56	-	-

How does the strategy use of three categories affect the outcomes of proficiency? Tables 8-10 provide the results of the multiple linear regression analyses for different sets of predictors. Three multiple regression analyses were conducted to predict the students' listening proficiency. One analysis only included metacognitive strategy use as predictor. The second model entered cognitive strategy use as predictor other than metacognitive strategy use. The third model entered social/affective strategy use as predictor other than metacognitive strategy category use. The regression equation with metacognitive strategy category was significant, R2 = 0.169, F change = 14.60, p = .000. It means that this predictor accounts for 16.9% of the variance of proficiency. However, the regression equation with metacognitive and cognitive strategy categories was not suitable because B value of cognitive strategy category was negative (B = -0.537). The reason was that the bivariate correlation between these two independent variables was as high as 0.79. Only one of these two predictors was recommended to enter the regression equation. In regression model 3, the result of T-test of regression coefficient of social/affective strategy use showed this predictor was insignificant (p = 0.496). As a result, regression model 1 was adopted. The regression equation was: proficiency = 1.635 + 0.616*(metacognitive strategy category use).

Table 8 Results of regression analyses for three sets of predictors (model summary)

Model	R	R^2	Change Statistics			
			F Change	df1	df2	p
1	0.411[a]	0.169	14.60	1	72	0.000
2	0.442[b]	0.195	2037	1	71	0.128
3	0.417[c]	0.174	0.47	1	71	0.496

[a] Predictors: (constant), metacognitive strategy use

[b] Predictors: (constant), metacognitive and cognitive strategy use

[c] Predictors: (constant), metacognitive, cognitive, and social/affective strategy use

Table 9. Results of regression analyses for three sets of predictors (coefficients [a])

Model	B	Standardized Coefficient, β	t	p
1. Constant	1.635	-	2.983	0.004
Metacognitive Strategy Use	0.616	0.411	3.821	0.000
2. Constant	1.406	-	2.482	0.015
Metacognitive Strategy Use	1.195	0.754	4.165	0.000
Cognitive Strategies	-0.537	-0.392	-2.169	0.033
3. Constant	1.563	-	2.792	0.007
Metacognitive Strategy Use	0.536	0.357	2.679	0.009
Social/Affective Strategy Use	0.100	0.091	0.685	0.496

[a] Dependent variable: proficiency

Table 10. Results of regression analyses for three sets of predictors (ANOVA [d])

Model	SS	df	F	p
1. Regression	6.154	1	14.601	0.000[a]
Residual	30.349	72		
Total	36.503	73		
2. Regression	7.135	2	8.624	0.000[b]
Residual	29.369	71		
Total	36.503	73		
3. Regression	6.354	2	7.481	0.000[c]
Residual	30.150	71		
Total	36.503	73		

[a] Predictors: (constant), metacognitive strategy use

[b] Predictors: (constant), metacognitive and cognitive strategy use

[c] Predictors: (constant), metacognitive, cognitive, and social/affective strategy use

[d] Dependent variable: proficiency

5. Conclusions

This study investigated the effects of listening comprehension strategy uses on learning proficiency of five-year junior college students. According to the results, the conclusions are as follows. Females employed “metacognitive” strategies more frequent than males do. The general listening comprehension strategy use was almost the same, but the proficiency of female was superior to that of male. The effective learners adopted more listening comprehension strategies than ineffective learners did and significant differences exist in strategy use of each category. The subjects with living abroad experience employed greater use of “cognitive” and “social/affective” strategies. It reflected that they had stronger social orientation. The most frequent used strategy item was “When I am listening to the text, I try to understand each word I listen to.” The second was “If I don’t understand, I continue listening seriously to clarify the following sentence.” The effective learners adopted ” When I am

listening to the text, I evaluate my knowledge of the topic", "After listening to the text, I evaluate how much I understand." and "If I don't understand what someone says to me in English, I would ask him/her for repetition." most frequently. It showed that effective learners have more self-examination and they ask for help when they had problems. The regression model with metacognitive strategy category use as predictor was recommended. It accounts for 16.9% of the variance of proficiency. The regression equation was: proficiency = 1.635 + 0.616*(metacognitive strategy category use)

References

Chang, S. (1992). A study of language learning strategies that overseas Chinese students in the United States employed and the relation of their strategy used to oral proficiency and other factors. The eighth conference on English teaching and learning in R.O.C. (pp. 443-470). Taipei: The Crane Publishing Co.

Chao, Y. G. (1999). EFL listening strategies by English majors in Taiwan. The Proceedings of the Sixteenth Conference on English Teaching and Learning in the Republic of China (pp. 465-479). Taipei: The Crane Publishing.

Cheng, Y. C. (2000). Effects of pictures as cues on English assessment of listening comprehension at junior high school in Taiwan. Master's thesis, National Changhua Normal University, Taiwan.

Chung, C. F. (1999). An investigation of FHK cadets' use of English learning strategies and their relationship to learning achievement. Master's thesis, Fu Hsing Kang College.

Green, J. M., & Oxford, R. (1995). A closer look at learning strategies, L2 proficiency, and gender. TESOL Quarterly, 29, 261-297.

Herron, C. A. & Seay, I. (1991). The effect of authentic oral texts on students' listening comprehension in the foreign language classroom. Foreign Language Annals, 24(6), 487-495.

Hosenfeld, C. (1984). Case studies of ninth grade readers. In J. C. Alderson & A. H. Urquhart (Eds.), Reading in a foreign language (pp.231-249). London: Longman.130

Hsiao, T. Y. (1997). An exploratory study of language learning strategies by learners of English as a second language. The 14th Conference on English Teaching and Learning in the Republic of China (pp. 57-79). Taipei: The Crane Publishing Co., LTD.

Huang, X., & Naerssen, M. V. (1987). Learning strategies for oral communication. Applied Linguistics, 8, 287-307.

Joe, S. (1993). A study of metacognitive awareness and strategy use of EST freshmen in reading English as a foreign language. Research report submitted to National Science Council (NSC82-0301-H-003).

Ku, P. Y. (1998). Strategies associated with listening comprehension of EFL students in Taiwan. The Proceedings of the Seventh International Symposium on English Teaching (pp. 581-591). Taipei: The Crane Publishing.

Lin, S. H. (2000). A study of English listening comprehension strategies used by senior high school students in Taiwan. Master's thesis, National Kaohsiung Normal University, Taiwan.

Liu, D. M. (1996). The relationship between language learning strategies used by high school EFL Students in the Republic of China and their English achievement. Unpublished doctoral dissertation. State University of New York at Albany.

Lu, C. T. (1996). Insights into sexes and language proficiency in language learning strategy for Chinese students of English majors. Master's thesis, National Kaohsiung Normal University, Taiwan.

MacIntyre, P. D., & Noels, K. A. (1996). Using social-psychological variables to predict the use of language learning strategies. Foreign Language Annals, 29, 373-386.

Murphy, J. M. (1987). The listening strategies of English as a second language college students. Research & Teaching in Developmental Education, 4(1), 27-46.

Nyikos, M. (1987). The effect of color and imagery as mnemonic strategies on learning and retention of lexical items in German. Dissertation, Purdue University, West Lafayette.

Okada, M., Oxford, R. L., & Abo, S. (1996). Not all alike: Motivation and learning strategies among students of Japanese and Spanish in an exploratory study. In R. L. Oxford, (Ed.), Language learning motivation: Pathways to the new century (pp. 105-119). HI: University of Hawaii Press.

O'Malley, J. M., & Chamot, A. U. (1990). Learning strategies in second language acquisition. Cambridge: Cambridge University Press.

O'Malley, J. M., Chamot, A. U., & Kupper, L. (1989). Listening comprehension strategies in second language acquisition. Applied Linguistics, 10(4), 418-437.

Oxford, R. L. (1990). Language learning strategies: What every teacher should know? Heinle & Heinle Publishers.

Oxford, R. L., & Ehrman, M. (1987). Effects of sex differences, career choice, and psychological type on adults' language learning strategies. Manuscript. Washington, D. C.: Center for Applied Linguistics.

Oxford, R. L., Hollaway, M., & Murillo, D. (1992). Language learning styles: Research and practical considerations for teaching in the multicultural tertiary ESL/EFL classroom. System, 20, 439-456.

Oxford, R. L., & Nyikos, M. (1989). Variables affecting choice of language learning strategies by university students. Modern Language Journal, 73, 291-300.

Oxford, R. L., Park-Oh, Y., Ito, S., & Sumrall, M. (1993). Japanese by satellite: Effects of motivation, language learning styles and strategies, gender, course level, and previous language learning experience on Japanese language achievement. Foreign Language Annals, 26(3), 359-371.

Paulauskas, S. (1989). The learning and retention effects of learning strategies training on the aural comprehension of beginner adult second language learners. Proposal, Diss., OISE, Univ. of Toronto. (diss. Completed 1993)

Rigney, J. W. (1978). Learning strategies: A theoretical perspective. In H. F. O'Neil, Jr. (Ed.), Learning Strategies (pp. 165-205). New York: Academic Press.

Rubin, J. (1975). What good language learner can teach us? TESOL Quarterly, 9, 41-51.

Rubin, J. (1981). Study of cognitive processes in second language learning. Applied Linguistics, 11, 117-131.

Schmidt, R., Boraie, D., & Kassabgy, O. (1996). Foreign language motivation; Internal structure and external connections. In R. L. Oxford, (Ed.), Language learning motivation: Pathways to the new century (pp. 9-70). HI: University of Hawaii Press.

Sy, B. M. & Liu, S. (1996). Sex differences and language learning strategies. The eleventh conference on English teaching and learning in R.O.C. (pp. 19-51). Taipei: The Crane Publishing Co.

Teng, H. C. (1996). An investigation of EFL listening comprehension strategies used by college freshmen in Taiwan. Research report submitted to National Science Council (NSC 85-2418-H-224-002).

Teng, H. C. (1999). A study of listening comprehension strategies. ERIC Clearninghouse on Languages and Linguistics (ED422745 FL025451).

Thompson, I. & Rubin, J. (1996). Can strategy instruction improve listening comprehension? Foreign Language Annals, 29(3), 333-342.

Vandergrift, L. (1992). The comprehension strategies of second language (French) listeners. Diss. Univ. of Alberta.

Vandergrift, L. (1997). The comprehension strategies of second language (French) listeners: A descriptive study. Foreign Language Annals, 30(3), 387-409.

Wenden, A. (1983). Literature review: The process of intervention. Language Learning, 33, 103-121.

Yang, N. (1993). Beliefs about language learning and learning strategy use: A study of college students of English in Taiwan. The tenth conference on English teaching and learning in R.O.C. (pp. 193-219). Taipei: The Crane Publishing Co.