## THE STUDY OF METACOGNITIVE STRATEGIES ON STUDENTS' LISTENING COMPREHENSION

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## ABSTRACT

Metacognitive strategies involved evaluating and monitoring one's own learning process. Many studies had advocated the effectiveness of metacognitive strategies on English listening comprehension. This study aims to investigate the effectiveness of applying metacognitive strategies on EFL students' English listening comprehension. This study is experimental research. One hundred and fifty students participate in this study. The participants are divided into two groups. The experimental group are provided with the training of metacognitive strategy while the control group keeps the traditional learning situation. Instructional implications will be provided for EFL educators to effectively apply metacognitive strategies in class in order to promote students' listening proficiency.

Keywords: Listening problem, Listening strategies, Metacognitive strategies, Listening comprehension.

## INTRODUCTION

With the importance of learning English, students have English lesson at the early age. Although many students are taught to learn English in the early age, only a few people can balance the four skills- listening, speaking, reading and writing in the same time. One of the major reasons is listening comprehension is difficult component. Furthermore, the entrance exam in Taiwan, focuses on reading and writing. Therefore, the importance of listening is often ignored. In Conaway's (1982) study, the poor listening skill have been pointed out as the main factor among college students. However, listening is the fundamental and vital skill in language learning. Hence, it shows the importance of listening.

Furthermore, there were various research papers demonstrated that listening ability can be trained or taught (Anderson & Lynch, 1988). In addition, O'Malley and Chamot (1989) had pointed out that using the strategic processing can enhance learning ability. Carrier (2003) also advocated good listeners usually use more effective listening strategies to help themselves in language learning. Moreover, there are several studies indicated metacognitive strategies can help students while they are listening (Thompson, Rubin, 1996). However, there are several studies investigated the effect of junior or senior high school students in using metacognitive strategies; there are few studies investigate the effect of college students in using metacognitive strategies. Therefore, this study aims to investigate the effect of metacognitive strategies in listening comprehension on college students.

#### **Research Questions of the Study**

Q: What is the effect of metacognitive strategies in listening comprehension on college students?

### LITERATURE REVIEW

#### The Importance of Listening

Listening is an important process in learning language. It is the language skills which develops faster than speaking and affects the development of reading and writing in learning the new languages (Vandergrift, 1997). Hence, to find out the most effective strategy can also improve students' listening comprehension and enhance their learning ability. For students, the importance of listening in the language classroom is the supplier, also, awareness and use of effective listening skills would assist them in utilizing the language input they received (Vandergrift, 1997). Therefore, listening is a fundamental and vital skill in language learning (Nunan, 2002).

#### **Factors of Listening Difficult**

There are many factors that affected listening comprehension, including language ability, pronunciation, accent, voice, speed of delivery, background knowledge, the speaker, the content of the message and any visual support that accompanies the message (Yao, 1995; Dunkel, 1991; Rubin, 1994). Moreover, Goh (2000) even indicated some problems as follow that affect listening comprehension. First, listeners forget what they heard quickly. Second, listeners can't understand the listening passages. Third, due to the two reasons above, listeners can't understand subsequent parts. Therefore, in order to enhance listener's listening ability, it's important for instructors and learners to examine the factors affect listening comprehension and improve it.

#### **Theoretical Foundation of Metacognition**

#### The Definition of Metacognition

The term metacognition was first advocated by John. H. Flavell in 1970s as cited in Georghiades (2004). Metacognition is to enhance students' learning by becoming more aware of their own thinking. In addition, Flavell (1979) defined metacognition as one's knowledge concerning one's cognitive processes and products or anything that related. Moreover, metacognition involve two essential features indicated as followed (Paris & Wiograd, 1990). First, is to control or executive aspects. Second, is to have a clear knowledge about cognitive and processes. In other words, metacognition refers to self-appraisal and self-management of cognition. Furthermore, metacognition had been defined as two-part; metacognitive knowledge and metacognitive regulation.

According to Flavell's (1979) study, there are three types variable involved metacognitive knowledge. First is personal variable, it can be the learner's self knowledge, i.e. learner's own strength weakness and ability. Second is task variable, it's about the different level of information, i.e. understand the task and determine what to learn. Third is strategy variable- to understand the strategies of how they work. On the contrary, in Brown's study (1987) indicated four parts including panning, monitoring, evaluating and revising. Planning is to determine the approach of learning. Monitoring is to track what learner themselves is doing. Evaluating and revising is to check the approach by learner themselves and determined if it should be revised.

#### The Importance of Metacognition to Listening Comprehension

Since the definition of metacognition had been indicated by many researchers, there are also many researches support the importance of metacognition in cognitive development and academic learning (Brown & Borkowski & Campione, 1983). In addition, understanding and knowing how to control the cognitive process may enhance students' listening ability. Moreover, it is important

for listeners to identify their own strengths and weakness in performing learning tasks (Flavell, 1987). In addition, metacognitive knowledge can help them identify what kind of strategy to use. Even though, metacognitive knowledge doesn't represent listeners actually apply strategies to listening comprehension.

Therefore, the instructor also plays an important role in metacognitive instructing. Anderson (2002) had also indicated that teachers can help learners in developing second language by understanding and controlling cognitive processes at the same time. Furthermore, according to Thompson and Rubin's (1996) study, the result had showed the metacognitive strategies do help students in listening. Moreover, many scholars pointed out metacognitive strategies can enhance learning (Bransford, Brown & Cocking, 1999; Hacker, Dunlosky & Grasser, 1998; Paris & Winograd, 1990). Also, it can foster learners' autonomy and the success in listening (Bacon, 1992; O'Malley & Chamot, 1990; Vandergrift, 1997). Therefore, according to earlier research, it shows metacognitive strategies can help listeners become more active in overcoming listening difficulties.

Besides, Marzano (1988) advocated through metacognitive training can help learners become active participants in their own performance, instead of being the passive recipients of instruction. Hence, if instructor can help learners develop metacognitive strategies in listening, learners will be able to overcome the difficulties and raise the motivation of learning to listen.

## METHODOLOGY

### 1. Participants

The participants of this study were150 freshmen from a private university located in Taiwan. Also, the participants are all English majors and are divided into an experimental group and a control group according to their listening class. The experimental group was provided with a training in metacognitive strategies while the control group remained in the traditional learning setting.

#### 2. Instrument

Five instruments utilized in the current study were the TOEIC listening test, the questionnaire, listening journal, a list of listening strategies and the interview protocol. The listening test contained twenty-five questions and was given via a CD player. This took approximately 10~15 minutes. Secondly, the questionnaire was designed and employed by Huang (2008), Liao (2009) and Hung (2010) with some modification by the author. Besides, the listening journal and the list of listening strategies were only given to the experimental group. The listening journal was given in order to see the feedback and attitude from the experimental group. Also, the list of listening strategies was taught by the researcher. The last instrument, interview protocol which contained ten questions was aimed to acquire in-depth perspective from interviewees.

## Procedure

At the beginning of the study, the participants were divided into experimental group and control group. The researcher found the teachers of these two groups and was permitted to give the pretest on March 9 and March 11. After the pre-test, the experimental group was again divided into group A and group B according to their listening course. In addition, before the metacognitive strategies training, the researcher gave instruction which was related to metacognitive strategies on March 15 and March 18. At the beginning of the instruction, the researcher gave the list of

listening strategies and explained those strategies one by one. The instruction took approximately thirty minutes. After the instruction, the teacher of group A and group B not only remain their own learning situation but apply the metacognitive strategy to the classes from March 15/22 to April 12/16. In addition, during those listening classes, the participants were asked to fill in the listening journal, in order to make sure the participants apply metacognitive strategies to their listening course. At the same time, the control group remained their own traditional learning situation without any metacognitive strategies training.

Six weeks after, on April 26 and April 29, both the control group and the experimental groups were given the post-test. The post-test took approximately  $10\sim15$  minutes and the participants were asked to complete the questionnaire immediately after the post-test. It took approximately  $10\sim15$  minutes also. The interviewees were told to do the interview after they finished the questionnaire. Furthermore, the interviewees were chosen based on their score of the pre-test. In addition, the whole interview process was audio-taped and transcribed verbatim.

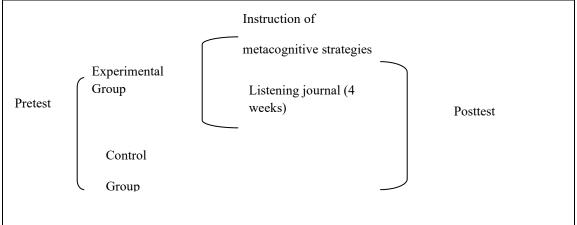


Figure 1: The procedure of the present study

## Results

# Hypothesis: The metacognitive strategies can improve college students' listening comprehension.

Before the instruction for the experimental group, both control group and experimental group were asked to do the pretest (TOEIC listening test) in order to show that there were no significant differences between two groups. The results of the pretest score between control and experimental group were showed in Table 4.

Table 4 T-test Results of the Pretest of Listening comprehension

Group	Ν	Mean	SD	Highest Score	Lowest Score	t	Р	
Control	57	61.19	13.67	92	32	717	.475	
Experimental	60	63.30	17.74	96	28			

Note. p>.05

The experimental group received the metacognitive strategies training for nearly one month, while the control group kept its learning situation. After one month, both two groups were asked to do the posttest, which was also TOEIC listening test. The difference between pretest and posttest in control group and experimental group was showed in Table 5 and Table 6.

Test	Ν	Mean	SD	t	Sig (two-tailed)
Pretest	57	61.54	13.90	-1.333	.188
Posttest	57	65.31	15.74		

Note. p>.05

Table 6. T-tes	st Results	of the pretes	t and posttest in	n experimer	ntal group	
Test	Ν	Mean	SD	t	Sig (two-tailed)	
Pretest	60	63.30	17.74	-3.691	.000	
Posttest	60	73.13	13.92			

Note. p<.05

The result indicated that there was a significant difference in the experimental group between pretest and posttest. The experimental group had received the metacognitive strategies training nearly one month. Therefore, the mean of pretest 63.30 was before metacognitive training; the mean of posttest was 73.13 which represent that not only kept the traditional learning situation but integrating metacognitive strategies into studying can make big progress.

Furthermore, there was also a significant difference between experimental group and control group after the metacognitive strategies instruction. (See table7.)

Group	Ν	Mean	SD	Highest Score	Lowest Score	t	P (two-tailed)
Control	57	66.16	15.91	100	24	-2.527	.013
Experimental	60	73.13	13.92	100	36		

Table7 T-test Results of the posttest in control and experimental group

Note. p<.05

Furthermore, the interviewees had also indicated that they felt the metacognitive strategies was beneficial to their learning. To sum up, after the instruction nearly one month, the significant difference was shown in the posttest; also, most of the interviewees had expressed the metacognitive strategies instruction was advantageous for them in listening comprehension. Besides, in terms of the used of metacognitive strategies, the result indicated that higher-achiever were used more frequently than the lower-achiever. Therefore, the hypothesis two was accepted.

### DISCUSSION

After presenting the findings, a finding in line with results obtained by some previous studies. (Bransford, Brown & Cocking, 1999; Hacker, Dunlosky & Grasser, 1998; Paris & Winograd, 1990; Thompson & Rubin, 1996). These studies indicated that metacognitive strategies could enhance learning. Based on the result of posttest, there was a significant difference after the metacognitive strategies instruction. Therefore, according to the result of the posttest indicated that the students who received metacognitive strategies instruction could make a big progress than the students who didn't received the metacognitive strategies.

Besides, from the responses of the interviewees in the experimental group had also showed that after the instruction, they tried to integrate more listening strategies to their listening course; in other words, instead of being a passive listener, they become more active during listening was in line with results obtained by Bacon (1992), O'Malley and Chamot (1990), Vandergrift (1997). Those studies indicated that metacognitive strategies could foster learners' autonomy and the success in listening. Therefore, it revealed that the metacognitive strategies could enhance students' listening ability.

### SUGGESTION

As to the further researchers, the researcher provides some suggestions as following. First of all, the present study investigated the effect of the metacognitive strategies instruction on college students. It is suggested that further study can employ the metacognitive strategies for different educational levels. Also, in order to gain a better understanding of how students progress when they have sustained explicit training in the use of listening strategies, a study of longer duration is recommended.

## REFERENCES

Afflerbach, P.P., & Johnston, P.H. (1986). What do expert readers do when the main idea is not explicit? In J.F. Baumann (Ed.), *Teaching main idea comprehension*, 49-72. Newark International Reading Association

Anderson, A & Lynch, T. 1988. Listening. Cambridge: CUP

- Anderson, N.J. (2002). *The role of metacognition in second language teaching and learning*. ERIC Document Reproduction Service. No. ED463659.
- Bacon, S. m. (1992a). Phases of listening to authentic input in Spanish: A descriptive study. *Foreign Language annals*, 25(4), 317-333.
- Brandford, J., Brown, A. & Cocking, R. (Eds.). (1999). How people learn: Brain, mind, experience and school. Committee on Development in the Science of Learning, Commission on Behavioural and Social Science and Education, National Research Council. Washington, DC: National Academy Press.
- Brown, A., Bransford, J. D., Ferrara, R., & Campione, J. C. (1983). Learning, remembering and understanding. In J. H. Flavell and E. M. Markman (Eds.) *Carmichael's manual of child psychology* :Vol.1 . New York : Wiley.
- Brown, A. (1987). Metacognition, executive control, self-regulation, and other more mysterious mechanisms. In F. E. Weinert and R. H. Kluwe (Eds.) *Metacognition, motivation, and understanding*, 65-116. Hillsdale, NJ: Lawrence Erlbaum.

Borkowski, J.G. (1985). Signs of intelligence: Strategy generalization and meta-cognition. In S. Yussen (Ed.) The development of reflection in children, 105-144. San Diego: Academic Press.

- Byrnes, H. (1984). The role of listening comprehension: A theoretical base. *Foreign* Language Annals, 17(4), 317-329
- Carrier, K. (2003). Improving high school English language learners' second language listening through strategy instruction. *Bilingual Research Journal* 27, 3, 383-408.
- Conaway, M.S. (1982). Listening: Learning tool and retention agent. In A.S. Algier & K.W. Algier, (Eds.), *Improving reading and study skills*, 51-63. San Francisco: Jossey-Bass.
- Dunkel, P. A. (1986). Listening in the native and second/foreign language: *Toward an integration of research and practice*. TESOL Quarterly, 25(3), 431-457.
- Flavell, J. (1979). Metacognition and cognitive monitoring: A new area of cognitive developmental inquiry. *American psychologist*, 34, 906-911
- Flavell, J. (1987). Speculations about the nature and development of metacognition. In F.E. Weinert and R.H. Kluwe (Eds.), *Metacognition, motivation and understanding*, 21-29. Hillsdale, NJ: Lawrence Erlbaum.
- Georghiades, P. (2004). From the geberal to the situated: Three decades of metacognition. *International Journal of science Education*, 26, 365-383.
- Goh, C. (2000). A cognitive perspective on language learners' listening comprehension problems. *System*, 28, 55-75
- Hacker, D. J., Dunlosky, J. & Graesser, A. C. (1998). *Metacognition in educational theory and practice*. Mahwah, NJ: Lawrence Erlbaum.
- Huang, Y. C. (2008). The Effects of Explicit Teaching of Listening Strategies on Senior High School Students' English Listening Comprehension. Unpublished master's thesis, National Changhua University of Education, Taiwan.
- Hung, L. C. (2010). An Experimental Study on the Effects of metacognitive strategy based English Listening Comprehension Instruction and the Strategy Use on Junior High School Students in Taiwan. Unpublished master's thesis, National Changhua University of Education, Taiwan.
- Liao, K. C. (2009). A Study of Metacognitive Awareness about English Listening of Taiwanese English Majors. Unpublished master's thesis, National Pingtung.
- Marzano, F. J., Brandt, R., Hughes, C., Jones, B. F., Presseisen, B., Rankin, S., et al. (1988). *Dimensions of thinking: A framework for curriculum and instruction*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Mendelsohn, D. (1994). Learning to listen: A strategy-based approach for the second language learner. San Diego: Dominie Press.
- Nunan, D. (2002). Listening in a second language. *The Eleventh International Symposium on English Teaching/Fourth Pan-Asian Conference*, 120-129. Taipei: Crane
- O'Malley, J. M. & Chamot, A. U. (1990). Strategies used by second language learners.
- Paris, S.G., & Winograd, P. (1990). How metacognition can promote academic learning and instruction. In B. F. Jones and L. Idol (Eds.) *Dimensions of thinking and cognitive instruction*, 15-51. Hillsdale, NJ: Lawrence Erlbaum.

- Pressley, M., Borkowski, J. G. & O'Sullivan, J. T. (1985). Children's metamemory and the teaching of memory strategies. In D. L. Forrest-Pressley, G. E. MacKennon & T. G. Waller (Eds), *Metacognition, Cognition and Human Performance,* (pp. 111-153). San Diego, CA: Academic Press
- Rubin, J. (1990). Improving foreign language listening comprehension. In Georgetown University Round Table on Languages and Linguistics, 309-316. Washington Georgetown University Press.
- Rubin, J. (1994). A review of second language listening comprehension research. *Modern Language Journals*, 78(2), 99-126
- Rubin, J. (1996). Using multimedia for learner strategy instruction. In Oxford (Ed.) Language learning strategies around the world: Cross-cultural perspectives (Technical Report#13), 151-156. Honolulu, HI: University of Hawaiii, second Language Teaching & Curriculum Center.
- Thompson, I., & Rubin, J. (1996). Can strategy instruction improve listening comprehension? *Foreign Language Annals*, 29(3), 331-342.
- Van Duzer, C. (1997). Improving ESL learners' listening skills: At the workplace and beyond. Washington, DC: *Project in adult Immigrant Education and National center for ESL Literacy Education*.
- Vandergrift, L. (1997). The comprehension strategies of second language (French) listeners: *A descriptive study. Foreign Language Annals*, 30, 387-409.
- Vandergrift, L. (2003). Orchestrating strategy use: Toward a model of the skilled second language listener. *Language Learning*, *53*(3), 463-496.
- Willing, K. (1988). Learning styles in adult migrant education. Australia: *National curriculum Resource Centre*.
- Yao, C.K. (1995). Needs analysis of freshman English listening curriculum. Papers from the twelfth conference on English teaching and learning in the Republic of China, 80-96. Taipei, Taiwan: The Crane Publishers.