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The Effects of Metacognitive Strategy Instruction
on Listening Proficiency, Listening Anxiety,
and Metacognitive Awareness

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摘要

國中教育會考已於 2014 年開始加考英文聽力。為了增進國中學生聽力理解能力，教師進行聽力策略教學有其必要性。在眾多聽力策略中，後設認知策略尤為重要，它不僅能調整學生使用認知策略的方式以達到更有效的聽力理解，亦能培養學生獨立思考、自主學習的能力。本研究探討後設認知聽力策略教學對於國中學生的聽力表現、聽力焦慮及後設認知覺察的影響。

來自北台灣某公立國中的 56 位八年級學生參與了這次的實驗，受試者分為實驗組(28 人)及對照組(28 人)兩組。實驗為期八週，在此期間，實驗組接受一週兩次共 16 次的後設認知聽力策略教學，教學過程中由研究者引導學生使用後設認知策略步驟來練習聽力。對照組每週亦練習相同的聽力題目，但未接受任何聽力策略教學。所有受試者在實驗前後都接受全民英檢初級聽力測驗，並在測驗後回答聽力焦慮量表(SLLAS)及後設認知覺察聽力量表(MALQ)，以檢視聽力焦慮程度及後設認知覺察的變化。研究者使用了描述性數據，t 檢定，及 ANCOVA 來分析學生的成績及量表填答變化。實驗結束後，兩組中進步最多及退步最多的各五位學生接受訪談，以了解受試者接受聽力測驗時的細節，包含聽力測驗時遇到的問題、焦慮情形、以及聽力測驗時所使用的策略。

本研究發現實驗組在英語聽力測驗的得分並未顯著高於對照組；若與實驗組本身前測相比，則呈現顯著的退步。在焦慮層面，實驗組焦慮問卷的得分與對照組並無顯著差異，但對照組後測的得分顯著地低於其本身的前測，顯示對照組的焦慮程度在後測時顯著地降低。在後設認知策略覺察上，實驗組的表現顯著優於對照組，與實驗組本身前測相比亦呈現顯著的進步，尤其是在引導注意力和心譯兩個面向。學生的訪談中顯示出此教學法對於學生的聽力表現和焦慮程度未能有顯著的改善，但對於聽力後設認知覺察有顯著的提升。依據此研究的發現，我們提出一些在國中英語課堂上實施後設認知聽力教學的建議。

關鍵字：後設認知、聽力策略、焦慮、聽力學習成就

ABSTRACT

Listening comprehension tests have been officially included in the Comprehensive Assessment for Junior High School Students since 2014. To enhance students' listening performance, it is essential for EFL teachers to teach listening strategies. Among the listening strategies, the metacognitive listening strategies are considered to be especially important because they not only help listeners regulate listening comprehension effectively but also help them become more self-regulated and independent. The aim of this study was to investigate whether and how metacognitive listening strategy instruction can affect EFL junior high school students' listening proficiency, listening anxiety, and metacognitive awareness.

The participants in the present study were 56 eighth grade students in a junior high school in northern Taiwan and they were divided into two groups, the experimental group and the comparison group. The experiment lasted for eight weeks. In the eight-week experiment, the experimental group received metacognitive listening strategy instruction, a process-based instruction which focuses on four major metacognitive strategies, twice a week. The comparison group received traditional listening instruction which merely provided listening comprehension exercises, without any instruction on listening strategies. The listening comprehension exercises the two groups did were the same. Before and after the experiment, both groups took GEPT listening tests, Second Language Listening Anxiety Scale (SLLAS), and Metacognitive Awareness Listening Questionnaire (MALQ) to reveal the participants' changes in listening proficiency, anxiety level, and metacognitive awareness. Descriptive statistics, independent-samples t-tests, paired-t tests, and ANCOVA were conducted to analyze the data. Interviews were conducted with five students that made greatest progress or regress in each of the two groups after the experiment to explore details of the listening process, including the difficulties the participants encountered, the anxiety they experienced, and the strategies they used in listening.

The results showed that the two groups had no significant difference in the listening post-test, but the experimental group's listening post-test score was significantly lower than its pre-test score. Similarly, the listening anxiety levels between the two groups did not differ significantly in the post-test, but the comparison group's anxiety level on the post-test was significantly lower than its anxiety level on

the pre-test. The experimental group significantly outperformed the comparison group on metacognitive awareness on the post-test. Similarly, the experimental group's metacognitive awareness scores on the post-test were also significantly higher than its pre-test scores, especially on the factors of directed attention and mental translation. According to the interviews with the experimental group, the metacognitive strategy instruction did not significantly improve the participants' listening performance and anxiety, but the instruction significantly enhanced their metacognitive awareness on listening. Based on the findings, some pedagogical implications are provided for metacognitive listening strategy instruction in junior high school English classes.

Key words: metacognitive awareness, metacognitive listening strategies, anxiety,
listening performance



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CHAPER ONE

INTRODUCTION

Research Background

English is a required foreign language course for students from primary schools to colleges and has received much attention in education in Taiwan. According to the national curriculum guidelines for English, students should master four language skills, including speaking, listening, reading and writing. Although English as a foreign language (EFL) teachers in Taiwan understand that the four language skills are equally important, they tend to put more energy on teaching reading and writing for various reasons. Listening and speaking are less emphasized in class. Therefore, most EFL learners in Taiwan do not have many listening and speaking practices in class, nor do they know how to develop listening and speaking skills by themselves. As a result, they do not have confidence in using English in daily conversations even though they have studied English for many years.

Importance of Listening Instruction

Listening and speaking play important roles in communication. Compared with speaking, listening, which can facilitate other language skills, is even more fundamental in language learning process (Rivers & Temperley, 1978; Vandergrift, 1999). However, listening is also the most difficult skill for language learners to learn because it is the least explicit skill among the four language skills (Vandergrift, 2004). Listening is more than just hearing the sounds; it requires complicated knowledge, like understanding words, phrases, clauses, sentences, and discourse, for listeners to process what they hear correctly (Oxford, 1993). Besides, listeners have to respond in real time and process the input quickly because when the text is over, listeners can only rely on their mental representation to interpret what they heard. As a result, EFL learners need systematic listening instruction to help them comprehend listening materials effectively and improve their listening proficiency.

Even though most EFL teachers in Taiwan understand the importance of teaching listening skills to their students, instruction of listening is often neglected by junior high school teachers. The neglect may be due to the fact that listening is implicit and hard to teach or that it requires a lot of time to develop listening ability. Most EFL teachers in Taiwan may not have so much time to teach students “how to listen” in class, nor do they have enough knowledge of listening instruction. Another

reason for the neglect of listening instruction at junior high schools may be related to students' motivation toward listening. Most junior high school students in Taiwan just want to prepare for the language skills that would be tested in the entrance examines; therefore, their motivation for learning listening skills might not be as high as that for learning reading or writing skills, the only two skills assessed in the entrance examines up to 2013.

To change this situation, the Ministry of Education, Taiwan decided to officially include listening comprehension tests in the Comprehensive Assessment for Junior High School Students in 2014. Because junior high school students have to get good grades in the exam in order to enter their ideal senior high schools, their motivation toward learning listening skills may thus be enhanced. At the same time, more and more researchers emphasize the importance of listening instruction and indicate that listening is an active process and should be taught as a language skill systematically (Gilakjani & Ahmadi, 2011). Under these conditions, EFL teachers at junior high schools in Taiwan start to consider how to teach listening systematically in class so as to improve their students' listening performance.

Approaches to Listening Instruction

In recent years, there has been a growing interest in listening instruction in the last 50 years, and the focus of listening instruction in different periods of time differs (Goh, 2008). In the 1950s and 1960s, listening instruction was influenced by behaviorists and the practice of drills for discriminating sounds and answering comprehension questions based on listening passages was popular (Goh, 2008). In the 1970s and 1980s, listening instruction was affected by sociolinguistics, and responding to spoken texts in socially and contextually appropriate ways became the focus of listening instruction (Goh, 2008). Since 1990s, listening instruction has focused on the use of listening strategies and developing metacognitive awareness of L2 listening (Goh, 2008).

Problems of Listening Instruction in Taiwan

A traditional teaching method that many EFL teachers in Taiwan apply is to ask their students to take numerous listening comprehension tests or quizzes in class. They believe doing different kinds of listening practices through quizzes would improve their students' listening proficiency. These teachers neglect the importance of providing listening instruction, especially listening strategy instruction, which may help students to accomplish their listening comprehension tasks more effectively.

Field (2000) indicated that listening comprehension practice without appropriate strategy instructions would develop in learners a sense of failure and could not help unskilled listeners. EFL learners, especially beginners in learning a foreign language, do not know how to expand their listening ability through listening comprehension practices or quizzes without explicit strategy instruction (Brown, 2000). In addition, instructors cannot easily distinguish those students who partly understand the listening content from those who do not understand the content at all merely based on students' answers to the listening comprehension questions on the quizzes. Hence, researchers suggested that listening instruction should focus not only on the product of listening but also on the process of listening (i.e., how listeners understand the message correctly), such as use of strategies (Arnold, 2000; Sheerin, 1987).

Lack of knowledge about listening strategies may lead to listening anxiety (Vogely, 1998; Kim, 2000). Without proper instruction in listening strategies, students may feel anxious or frustrated when they face difficulties in listening, especially when they notice that they have no ability to deal with listening comprehension problems effectively. They may worry that their misinterpretation or misunderstanding of listening messages will bring them embarrassing outcomes (MacIntyre, 1995). This listening anxiety has negative correlation with listening comprehension (Golchi, 2012; Kim, 2000; Yang, 2012; Zhang, 2013). If students feel anxious at the beginning of the listening comprehension tests and if they cannot control their anxiety, they cannot stay calm enough to work through the difficulties and continue the tests (Chang, 2005). On the contrary, if learners know how to apply strategies to alleviate their anxiety and to monitor their listening process, their performance can be improved (Atasheneh, 2012; Zhang, 2013). The importance of providing effective listening strategy instruction to students in Taiwan is obvious.

Effects of Listening Strategies on Performance and Learning

Since the late 1970s, researchers have started to investigate the effects of listening strategies. Firstly, they found that listening strategies can improve EFL learners' listening comprehension effectively (Chin, 2010; Chou, 2014; Goh, 2006; Hung, 2010; Li, 2009; Lin, 2012; Thompson & Rubin, 1996; Tsai, 2011; Wang, 2014). More importantly, it is found that high ability listeners tended to use more listening strategies and used them flexibly while answering listening comprehension questions. These strategies helped them perform better on the tests. In contrast, low ability listeners tended to merely translate each word and tried to understand every word they

heard (Goh, 2005; Vandergrift, 2003). This strategy is called mental translation, which is not a good listening strategy, and high proficiency listeners avoid using it (Graham, 2006b; Hasan, 2000; Wenden, 1986, 1999). Secondly, some studies showed that listening strategy use and anxiety were negatively correlated (Yang, 2012) and that listening strategies and tactics could alleviate learners' anxiety (Han, 2004; Movahed, 2014).

Among the listening strategies investigated, metacognitive strategies are considered to be especially important in recent years. According to O'Malley and Chamot (1990), metacognitive strategies are "higher order executive skills", which help listeners to use cognitive process to regulate listening comprehension effectively. These strategies include planning, monitoring, problem-solving, and evaluation. Studies have revealed several positive effects of metacognitive strategies. First, use of metacognitive strategies was found to be effective in improving learners' listening performance (e.g., Chin, 2010; Han, 2014; Hung, 2010; Li, 2009; Lin, 2012; Movahed, 2014; Oxford, 2003; Vandergrift, 2002). Secondly, Goh (2008) indicated that learning metacognitive strategies helped learners decrease listening anxiety and increase self-confidence in learning. Thirdly, metacognitive strategy instruction was found to increase learners' metacognitive awareness, defined as "listener awareness of the cognitive process involved in comprehension, and the capacity to oversee, regulate, and direct these process" (Vandergrift & Goh, 2012, p.23). With this awareness, learners will plan, monitor, and evaluate their behavior before, during, and after the process of listening comprehension in order to achieve their cognitive goals (Goh, 2002). Fourthly, metacognitive strategy instruction helped learners know how to apply what they learned to familiar tasks (Movahed, 2014) or transfer learned strategies to different tasks outside the classroom (Vandergrift & Goh, 2012). Learners also became more self-regulated and more independent after receiving metacognitive strategy instruction (Movahed, 2014; Vandergrift, 2002).

Purpose of the Study

Based on the above review of literature, the facilitating effects of metacognitive listening strategy instruction on listening performance and learning seem to be clear. However, few metacognitive listening strategy instruction programs have been applied at junior high schools in Taiwan except for Li (2009) and Hung (2010), none of which explored the effects of metacognitive strategy instruction on listening anxiety though previous research suggests that learning metacognitive strategies could

reduce anxiety. As a result, the aim of this study was to investigate whether and how metacognitive listening strategy instruction affected EFL junior high school students' metacognitive awareness, listening proficiency, and listening anxiety by adopting a quasi-experimental research design. The following research questions are addressed:

1. Does metacognitive listening strategy instruction improve EFL junior high school students' English listening performance?
2. Does metacognitive listening strategy instruction reduce EFL junior high school students' listening anxiety?
3. Does metacognitive listening strategy instruction enhance EFL junior high school students' metacognitive awareness?

Significance of the Study

There have been many studies researching the relationship among general language learning strategies, learning anxiety, and learning performance, but few studies specifically focused on listening strategies and explored how they influence listening performance, listening anxiety, and metacognitive awareness. In addition, few studies focused on instruction of metacognitive listening strategies. Most research, instead, investigated learners' reported use of listening strategies without providing instruction to them. Even though these researchers provided pedagogical implications for teachers at the end of their reports, no solid evidence indicated that their suggestions for teaching would be beneficial for EFL learners, especially for junior high school EFL students, to deal with their listening problems. By conducting an experiment on the effects of metacognitive listening strategy instruction, this study provided more solid evidence for the effects of metacognitive listening strategy instruction. Effective listening instruction has become an important issue to junior high school teachers in Taiwan after listening comprehension tests were officially included in the Comprehensive Assessment for Junior High School Students. The findings of this study thus might help teachers design more effective listening activities in junior high school English classes.

CHAPTER TWO

LITERATURE REVIEW

This chapter consists of five sections to review literature related to listening comprehension, listening anxiety and listening strategies. The first section is an introduction to listening comprehension. The second part discusses listening anxiety. The third part presents listening instruction and studies of listening instruction. The fourth part introduces language learning strategies. Finally, metacognitive listening strategies and studies of listening comprehension strategies are discussed.

An Overview of Listening Comprehension

Listening is recognized as an important language skill which helps language learners receive language input and facilitate other language skills (Vandergrift & Goh, 2012). There has been growing interest in listening research. Thirty years ago, the interest was triggered by Krashen's (1985) proposed input hypothesis, in which L2 learners' exposure to comprehensible input is considered beneficial to cultivate their listening skills and enhance their language acquisition. More recently, research focus has been shifted from what comprehensible listening input is to how learners process listening input. As Taguchi (2002) points out, knowing what strategies listeners apply in their mental processes and what difficulties they encounter while listening can provide better pedagogical suggestions and help learners listen efficiently.

The Process of Listening Comprehension

Listening comprehension is a complex process. O'Malley and Chamot (1990) pointed out that listening comprehension is "an active and conscious process" (p. 133) in which listeners can construct meaning by applying the information hidden from the context. To successfully comprehend the listening message, listeners need to distinguish sounds, understand vocabulary and sentence structures, discriminate stress and intonation, maintain what they hear, and interpret it based on the context within a short period of time. Therefore, listening comprehension needs more support and analysis (Vandergrift, 1999). A better understanding of the listening comprehension processes may inform listening instruction.

Scholars have proposed different types of listening comprehension process. Generally speaking, most researchers (e.g., Mendelsohn, 1998; Oxford, 1993; Rubin, 1994; Vandergrift, 2004) agree that listeners understand the information of input through top-down or bottom-up processes. In the bottom-up process, listeners decode what they hear from small segmentation of sounds, and make the sounds into

meaningful units. Through the process, listeners gradually understand the meanings from phonemes to words, phrases, clauses, full sentences, and discourse (Vandergrift & Goh, 2012). In other words, listeners interpret the message from “lower” levels to “higher” levels (Brown, 2000). On the other hand, in the top-down process, listeners use context and prior knowledge, such as topic, genre, culture, and other schema knowledge in the long-term memory, to interpret the sound stream (Vandergrift, 2004). Although bottom-up and top-down processes seem to work in parallel, these processes rarely operate independently in real listening situations (Vandergrift & Goh, 2012). In particular, proficient listeners can coordinate top-down and bottom-up processes efficiently or even automatically though listeners with lower proficiency apply the bottom-up process more often.

Compared with the common distinction of bottom-up and top-down processes, Anderson (1995) divided the process of listening comprehension into three phases: perceptual processing (i.e. perception), parsing, and utilization. In the perceptual processing phase, listeners use the bottom-up approach to analyze the sounds they hear and retain them in their memory; in the parsing phase, listeners parse the sounds retained in the memory into meaningful units and activate the potential word candidates related to the context or topic; in the utilization phase, listeners relate the meaningful units to their prior knowledge (i.e. schemata) stored in their long-term memory to correctly interpret the hidden meanings. These phases are interconnected and can affect or be affected by the results of processing which precedes or follows (Vandergrift & Goh, 2012).

Similarly, Brownell (1996) proposed the HURIER listening process, which contains six interrelated segments, namely, hearing, understanding, remembering, interpreting, evaluating, and responding. *Hearing* refers to the reception of sounds. *Understanding* is decoding the received passages. *Remembering* is listeners’ retaining and recalling what they hear. *Interpreting* is listeners’ effort in comprehending what they hear based on the context and nonverbal messages. *Evaluating* is listeners’ making careful judgment of their interpretation. *Responding* is listeners’ giving appropriate responses to speakers after they analyze the situation.

Although there are various kinds of listening comprehension processes, most researchers agree that listening is transient and the process of listening often occurs within limited working memory (Rost, 1994). The tasks become more difficult for foreign language learners, who, unlike native speakers, cannot automatically process

listening comprehension and their knowledge of linguistics, sociolinguistics, and the content of the speech are not as rich as native speakers' (Goh, 2002).

Factors Related to L2 Learners' Listening Performance

A variety of factors are considered to facilitate or hinder L2 listening, but very little research can provide empirical evidence to prove that those factors really cause the success or failure of L2 listening comprehension. Vandergrift and Goh (2012) stated listening success is attributed to the factors from three main aspects: cognitive factors, affective factors, and contextual factors. Cognitive factors include vocabulary knowledge, syntactic knowledge, discourse knowledge, pragmatic knowledge, metacognition, prior knowledge, working memory, L1 listening ability, and sound discrimination ability. Affective factors, such as anxiety, self-efficacy, and motivation, can maximize listeners' ability to comprehend listening messages, whereas learners' confidence, their attitude toward L2 listening tasks, and their worry for making mistakes in front of others are believed to have great impact on their listening performance. Contextual factors include the formal/informal distinction and degree of interaction concerning the listening situation.

Several additional factors associated with L2 listening performance have been posited by Rubin (1994). These factors include text characteristics, interlocutor characteristics, task characteristics, listener characteristics, and process characteristics. Text characteristics refer to the variation of listening passages or associated visual support, and thus include text type, three temporal variables (i.e. speech rate, pause phenomena and hesitation), morphological and syntactic modifications (e.g., syntactic modifications, redundancy, morphological complexity, word order, and discourse markers), and other variables (e.g., level of perception, stress, rhythmic patterning perception, and L1/L2 differences). Interlocutor characteristics refer to variation in the speakers' personal characteristics. Task characteristics are the variation in the purpose for listening and associated responses. Listener characteristics are the variation in listeners' individual differences, including language proficiency level, memory, affect, age, gender, background knowledge, motivation, and self-confidence. Process characteristics are the variation in listeners' cognitive activities and in the nature of the interaction between speakers and listeners, and thus involve listening strategies as well as top-down, bottom-up, and parallel processing.

Since there are too many factors which are related to L2 learners' listening performance, some researchers (e.g., Chao & Chien, 2005; Goh, 2000; Graham,

2006a) have turned to investigating what the key factors leading to the failure of their listening comprehension are and what difficulties these listeners encounter while taking listening tasks.

Studies of Listening Difficulties

Goh (2000) posited ten main problems of listening comprehension reported by forty English as a second language learners from Mainland China. The researcher classified these ten problems into three categories based on Anderson's listening process phases: perception, parsing, and utilization. Problems occurring at the perception stage included difficulties with attention and sounds recognition (i.e. which sounds should be regarded as distinct words or groups of words). Parsing problems involved difficulties with developing a consistent mental representation of words. Problems occurring at the utilization stage referred to lack of prior knowledge or inappropriate application.

Similar result was found in a later study done by Graham (2006a), who investigated 595 French learners whose L1 was English and found that the main difficulties the participants encountered in listening comprehension were the delivery speed of texts and lack of ability in distinguishing individual words in a stream of spoken French. Most students attributed their failure of listening to their low ability, the difficulty of the listening tasks and texts, and their ineffective listening strategies. The researcher pointed out that because the participants did not know how to use strategies to monitor the effectiveness of their strategies, they used strategies in isolation and could not combine one strategy with others.

In Taiwan, Chao and Chien (2005) investigated the listening strategies used by college students at different proficiency levels and the difficulties they encountered while taking the listening section of a simulated TOEFL test. The results showed that the lower proficiency learners had difficulties in the listening process, and they tended to translate English into Chinese. On the other hand, the middle-proficiency learners had difficulty in dividing streams of speech into meaningful segments, which requires a lot of cognitive knowledge of foreign language and is related to listeners' language proficiency level. Listeners at the beginning level are often struggled with the limitation of working memory because it is not easy for them to group what they hear into meaningful chunks, which can not only lessen the load of working memory but also be processed effectively (Vandergrift, 2004).

Aside from these cognitive factors described above, affective factors such as

anxiety can also hinder listening comprehension (Vogely, 1998). Unlike cognitive factors which are related to listeners' language proficiency level, affective factors may occur at any proficiency levels, no matter how low or high the language learners' proficiency level is. Hence, it would be important to uncover the impact of such affective factors as listening anxiety on learners' listening performance.

Foreign Language Listening Anxiety

E. K. Horwitz, M. B. Horwitz, and Cope (1986) stated that "foreign language anxiety is a distinct set of beliefs, perceptions and feelings in response to foreign language learning in a classroom and not merely a composite of other anxieties" (p. 128). In other words, foreign language anxiety is a situation-specific anxiety which learners may experience when learning a second or foreign language. Foreign language anxiety relates to three types of anxieties: communication apprehension, test anxiety, and fear of negative evaluation. Communication apprehension refers to the fear associated with communicating with others orally or in other forms (McCroskey & Beatty, 1984). Test anxiety refers to the anxiety which stems from a fear of failure (Horwitz et al., 1986). Fear of negative evaluation is similar to test anxiety, but it is broader than test anxiety. Test anxiety only happens in tests, but fear of negative evaluation could happen in other situations, such as "apprehension about others' evaluations, avoidance of evaluation situations, and the expectation that others would evaluate oneself negatively" (Horwitz et al., 1986, p. 128).

Research in foreign language learning has proved that anxiety would weaken learners' motivation and cause negative affective responses to the foreign language they are studying (Gardener, Lalonde, Moorcroft, & Evers, 1987). Listening anxiety often occurs when learners face a difficult or unfamiliar listening task and do not have enough ability to comprehend it (Scarcella & Oxford, 1992). For example, many less proficient language learners believe that they have to listen to and understand every word in order to comprehend the message successfully. This misconception causes great pressure on low proficiency listeners, and they may have low self-confidence in listening when they find they cannot reach the goal (Vogely, 1998).

Sources of Foreign Language Listening Anxiety

To uncover the sources of listening anxiety and provide pedagogical suggestions, Vogely (1998) investigated sources of listening anxiety reported by 140 Spanish foreign learners and collected their suggestions to alleviate listening anxiety. The results of her study revealed 220 sources of listening anxiety and 165 suggestions for

alleviating listening anxiety were reported. The reported sources of anxiety could be classified into four main categories (i.e. input, process, instructional factors, and personal factors), and so could the suggestions for alleviating listening anxiety. According to the findings of the study, among the four categories of listening anxiety sources, the “input” category received the most responses. In this category, “nature of the speech” (e.g., the delivery speed of the speech) (p.70) was the source which received the most responses, while poor enunciation and different accents were also the sources of anxiety. The most effective suggestion for reducing listening anxiety with input characteristics was “making input comprehensible”. The second major source of anxiety belonged to the “process” category, in which “inappropriate strategies” received the most responses. In other words, if listeners do not know how to use appropriate strategies, like directing attention or listening to the key words, they would easily feel frustrated and anxious when they encounter listening difficulties. However, the participants’ suggestions for alleviating listening anxiety from this category were the fewest. This surprising result showed that learners knew little about listening process, like strategy use, to help them deal with the difficulties. As a result, listening strategy instruction would be beneficial for listeners to cope with their listening difficulties and lower their listening anxiety.

To further explore the sources of and the changes in second language learners’ listening anxiety which were not available in Vogely’s study (1998), Cheng (2005) conducted a longitudinal research, examining 23 EFL learners’ listening anxiety and their changes over one semester. Both audio and video resources were applied in the study in order to investigate under which condition learners’ listening anxiety would be provoked. The result showed that audio-listening activities provoked more anxiety than video-viewing activities. There was a negative association between anxiety and listening grades, and learners’ listening anxiety level was quite stable throughout the semester. To minimize the anxiety provoked by input, she suggested language teachers to ensure the listening materials are at the appropriately difficult level and more comprehensible for language learners. As for the issue of minimizing the anxiety generated in the process, she suggested teachers teach listening comprehension strategies explicitly so that learners can regulate their listening process, manage their emotion, and alleviate their anxiety. As for anxiety which occurs in instructional practices, teachers were suggested to remove students’ fear of negative evaluation and to help them learn listening comprehension effectively rather than just

evaluate their listening comprehension performance. She also proposed new sources of anxiety which were not reported in Vogely's (1998) study, such as texts presented for the first time, the instructional practice of playing audio-tape only once, difficult or unfamiliar comprehension tasks, and a poor physical state. Unlike the results of Vogely's (1998) study, Cheng indicated that while instructional factors (e.g., evolution and testing) received about 30% responses and tended to cause anxiety on students, personal factors only received 3% responses, the number of which was much smaller than that reported in Vogely's (1998) study (about 13%). The differences between the two studies may be due to the difference in participants and Cheng suggested that language teachers, instead of getting confused with the inconsistent findings in different research, should investigate their students' anxieties in their own classrooms so that they can provide more appropriate instruction to alleviate their students' anxiety.

Similar research was conducted by Sharif and Ferdous (2012), who also investigated the sources of listening anxiety based on Vogely's (1998) classification and provided suggestions to help learners to lower their anxiety. The participants included sixty EFL college students and three teachers. Classroom observation and questionnaires were employed as the instruments. The findings showed that listening anxiety is most likely to be associated with input and listening process. Among the listening anxiety sources belonging to input and process, "the nature of speech" received the most responses from the participants, and this finding is consistent with that of the study conducted by Vogely (1998). "Level difficulty" was the second major listening anxiety source, and many participants stated that the materials of difficulty at a higher level, like those containing complicated syntax and unfamiliar vocabulary, would make them feel anxious. In order to lower learners' listening anxiety, Sharif and Ferdous suggested that when designing listening instruction, teachers should take the sources of listening anxiety into consideration. They also suggested that instructors should provide an anxiety-free listening environment and teach students how to use listening comprehension strategies so that students' listening anxiety would be decreased.

Studies of Foreign Language Listening Anxiety and Listening Performance

There have been a great number of studies which investigate the relationship between foreign language listening anxiety and listening performance (e.g., Cheng, 2005; Atasheneh & Izadi, 2012; Golchi, 2012; Zhang, 2013). Atasheneh and Izadi

(2012) investigated the effects of foreign language anxiety on the test results of students' listening comprehension. The findings showed that the high anxious students who lowered their anxiety level after the treatment had a significant improvement in the listening post-test, and there was a moderate but significant negative correlation between anxiety and listening comprehension. The same finding was also pointed out by other researchers (e.g., Cheng, 2005; Golchi, 2012). Atasheneh and Izadi (2012) also indicated that anxiety could hinder the results of listening comprehension tests; therefore, if teachers want to accurately evaluate their students' listening performance, they should take anxiety into consideration. In addition, most of the participants reported that they felt embarrassed and anxious when they made mistakes or being corrected in front of their peers, and they reported that teachers' response was also a source of anxiety. As a result, instructors should help students build their confidence in foreign language learning by giving positive feedbacks, and their expectation for students should be realistic because too much teachers' expectation would also create anxiety. Instructors were also suggested to teach their students strategies, such as listening for main points because intermediate students do not have enough time to listen to every word and they often feel nervous when they fail to catch up with the information while taking the listening tests.

Likewise, Zhang (2013) conducted a study to investigate the possible causal relationship between foreign language listening anxiety and listening performance. Three hundred EFL college students in China participated in the study and Foreign Language Listening Anxiety Scale (FLLAS) was applied to investigate participants' listening anxiety. Zhang's research showed that foreign language listening anxiety could affect foreign language listening performance. This finding was consistent with previous studies (e.g., Golchi, 2012; Atasheneh & Izadi, 2012). Reversely, foreign language listening performance did not appear to systematically affect foreign language listening anxiety. Zhang also indicated that individual difference factors such as self-efficacy, motivation, learning strategies, and self-regulation were important in determining the outcome of learning a foreign language.

Anxiety may also have an impact on use of strategies. Chang (2005) investigated how listening anxiety affects Chinese students' strategy use, and the results showed that the listening strategies applied by the high-anxious students and low-anxious students were very different. High-anxious students were afraid of guessing and tended to focus on hearing every word clearly and translate what they heard into

Chinese. Anxiety was particularly detrimental to high-anxious students, especially at the beginning of the listening part. They were also concerned about the performance of other test takers around them and were easily influenced by others. On the contrary, low-anxious students stayed calm, trying to work through unintelligible information and continuing their listening.

Similar research was conducted by Golchi (2012). The study investigated listening anxiety and its relationship with listening strategy use and listening comprehension. The participants were 63 EFL learners in Iran, who were required to complete questionnaires after a listening comprehension test. From the gathered questionnaires, the researcher found that listening anxiety had negative correlation with listening comprehension and listening strategy use. Besides, learners with low anxiety used metacognitive strategies more often than learners with high anxiety did and performed better in the listening comprehension tests. However, there was no significant difference in the use of cognitive and social-affective strategies between the high- and low-anxiety groups.

Compared to Golchi's study (2012), another similar research conducted by Xu (2013) had different findings. Xu made a survey of the relationship between listening anxiety and listening strategies to understand whether students of different anxiety levels apply different listening strategies. The participants were 178 EFL college students in Mainland China. The findings showed that there was a significant negative correlation between students' listening anxiety and their use of listening learning strategies, especially with their use of cognitive strategies. The latter finding was different from Golchi's (2012) study, which indicated there was no significant difference in the use of cognitive strategies. The difference between these two studies might be due to the different categorizations of listening strategies. Compared to Xu's study, Golchi's study included one more listening strategy, namely, the metacognitive strategy, which is believed to be beneficial to control and manipulate the listening process. But both of them agreed that there was no significant difference in socio-affective strategy use among students of different anxiety levels.

According to the studies discussed above, instructors are suggested to help students lower their anxiety so that they can have better performance in listening comprehension, and the use of effective listening strategies may play an important role in lowering listening anxiety. If teachers can provide strategy instruction and appropriate tasks for students to complete and experience success, students' anxiety

could be reduced, and their confidence and motivation toward learning may be enhanced.

Listening Instruction

Listening is a basic and important skill in language learning, but it did not receive great attention in language teaching and was often viewed as a subordinate skill until the 1970s (Field, 2008). With the advance of technology in global communication, the importance of listening increases and listening instruction has become crucial to non-native speakers (Mendelsohn, 1998). In the past 60 years, listening instruction, which is influenced by different pedagogy, has changed a lot over time. First, in the audio-lingual period, the listening instruction required listeners to repeat and mimic a great number of drills they hear, but the meaning of these sentences might remain unknown to them. Later on, answering listening comprehension questions became a common way in listening instruction (Vandergrift, 2004). More recently, the strategy instruction, which encourages listeners to notice and regulate their listening process, has become the core of listening instruction (Vandergrift & Goh, 2012). To sum up, the focus of listening instruction changed over time, shifting from the product of listening to the process of listening.

History of Listening Instruction

Looking back on the history of listening instruction, there are three different stages of listening instruction in the past 60 years: text-oriented instruction, communication-oriented instruction, and learner-oriented instruction. Text-oriented and communication-oriented instruction emphasize the product of comprehension, and learner-oriented instruction seemingly focuses more on the process of listening, such as cognitive strategy instruction (Vandergrift & Goh, 2012).

In the 1950s and 1960s, listening instruction was text-oriented, which focused on decoding skills, and learners were required to recognize and understand the input component. The most common ways for assessing listening comprehension abilities at this stage was asking listeners to answer different kinds of listening comprehension questions based on the listening passages. However, the listening passages, which were far from the authentic materials, were often “lexically dense and did not represent the linguistic features of spoken texts” (Vandergrift & Goh, 2012, p.7).

The listening instruction in the early 1970s became communication-oriented, focusing on the communication function (Vandergrift & Goh, 2012). The Council of Europe proposed “a model of communicative needs of the archetypal adult foreign

language learners” and started to emphasize the practical function of listening in real world communication. The communicative language teaching (CLT) methodology that emerged in the 1970s brought innovative methods for teaching. Teachers started to apply authentic materials, like songs, movies, and recorded daily conversations to listening instruction. Although different kinds of listening activities were applied in the classroom on the stage, listening was only regarded as an unimportant partner, providing background information without receiving the same importance as speaking and writing (Vandergrift & Goh, 2012). In addition, few teachers provided instruction on self-regulated learning. Until the late 1970s, Munby (1978) proposed models for learning the four language skills, emphasizing that listening was a complex communicative skill like writing and reading, not just an additional skill which could be “picked up” easily by learners.

In late 1970s and 1980s, comprehensive approach became the center of language teaching (Larsen-Freeman, 2000). The teaching method like Total Physical Response and New Approach emphasize the students’ comprehension process more, and listening instruction turned to learner-oriented, emphasizing more on learners’ learning styles and learning experiences. Researchers started to investigate why some learners were more successful in learning foreign languages than others (i.e., good language learner research) and what strategies they used to enhance their learning, and provided some pedagogical suggestions for teaching and learning individual language skills accordingly, including listening (O’Malley & Chamot, 1990; Oxford, 1990; Wenden & Rubin, 1987).

Since 1990s, listening instruction has focused on the strategy instruction. How to apply appropriate strategies while listening becomes the focus of listening instruction, and a strategy-based approach to listening instruction was proposed then (Vandergrift & Goh, 2012). The strategy-based approach, which is influenced by socio-cognitive theory, trains learners how to apply strategies to deal with the difficulties they encounter while listening (Mendelsohn, 1998; Goh, 2008). Teacher-modelling is essential in this approach. Through teacher-modelling, learners learn how listeners construct their understanding of the listening passages and their listening awareness is also raised from the pre-communication activities prepared by teachers (Goh, 2008).

Language Learning Strategies

Learning strategies, as O’Malley and Chamot (1990) defined, are “the special thoughts or behaviors that individuals use to help them comprehend, learn, or retain

new information” (p.1). Proposed by Oxford (1990), another definition describes learning strategies as “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed and more transferable to new situations” (p. 8).

The investigation of learning strategies in second language acquisition first emerged to identify what are the learning strategies that effective second learners use (O’Malley & Chamot, 1990). The “good language learner” research had indicated the effective strategies were reported by learners or were observed in language learning situations and contributed to learning (Rubin, 1975). The results of these studies show that learners do apply learning strategies when learning a second language; in addition, these strategies applied by the learners can be distinguished and classified (O’Malley & Chamot, 1990). Furthermore, learners with learning strategies are more independent and autonomous learners (Oxford, 2003), but many language learners may not be aware of the power of L2 learning strategies which can help them learn more quickly and more effectively (Nyikos & Oxford, 1993). Thus, teachers should remind their students of the importance of their awareness of learning strategies and help them apply appropriate strategies based on the tasks (Oxford, 2003).

Categories of Listening Strategies

O’Malley and Chamot (1990) classified language learning strategies as metacognitive strategies, cognitive strategies, and socio-affective strategies. Metacognitive strategies, which are related to learners’ self-regulatory actions, contain planning, advance organizer, direct attention, selective attention, self-management, self-monitoring, problem identification, self-evaluation, and functional planning. Cognitive strategies, which are techniques that learners apply to manipulate listening materials directly, include repetition, resourcing, grouping, note-taking, deduction, substitution, elaboration, summarization, translation, inferencing, imagery, and recombination. Socio-affective strategies, which learners apply while adjusting their emotion and interacting with instructors or other learners to solve a problem, refer to questioning for clarification, cooperation, self-talk, and self-reinforcement.

Oxford (2003) has further divided L2 learning strategies into six categories, including cognitive, metacognitive, memory-related, compensatory, affective and social strategies. Cognitive strategies include reasoning, analysis, note-taking, summarizing, synthesizing, outlining, reorganizing information to develop stronger

schemas (knowledge structures), practicing in naturalistic settings, and practicing structures and sounds formally. These strategies help learners to deal with language materials directly, and they are significantly related to L2 proficiency and are often used to solve learning problems. Metacognitive strategies include planning for a task, gathering and organizing materials, monitoring mistakes, selecting attention, and evaluating the success of any type of learning strategy. These strategies not only help learners to manage the whole learning process but also influence their cognitive strategy use directly. Memory-related strategies include using acronyms, rhyming, images, keyword method, body movement, mechanical means, and location. These strategies help learners to connect new information with another, and learners will have a deeper understanding and better memorization. Affective strategies, including awareness of one's mood and anxiety level, using positive self-talk, deep breathing, and self-reward, are significantly related to L2 proficiency (Dreyer and Oxford, 1996). Compensatory strategies, such as guessing from the context, help learners make up the missing information, and like cognitive strategies, these strategies are also significantly related to learners' second language proficiency. Social strategies include asking questions for clarification, talking with a native-speaking conversation partner, asking for help while doing a language task. These strategies help learners to work with others and understand the target culture and the language.

The previous two classification schemes are made for language learning strategies in general, whereas Goh (2002) focused on listening strategies and tactics. An inventory of listening strategies and tactics was proposed based on 40 ESL learners' retrospective verbal data. Specifically, in addition to the twelve cognitive strategies proposed by O'Malley and Chamot (1990), Goh (2002) proposed four new cognitive strategies, prediction, contextualization, fixation, and visualization. Goh also added two more metacognitive strategies: pre-listening preparation, and real-time assessment of input, into Oxford's metacognitive strategies (2003). In total, Goh introduced 44 listening comprehension tactics, which were grouped into eight cognitive strategies (i.e., inferencing, elaboration, prediction, contextualization, translation, fixation, visualization, and reconstruction) and six metacognitive strategies (i.e., pre-listening, selective attention, directed attention, comprehension monitoring, real-time assessment of input, and comprehension evaluation). She also indicated that more proficient listeners used both cognitive and metacognitive strategies more effectively, listening comprehension could be improved through

awareness-raising tasks, and that there seemed to be a strong relationship between learners' metacognitive knowledge and strategy use.

Studies of Listening Strategy Use

Many studies have explored the strategies used by learners in listening. Chiu (1997) investigated 163 college students' listening strategies when they took the GEPT listening test. The participants were required to fill out the questionnaires right after they finished each of the three parts in the listening test. It was found that firstly, in general, the participants used affective, metacognitive, and compensation strategies most frequently throughout the three sections of the listening test. To be specific, affective strategies were used most frequently, followed by metacognitive strategies and then by compensation strategies. Secondly, the participants were discovered to use different listening strategies according to the types of listening questions; for example, compensation strategies were used most frequently when learners were confronted with question types involving picture description and question/statement response; affective strategies were applied the most in answering listening questions about a short conversation; memory-related strategies were reported to be used the least in the test. Last but not least, the significant differences between strategy use were found to be mainly related to metacognitive strategies.

Another similar study was conducted by Yang (2012), who investigated the relationship among listening anxiety, strategy employment, and listening performance in three text types. The participants were 211 junior high school students in Taiwan. The results, distinct from those in Chiu's study (1997) described above, revealed that compensation strategies were most frequently used and affective strategies were reported to be least applied. Furthermore, students of low anxiety used more listening strategies, especially compensation and memory-related strategies, and performed significantly better than students of high anxiety, especially in the text types of picture questions and conversations. Most important of all, listening anxiety was found to be negatively correlated with overall listening performance, listening performance in conversation texts, overall strategy use, as well as the employment of compensation, memory-related and metacognitive listening strategies. Therefore, learners' listening anxiety could be regarded as a predictor for their listening performance.

In order to understand what listening strategies proficient and less proficient learners use, Taguchi (2002) investigated the strategies used by college students while they took a listening test and aimed to find out whether there were significant

differences between proficient and less proficient listeners in their strategy use during the test. The findings showed that there was a significant difference between proficient and less proficient listeners in using top-down strategies and their reported sources of listening difficulty. The proficient listeners had better retrospective observations on their strategy use and used top-down strategies more frequently, and this result agrees with previous research (e.g., Conrad, 1985; O'Malley et al., 1989). In other words, proficient listeners seemed to be more aware of their listening process and have better awareness of their strategy use. In addition, the frequency of the use of top-down strategies was positively correlated with test scores. In fact, it was found that there was a wider range in proficient listeners' use of affective and compensatory strategies, whereas the listeners who focused on every word they heard experienced frustration or anxiety when unable to translate every word successfully. The former result reflected Goh's (2005) finding that proficient listeners would flexibly coordinate different kinds of strategies and lower anxiety in listening comprehension; while the latter result actually corresponded to Vogely's (1998) finding that less proficient listeners relied more on bottom-up processing and matched her interpretation that not only do less proficient listeners tend to overload the short-term memory so much that they do not have extra energy to use more important strategies, like predicting or inferencing, but bottom-up processing such as decoding word-by-word would also make listeners anxious and hinder their listening process.

Listeners who want to successfully comprehend listening messages have to engage in mental processes and have their own listening strategies. These strategies include not only cognitive strategies (i.e. knowing how to recognize sounds and structures) but also metacognitive (i.e. knowing how to manipulate and control the listening process) and socio-affective strategies (Goh, 2002). Some researchers further contended that what unsuccessful foreign language learners need most is not cognitive strategies in foreign language learning, but metacognitive strategies such as awareness and control ability (Chiu, 1997; Han, 2014). Though cognitive strategies are significantly related to L2 proficiency, low proficient students may face difficulties while applying cognitive strategies (Oxford, 2003). In contrast, metacognitive strategies can be used by L2 learners at all levels of proficiency and applied to all sorts of language and non-language tasks; and they are often predictors of L2 proficiency (Oxford, 2011). As a result, the instruction of metacognitive strategies is believed to be more beneficial for language learners, and more studies have been

conducted to investigate the effectiveness of metacognitive listening strategies.

Metacognitive Listening Strategies

The importance of metacognition in learning has been proved in the field of cognitive psychology and second language learning (Vandergrift, 2005). Metacognition is important because it enables individuals to construct an understanding of themselves and the world around them, to control their thought and behaviors, and to monitor the consequences of these thoughts and behaviors (Vandergrift & Goh, 2012). Similarly, metacognitive strategies help monitor and regulate or direct the language process (Vandergrift, 1999). Thus, use of metacognitive strategies not only activates learners' thinking process but also improves their learning performance (Anderson, 2002).

Definition of Metacognition

The term "metacognition" was first coined by John Flavell in the mid 1970s. Based on Flavell's (1976) definition, "Metacognition' refers to one's knowledge concerning one's own cognitive processes... active monitoring and consequent regulation and orchestration of these processes in relation to the cognitive objects or data on which they bear, usually in the service of some concrete goal or objective." (p. 232). Goh (2008) further explained metacognition as "an individual's awareness of thinking and learning: what we are thinking, how we are thinking in relation to a learning task or situation and why we are thinking in a particular way" (p.192). Metacognition is often simply defined as "the act of thinking about thinking" (Vandergrift & Goh, 2012, p.5), which refers to learners' ability to monitor and control their thinking and to regulate their learning process.

According to Flavell (1979), metacognition includes two main categories, metacognitive knowledge and metacognitive experience. Metacognitive knowledge is people's stored world knowledge about their cognitive process and the knowledge people can use to manipulate their diverse cognitive tasks, goals and experiences (Flavell, 1979). Wenden (1998) presented a simple definition of metacognitive knowledge as "knowledge about learning" (p. 515). Metacognitive knowledge can further be divided into three categories: person, task, and strategy (Flavell, 1979). Person knowledge is knowledge about how a particular person learns (i.e., how s/he understands her/his own learning process) and the different factors (i.e., cognitive and affective factors) that influence that person's learning. Task knowledge refers to individuals' knowledge about the demands, purpose, and nature of a task. Strategy

knowledge includes the knowledge of cognitive and metacognitive strategies, and also the knowledge about which strategies can be effectively used to achieve a specific goal (Flavell, 1979; Vandergrift & Goh, 2012).

Metacognitive experiences are “conscious cognitive or affective experiences that accompany and pertain to any intellectual enterprise” and these experiences can occur not only during a cognitive enterprise but also before and after it (Flavell, 1979, p.906). Goh (2008) described metacognitive experience as a feeling that a particular individual has about her/ his cognition. In addition, Brown (1987) stated that metacognitive experiences include the use of metacognitive strategies or metacognitive regulation. Metacognitive experiences are beneficial for learners, especially when these experiences provide learners some productive applications of strategies or a further understanding about tasks, themselves, or the world around them (Vandergrift & Goh, 2012).

Categories of Metacognitive Listening Strategies

Researchers have grouped metacognitive strategies into categories in different ways. Brown (1978) divided metacognitive strategies into three categories: planning, monitoring, and evaluation. When applied to listening comprehension, planning involves the process of determining learning or comprehension objectives and ways that can be applied to achieve the goals successfully. Monitoring refers to checking the progress of overall listening process. Evaluation refers to determining whether the learners’ efforts at processing the listening materials or the outcome of a plan are effective or not. O’Malley and Chamot (1990) extended Brown’s categorization by adding one more category of metacognitive strategies: selective attention, which refers to paying attention on certain concepts of the target language to facilitate listening comprehension.

On the other hand, Bacon (1992) proposed thirteen metacognitive listening strategies and divided them into three phases: pre-listening, while-listening, and post-listening. Pre-listening includes setting oneself up for the task, focusing attention, applying an advance organizer, going in with a plan, and vowing to think or listen in the target language. While-listening includes self-management, self-evaluation, monitoring, expressing interest and motivation, expressing lack of interest and loss of focus, as well as being aware of loss of attention (i.e. refocus). Post-listening includes knowing what helped understanding and evaluating comprehension.

Even though there are some differences among researchers’ metacognitive

strategy categories, most of them agree that metacognitive strategies include planning (at the pre-listening stage), monitoring and problem-solving (at the while-listening stage), and evaluation (at the post-listening stage). This categorization somewhat corresponds with Vandergrift's (2004) classification of metacognitive strategies underlying his proposed instructional stages, which is well and widely used by other researchers (Chan, 2005; Chou, 2014; Cross, 2009; Mareschal, 2007). According to Vandergrift (2004), the pedagogical sequence of metacognitive listening instruction should include four main stages: planning, monitoring, problem-solving, and evaluation. These processes not only may raise listeners' awareness of using strategies but also provide scaffolding for listeners when they are processing the listening message. Through these instructional steps, listeners learn how to use metacognitive strategies while taking listening tasks effectively, and their motivation toward listening is enhanced as well (Selamat & Sidhu, 2013). Hence, the present study followed Vandergrift's classification and adopted Vandergrift's metacognitive instructional sequence to teach metacognitive listening strategies.

Studies of Metacognitive Listening Strategies Use

Use of metacognitive strategies has been found to be effective in improving learners' listening performance (Goh, 2002; Oxford, 2003). Wenden (1998) stated that learners who know how to use metacognitive strategies seem to have more advantages than those who do not. For example, learners who know how to apply metacognitive strategies tend to be strategic learners and they have more confidence in their learning abilities. Their speed in learning is also faster and the quality is better. Besides, if failure happens during an activity, they will think thoroughly about inaccuracies, and they regard themselves as continual learners and can deal with new situations successfully.

Chan (2005) investigated what metacognitive strategies Taiwanese college students use in EFL listening process, and whether proficient and less proficient learners use different strategies. She found that the "planning," "monitoring," and "evaluation" strategies were used more by proficient listeners than less proficient listeners, but "problem identification" was used more by less proficient listeners.

Rahimi and Katal (2012) surveyed the awareness of metacognitive listening strategies between EFL university students and EFL high school students in Iran. The researcher indicated that students of different proficiency levels at different ages had different metacognitive awareness. Compared to university students, high school

students were more aware of their metacognitive listening strategies in general. High school students showed higher awareness in mental translation and person knowledge strategies, such as self-efficacy and the ability of knowing the difficulty of the learning tasks. On the other hand, college students used mental translation less than high school students, and they showed less confidence in L2 listening and higher anxiety. The explanation for such a result might be that university students knew the inefficiency of some strategies and avoided them after accepting more advanced instruction. Take mental translation for example, according to the results of Vandergrift's (2003) research, it is often applied by beginners and not encouraged for advanced learners. Therefore, the use of mental translation was avoided among college students. Another finding of Rahimi and Katal's (2012) study is that generally speaking, both college and high school students were more aware of the metacognitive strategies of problem solving than other metacognitive strategies, like person knowledge strategies. This result could be explained by the instruction of Iran, which was teacher-centered, so students had few chances to evaluate their own learning in class and might not have the chance to build their ability to assess the tasks.

Kummin and Rahman (2010) conducted a study to examine the relationship between the use of metacognitive strategies and English performance. The participants were fifty college students in Malaysia. The finding, consistent with other research (e.g., Han, 2014; Yang, 2009), indicated that students who frequently used metacognitive strategies tended to have better performance and were more proficient in language learning. In addition, there were indeed differences in the use of metacognitive strategies between proficient and less proficient learners. To elaborate, proficient students often used a variety of strategies and used them in an orchestrated way; on the contrary, less proficient students could not use strategies appropriately to deal with the listening tasks and check their own understanding of the listening, and their failure in using strategies appropriately may be due to their lack of metacognitive knowledge.

Han (2014) investigated the relationship among listening anxiety, listening proficiency, and metacognitive listening strategies. The participants were 95 sophomores in China, and it was found that there was a significant negative correlation between listening anxiety and listening performance, while a positive correlation existed between metacognitive strategy use and listening proficiency,

especially the use of planning and monitoring strategies. Therefore, it could be inferred that metacognitive strategy use could enhance the listening comprehension process, but listening anxiety would hinder it. In addition, there was a significant negative correlation between listening anxiety and metacognitive strategy use as low-anxious students tended to use metacognitive strategies more actively, whereas high-anxious students were easily distracted while comprehending the listening messages, and it is very likely that this distraction would cause the failure of listening comprehension.

In sum, the findings of the studies discussed above show that there is a positive correlation between metacognitive strategies and listening performance, and that metacognition plays an essential role in the process of language learning (Kummin & Rahman, 2010). Moreover, listening anxiety may increase during the standardized exams, especially the exams in which the listening comprehension section is only played once. Teaching students how to apply metacognitive strategies can be beneficial in reducing EFL learners' listening anxiety. As a result, instructors should teach EFL learners how to apply metacognitive strategies in listening.

Metacognitive Listening Strategy Instruction

Metacognitive instruction is learner-oriented and emphasizes both cognitive and social factors which are related to successful listening (Vandergrift & Goh, 2012). In fact, L1 listeners use metacognitive strategies to regulate their listening comprehension (Vandergrift, 2004). By using metacognitive strategies, L1 learners were found to improve their listening habits, sustain attention more, enhance comprehensive understanding, be aware of processing, and have more reflective assessment (Imhof, 2001). Likewise, metacognitive listening strategy instruction is beneficial to L2 or foreign language learning. The studies related to metacognitive listening strategy instruction are discussed in the following section.

Studies of Metacognitive Listening Strategy Instruction

A number of studies (e.g., Chan, 2005; Chou, 2014; Lin, 2012; Kummin & Rahman, 2010) have suggested that language learners should accept strategy instruction in order to learn independently and effectively, and abundant of research (e.g., Chin, 2010; Feng, 2013; Han, 2014; Hung, 2010; Li, 2009; Rahimi & Katal, 2012; Tsai, 2010) has proved that the use of metacognitive strategies is beneficial to improve language learners' listening performance. The following are studies that apply metacognitive strategy instruction for learners at different ages and in different

countries. A review of such studies may help understand the effectiveness of metacognitive instruction in different areas and at different ages.

Wenden (1987) first applied the concept of metacognition to the field of language learning and indicated that metacognition helped language learners develop learner autonomy. Learners' awareness of listening and learning processes could be potentially enhanced by metacognitive instruction, and learners' ability to use appropriate strategies was also promoted after accepting metacognitive instruction.

To investigate the effectiveness of different kinds of strategies, O'Malley and Chamot (1990) conducted a study to investigate the effects of three different kinds of strategy instruction (i.e. cognitive, socio-affective, and metacognitive instruction) on listening performance. The participants were ESL high school students and were divided into three groups. One group received three-strategy instruction (i.e. metacognitive, cognitive, and socio-affective strategies), another received two-strategy instruction (i.e., cognitive and socio-affective strategies), and the other received no instruction. The results showed that the participants from the first group had better performance than the second group on three out of the four tests, and that those who did not receive any instruction had the worst performance among the three groups.

Likewise, Thompson and Rubin (1996) also conducted a study to investigate the influence of metacognitive and cognitive strategy instruction on listening performance. The participants were divided into two groups: the experimental group, who received systematic training in listening strategies, and the control group, who did not receive any instruction. The outcome of their research showed that the participants who received listening strategy instruction had improved significantly after the treatment.

Recently, some researchers have narrowed down the focus of studies only on metacognitive strategy instruction. Some of the studies show that metacognitive listening strategy instruction is effective to enhance students' listening performance, while others did not show significant effect of metacognitive listening strategy instruction on listening performance though they still provided thoughtful pedagogical implications. For example, Hung (2010) explored the effect of metacognitive strategy instruction on listening performance. The participants were 93 junior high school students and they were divided into two groups: one was the experimental group, who received strategy instruction including six metacognitive listening strategies (i.e., advanced organization, directed attention, selective attention, self-management,

performance evaluation, and problem-identification) for twelve weeks, while the other was the control group, who did not receive any strategy instruction. Metacognitive Strategy on Listening Activity Questionnaire (MSLAQ) and the GEPT listening proficiency tests (elementary level) were administered in both pre-test and post-test. The results of the study showed that metacognitive listening strategy instruction had a positive impact on students' English listening comprehension, and metacognitive listening strategy instruction was beneficial especially for less proficient students.

Similarly, Coşkun (2010) conducted a study to explore the effect of metacognitive strategy training on listening performance. The participants were forty EFL college students and were divided into two groups, the experimental group and the control group. The experimental group received five-week metacognitive listening strategy instruction, while the control group did not receive any instruction. It was found that those who received metacognitive listening strategy instruction enhanced their listening performance. Despite the encouraging finding for promoting metacognitive listening instruction, Coşkun cautioned that the result should not be generalized to all EFL contexts in a certain country or all over the world; in addition, the number of participants, the duration of strategy training, and other different variables should be taken into consideration.

In addition to increasing metacognitive awareness, metacognitive strategy instruction could help students decrease their anxiety and improve their confidence and listening performance (Movahed, 2014). Movahed investigated 55 Iranian college students' metacognitive awareness and listening anxiety after they received metacognitive strategy instruction. The results showed that the intervention of metacognitive strategy instruction had a positive effect on students' listening performance and was strongly effective in increasing students' metacognitive awareness to deal with listening tasks and in reducing students' anxiety. In addition, metacognitive strategies instruction helped students be more self-regulated and more responsible for their own learning.

However, a similar research conducted by Lin (2012) showed different results. She investigated the effect of metacognitive listening instruction on EFL learners' listening performance. The participants were 140 elementary school students divided into an experimental group and a control group. The experimental group received three-month metacognitive instruction, while the control group did not receive any instruction. Metacognitive Awareness Listening Questionnaire (MALQ) and two

listening comprehension tests were administered at the beginning and end of the study. The findings showed that there was no significant difference between the two groups' listening comprehension scores on the post-test. However, the awareness of metacognitive strategies in the experimental group was significantly higher than that of the control group, especially for directed attention and person knowledge strategies. Furthermore, learners in the experimental group showed growing self-efficacy in the English learning process.

Selamat and Sidhu's (2013) findings on metacognitive strategy instruction were also not positive. They investigated the effects of metacognitive strategy instruction on the academic listening comprehension abilities of undergraduate students. The participants were 34 first-year students from the Faculty of Education in a public college in Malaysia. All of them were from non-English speaking backgrounds. The participants were given a TOEFL listening test as the pre-test, and then they underwent the metacognitive strategy training for ten weeks in order to improve their lecture listening skills and metacognitive strategy awareness. The participants were asked to answer a questionnaire based on MALQ during the ten-week intervention, and they were also interviewed after the intervention. The metacognitive strategy instruction includes listening tasks, like stories and academic lectures. The findings of the study were that there was a lack of awareness in strategies, even though the learners' listening comprehension performance improved significantly after the experiment, and that many students who used metacognitive strategies did not realize that they were actually using them. It indicated that strategies were seldom taught to students explicitly and were often neglected in language instruction. Other important findings of this study include students' frequent use of mental translation, directed attention, and problem-solving strategies. The problem that most students encountered while listening to the lectures was that they could not stay concentrated for a long time, so they used strategies like using their prior knowledge and refocusing when they have problems of concentration.

It can be observed from the discussion above that the effects of metacognitive strategy instruction on listening performance were mixed though it seems to help reduce listening anxiety and increase metacognitive awareness. More research is needed to clarify the effects.

Models of Metacognitive Listening Strategy Instruction

There are many strategy instruction models proposed by scholars, and the phases

included in the models are mostly overlapped. Oxford (1990) proposed a six-phased instruction model and modified it in 2006. This model contains preparation, learners' continuing to raise awareness, model and name strategies, practice, evaluation and transferring (or expanding and adapting), and learners' continuing to increase ownership. The model is a continuous cycle, and learners can go back to the first phase when they finish the sixth phase. This model has more phases than other models (e.g., Chamot, Barnhardt, El-Dinary, & Robbins, 1999; O'Malley & Chamot, 1990) and clearly describes what learners should do in every phase.

O'Malley and Chamot (1990) proposed a similar instruction model, but it only contains four phases: students' identifying their present learning strategies, teachers' explaining additional strategies, teachers' providing opportunities for practice, and teachers' assisting learners in evaluating their success with the new strategies. Compared with Oxford's (1990) model, this model omitted two parts: continuing to raise awareness, and expanding and adapting, and it seems to put more emphases on teachers' part, and learners may have fewer chances to apply strategies to further tasks and may not become independent learners because teachers will not release the control on their strategy learning.

Chamot et al. (1999) developed a five-phased listening instruction, including preparation, presentation, practice, self-evaluation/ expansion, and assessment. This model is almost identical to Oxford's (1990) model and only omits Oxford's second phase (i.e., continuing to raise awareness). For some instructors, it is more effective to spend time on teaching learners new learning strategies instead of brainstorming learners' current strategies. The model is suitable for those who do not have much time on strategy instruction or those who want to narrow down the focus of strategy instruction.

Unlike the strategy instruction models illustrated above, the metacognitive listening strategy instruction applied in the present study was based on Vandergrift and Goh's (2012) metacognitive listening pedagogical procedures, which was based on Vandergrift's (2004) procedure. Vandergrift and Goh's (2012) model adopts a process-based approach, which contains planning/ predicting, first-listening, first verification and plan with peers for second-listening, second-listening, second verification and text construction or other comprehension activities, third-listening, final verification, reflection, and goal-setting. According to Vandergrift and Goh (2012), the metacognitive listening strategy instruction refers to a sequence of

instructional procedures which help increase listeners' metacognitive knowledge about themselves, the listening tasks, and strategies for listening. Through the instruction, listeners learn to plan, monitor, and evaluate their efforts at listening comprehension and their progress of their overall listening development. In addition, the teacher's modelling and the listening practices provided along the cycle of metacognitive listening strategy instruction help learners understand how to listen. Vandergrift's (2004) study indicated that students' awareness of metacognitive knowledge and self-regulation in listening indeed had been improved after they completed listening tasks by using the four major metacognitive strategies: prediction, monitoring, problem-solving, and evaluation. Students of different ages also agreed that their motivation toward L2 learning had been enhanced after learning metacognitive strategies because the strategies could help them understand authentic texts fast delivered, build their confidence, and enhance their ability to comprehend oral messages. More details of the metacognitive listening strategy instructional procedures will be introduced in chapter three.

In conclusion, although there is abundant research investigating the effectiveness of metacognitive strategy instruction on listening performance, the results do not seem to be consistent. Besides, except for listening performance, few studies investigated the effects of metacognitive listening strategy instruction on EFL junior high school students' metacognitive awareness and listening anxiety. Thus, there is a need for investigating the effects of metacognitive listening strategy instruction on listening proficiency, listening anxiety, and metacognitive awareness. The present study served as a complement to the literature on metacognitive listening strategy instruction.

CHAPTER THREE

METHOD

The goal of the present study was to investigate the effectiveness of metacognitive listening strategy instruction. The study aimed to discover whether metacognitive strategy instruction improved EFL learners' listening performance and reduced listening anxiety. In addition, the study investigated whether EFL learners' awareness of strategy use improved after receiving metacognitive strategy instruction. The following sections explain the design of the research, including the participants, the instruments, data collection procedure, and data analysis procedure.

Research Design

The design of the study was quasi-experimental, with an experimental group (with intervention) and a comparison group (without intervention). The duration of intervention lasted for eight weeks, from April to June, 2015. The experimental group received metacognitive strategy instruction and did listening comprehension exercises in the experiment. The comparison group received traditional listening instruction which merely provided listening comprehension exercises, without any instruction on listening strategies. The listening comprehension exercises the two groups did were the same. The materials used for the listening exercises were derived from the listening section of General English Proficiency Tests-Elementary Level compiled by Zhang and Gu (2013), which contained mock listening tests. As listening practice materials, six questions were played to the participants in the experimental and the comparison groups each week in the duration of experiment. A pilot study on the instruments and instructional procedures was done before the formal study.

The Pilot Study

In order to make sure the instruments and instructional procedures used in the present study are suitable, as well as to measure the time needed for the tests and the metacognitive strategy instruction, the researcher conducted the pilot study in March, 2015. Twenty- six students in the same junior high school as those in the formal study were chosen by convenient sampling. They were required to complete the listening tests and the questionnaires as soon as possible so that the researcher could measure how much time would be needed in the formal study. The students were also asked to give feedback on the wording of the items. In this way, the researcher could modify the ambiguous words or questions in the questionnaires. In addition, the procedures of one lesson's metacognitive strategy instruction were gone through in the pilot study.

Thus, the researcher assured good pacing of the instruction in the formal study. The students were also encouraged to give feedback after receiving the instruction. The researcher modified the instructional plans based on the results of the pilot study.

Participants

The participants in the formal study were 56 eighth grade students (28 males and 28 females) in a junior high school in Taoyuan City, Taiwan. It's almost impossible to randomly arrange individual students into any groups because of the management policies of schools; therefore, the participants were chosen from two intact classes, one as the experimental group ($n = 28$) and the other as the comparison group ($n = 28$) in the same junior high school, whose performance on monthly English listening comprehension tests did not differ significantly ($t = 1.04, p = .30$). The participants had learned English as a foreign language in school for at least five years and they had five English classes per week and the instructional time in each class period was 45 minutes. The traditional listening practices provided for the students in the school included listening practices in the workbook and textbook. In every monthly test, 20 to 30 marks out of 100 were allocated to listening comprehension questions.

Data Collection Procedures

One week before the experiment, both of the experimental and comparison groups took pre-tests to provide baseline data on the participants' listening proficiency, anxiety level, and metacognitive awareness. After the eight-week intervention, both of the two groups took post-tests on listening proficiency, anxiety, and metacognitive awareness. The pre-tests and post-tests were mostly the same, except that the pre-tests contained one more questionnaire on the participant's background and that the tests used to assess listening proficiency differed. The two sets of tests provided quantitative data for the researcher.

In the eight-week intervention, students in the experimental group were asked to write their reflections of learning on a listening worksheet, right after each period of strategy instruction. The worksheets provided qualitative data. Further qualitative data were provided by interviews with students that made greatest progress or regress in each of the two groups.

Instruments

The instruments used in the present study included two listening comprehension tests, a questionnaire that included the participants' background information, Vandergrift, Goh, Mareschal, and Tafaghodtari's (2006) Metacognitive Awareness

Listening Questionnaire (MALQ) translated by Li (2009), and Cheng's (2014) Second Language Listening Anxiety Scale (SLLAS). In addition, semi-structural interviews and the worksheets which were used in the intervention also served as instruments for data collection in the present study.

The Listening Comprehension Tests

The listening tests applied in the pre-test and post-test of the present study were derived from the listening section of General English Proficiency Tests (Elementary Level) published by the Language Training and Testing Center in 2009 and 2011. The difficulty of these two tests was similar, and both of them contained 30 multiple-choice items. Each test took 20 minutes to finish.

The General English Proficiency Test (GEPT) is constructed by the Language Training and Testing Center in Taiwan and has been widely applied in Taiwan's studies of language learning as the instrument for assessing participants' English proficiency level. According to the Language Training and Testing Center (LTTC), the listening tests of GEPT Elementary Level have a high reliability ($KR-20 = .80$) (LTTC, 2008). In addition, a review of the GEPTs indicated that the reliabilities of the GEPTs are mostly in the high .8 range (Roever & Pan, 2008), which is similar to other standardized proficiency tests like TOEFL and IELTS.

The GEPTs contain five proficiency level tests: Elementary, Intermediate, High-Intermediate, Advanced, and Superior. According to the descriptions of the GEPTs, graduates of junior high schools with basic English proficiency can pass the elementary level of the GEPT, and the question types of the listening section of the GEPT are also similar to the listening comprehension questions of the Comprehensive Assessment (CA) for junior high school students. As a result, the researcher used the elementary level of GEPT to determine the participants' listening proficiency. The listening comprehension section of the elementary level of the GEPT contains three parts, including picture description, response to the statement or question, and short conversation. In *picture description* section, listeners have to listen to the description of a picture and select the correct description for a picture printed on the test paper. The second part is *response to the statement or question*. Listeners have to select a suitable response to a question. The third section is *short conversation*. Listeners listen to short conversations between people, and answer the questions based on their comprehension of the conversations.

Participants' Background Questionnaire

The background questionnaire (See Appendix A) used in the study was adapted from Tsai (2010) and Hung (2010). The questionnaire included participants' gender, exposure time to English per week, the length of studying English, whether the participants had stayed or lived in English-speaking countries, and whether the participants had passed the elementary level of GEPT. The questionnaire was written in Chinese so that the participants could have better understanding of the questions and their answers would be more reliable. This questionnaire was used only in the pre-test.

Metacognitive Awareness Listening Questionnaire (MALQ)

The Metacognitive Awareness Listening Questionnaire (MALQ, Appendix B) constructed by Vandergrift, Goh, Mareschal, and Tafaghodtari (2006) is a 6-point-Likert scale with 21 items. The MALQ is a self-report questionnaire and is constructed for researchers to assess second language learners' metacognitive awareness and the use of metacognitive listening strategies. It was used as part of the pre-test and the post-test in the present study. To align with the response format of the listening anxiety scale, a 5-point-Likert scale was used instead of the 6-point scale. The MALQ assesses five factors of listening strategies, including *planning and evaluation*, *directed attention*, *person knowledge*, *mental translation*, and *problem-solving*. Table 1 presents the categorization of the items in MALQ. According to Li (2009), the Cronbach's alpha reliabilities for the MALQ were acceptable, ranging from .68 to .78. The MALQ was originally written in English; it was translated into Chinese by Li (2009) to ensure the participants in her study could understand the questions. The Cronbach's alpha reliabilities of the Chinese version as a whole was .90, and its split-half reliability for the first section was .83 and for the second section was .82 (Li, 2009). All of the values indicate that the Chinese version of the MALQ is reliable.

The participants' responses to the MALQ were transformed into points and the scores they got were assumed to reflect their metacognitive awareness in listening. Stronger agreement with the statements got more points (i.e. "strongly agree" equaled five points, "agree" equaled four points, "neutral" equaled three, "disagree" equaled two, and "strongly disagree" equaled one). But items 4, 8, 11, 16 and 18 were reverse scored; that is, a stronger agreement with these items was transformed into fewer points and vice versa.

Table 1

The Factors of the MALQ

Factors	Description of the Factor	Items
Planning & evaluation	Prepare for listening.	1, 10, 21
	Evaluate the results of their listening efforts.	14, 20
Problem solving	Make inference (guess at the unknown part) and monitor the inference.	5,7, 9, 13, 17, 19
Directed attention	Concentrate or maintain concentration on tasks.	2, 6, 12, 16
Mental translation	Translate heard information into L1. (Listeners must learn to avoid this if they want to be skilled listeners.)	4, 11, 18
Person knowledge	Listeners' perceptions and self-efficacy in L2 listening.	3, 8, 15

Second Language Listening Anxiety Scale (SLLAS)

The listening anxiety scale applied on the pre- and post-tests of the present study was Cheng's (2014) Second Language Listening Anxiety Scale (SLLAS). The SLLAS includes only nine questions (Appendix C), measuring three dimensions of listening anxiety: cognitive, somatic (physiological), and behavioral. According to Cheng (2014), the construct validity of the SLLAS was ascertained based on a confirmatory factor analysis, which yielded fit indexes meeting the recommended criteria (normed $\chi^2 = 1.24$; SRMR = .03; RMSEA = .04; CFI = 1.00; GFI = .97). The internal reliability of the SLLAS (Cronbach's alpha = .83) was also satisfactory.

Listening Worksheets

The listening worksheets for the experimental group (Appendix D) provided guidance for students to practice four major metacognitive strategies while doing listening exercises: planning, monitoring, problem-solving, and evaluation. These four strategies were chosen based on Vandergrift and Goh's (2012) metacognitive approach to listening. The strategies were presented on the worksheet in the sequence

of planning, monitoring, problem-solving, and then evaluation. Details about these metacognitive strategies are shown in Table 2.

Table 2

Descriptions of the Metacognitive Strategies Instructed

Metacognitive Strategy	Description
Planning	<ul style="list-style-type: none"> • Preview the content and prepare for listening. • Predict key words and phrases of the listening material. • Consider strategies for dealing with the possible challenges.
Monitoring	<ul style="list-style-type: none"> • Check understanding of messages by applying appropriate language knowledge (e.g., contextual and linguistic) and world knowledge. • Determine accuracy of understanding between old and new information. • Determine whether the approach adopted to understand the text is effective or not.
Problem-solving	<ul style="list-style-type: none"> • Adjust their approach by applying more appropriate strategies (e.g. revise predictions or adjust pervious inference to new possibilities). • Make inference from the understood content.
Evaluation	<ul style="list-style-type: none"> • Check overall acceptability of understanding of information. • Confirm comprehension based on a transcript of the text. • Check accuracy of understanding between old and new information. • Assess the effectiveness of strategies for listening practice.

Note. Adapted from Vandergrift and Goh (2012, p.106).

At the end of the worksheet, the participants were asked to write down their reflections on the listening tasks. The worksheets were collected after each class.

Semi-structured Interview Guide

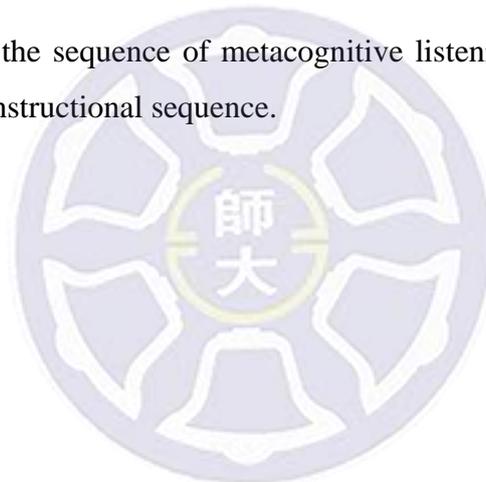
In order to explore the reasons why participants in the experimental or the comparison groups made progress or regress greatly after the intervention, and to

supply data gathered from the questionnaires and the worksheets, interviews were applied in the study. From each group, five participants whose listening performance improved the most in the eight-week experiment and five participants whose performance regressed the most were chosen as the interviewees. The interviews were guided by pre-determined questions (Appendix E) that explored details of the listening process, including the difficulties the participants encountered, the anxiety they experienced, and the strategies they used in listening.

Metacognitive Strategy Instruction Procedure

In the eight-week treatment, the experimental group received instruction of metacognitive listening strategies, a process-based instruction which focused on four major metacognitive strategies: planning, monitoring, problem-solving, and evaluation (Vandergrift & Goh, 2012). The instruction was conducted twice a week, 45 minutes each time.

Figure 1 presents the sequence of metacognitive listening instruction, followed by descriptions of the instructional sequence.



Metacognitive Strategy Instruction Procedure

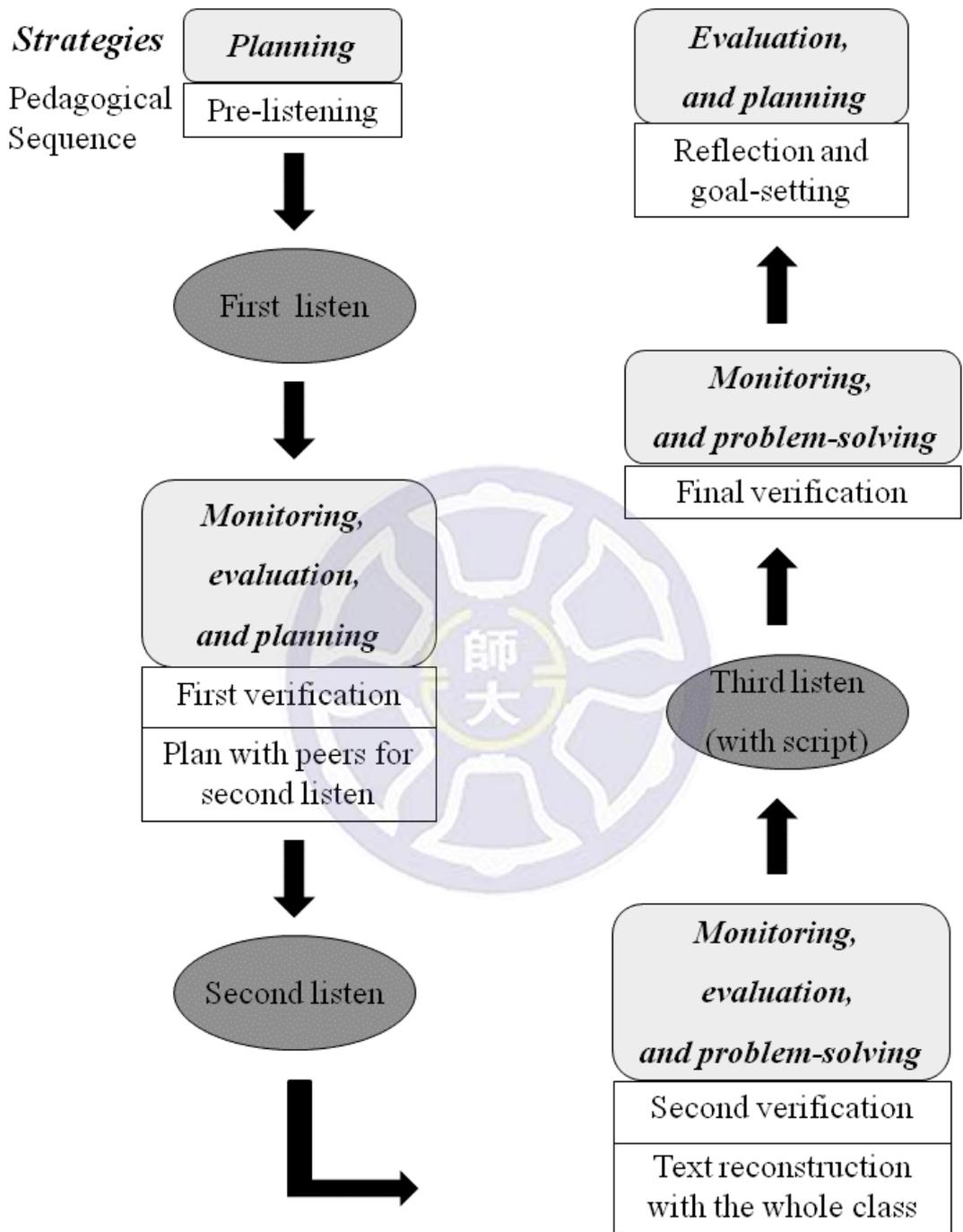


Figure 1. Stages in the Metacognitive Pedagogical Sequence for Listening Instruction
 Note. Adapted from Vandergrift and Goh (2012, p.109)

1. *Pre-Listening Stage—Practice of the Planning Strategy*

Before listening to the first question, the instructor led the students to read the answer choices of the question carefully and made predictions on the possible content they were going to listen to. The instructor wrote down the key words of the predictions made by the students on the board, and the students also had to write down their own predictions in section A of their own listening worksheets. In addition, the students had to decide what strategies they would apply to deal with the possible challenges, and wrote down these strategies in the worksheets.

2. *First Verification Stage—Practice of the Monitoring, Evaluation, and Planning Strategies*

After the prediction exercise, the students listened to the question for the first time. The students were led to clarify their original predictions and noted additional information on the worksheets. They were asked to place a circle beside their correct predictions and a cross beside their wrong predictions listed in section A of the worksheet based on their language knowledge and world knowledge. Also, they had to write down the information they heard which was beneficial for answering the question in section B of the worksheet. Then, the students worked in pairs, sharing their notes, discussing differences of their notes in section B, and deciding which part they would pay more attention to in the second time of listening in order to check the accuracy of their understanding. The students evaluated whether their strategies used in the first listening were efficient for the listening task or they should apply more effective strategies.

3. *Second Verification Stage—Practice of the Monitoring, Evaluation, and Problem-solving Strategies*

After the second time of listening, the students were led to decide the accuracy of the notes they wrote down in section B by marking circles or crosses, made revisions on their previous notes, and wrote down the revisions and new information they noticed this time in section C of the worksheet. The students then were given time to work with their partner again, sharing the new information they wrote down in section C and their comprehension problems, and working together to solve the differences between their previous understanding and their new understanding. The students were guided to adjust their approach to more appropriate strategies, and made inferences about the meanings of the words they did not understand by deducing from the information

they had already understood. After that, the instructor led the whole class to discuss what they heard, asking the students to share their notes and reconstructed the main points and important details with the whole class.

4. *Final Verification Sage—Practice of the Monitoring and Evaluation Strategies*

When the instructor thought the main points and supporting information had been reported, she asked the students to listen for the third time and verified the parts that they could not understand earlier. They also had to check the accuracy of their notes in section C. A transcript of the text was given to the students while they listened for the third time. That way, they could more precisely check their understanding. In addition, the students had to assess the effectiveness of the strategies they applied for the listening practice.

5. *Reflection and Goal-setting Stage—Practice of the Evaluation and Planning Strategies*

In each class, the instructor led the participants to practice three listening comprehension questions according to the metacognitive pedagogical sequence (from stage 1 to stage 4) described above. At the end of the class, the instructor led the class to discuss the strategies that they applied to solve the difficulties and the effectiveness of these strategies in listening comprehension. The participants were asked to write down what they learned in class and set their goals for the next listening class.

When the participants got familiar with the sequence and the metacognitive strategies, the instructor's support was lessened to leave the participants more time to apply their strategies individually so that they learned how to regulate these processes on their own and developed learner autonomy in listening.

To illustrate the difference of the instruction between the experimental group and the comparison group, a comparison of the instructional procedures between the two groups is shown in Figure 2. The times of listening comprehension questions played in both groups were the same, but the comparison group had extra time to do reading and writing exercises on the workbook.

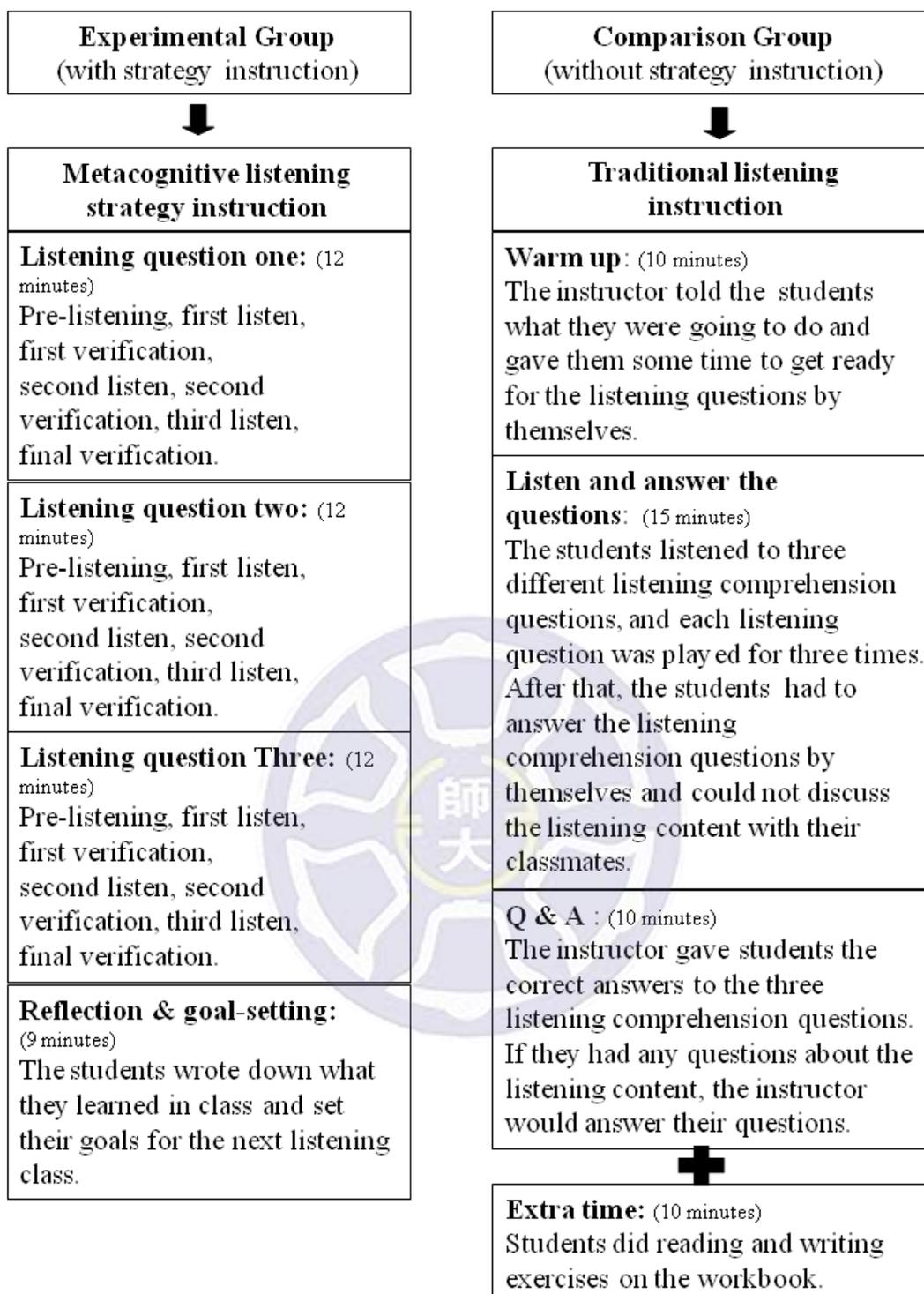


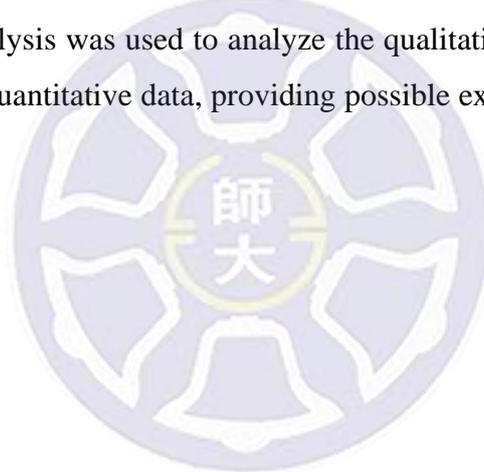
Figure 2. The Comparison of the Instructional Procedures between the Two Groups

Data Analysis Procedure

The scores of the pre- and post-tests (including two sets of listening comprehension tests and questionnaires) and the qualitative data collected from the worksheets and the interviews provided the researcher data to understand whether and

how the participants' listening performance, use of listening strategies, metacognitive awareness, and listening anxiety changed over the eight-week treatment.

For the quantitative data, descriptive statistics, independent-samples t-test, paired-t test, and ANCOVA were conducted in the study. Descriptive statistics were computed with the data collected from the listening comprehension tests as well as the questionnaires. Independent-samples t-tests were run to detect if there were significant differences between the experimental and the comparison groups in listening comprehension performance, metacognitive awareness, and anxiety level after the treatment. When there was a significant difference between the two groups in the pre-test, ANCOVA was conducted to compare the post-test scores by group with the pre-test score statistically controlled. Paired-t tests were performed to reveal whether the scores of listening comprehension, listening anxiety, and metacognitive awareness before and after the intervention within the same group had significant difference. Content analysis was used to analyze the qualitative data, which served as the supplement to the quantitative data, providing possible explanations for the results of the quantitative data.



CHAPTER FOUR

RESULTS

This chapter reports the results drawn from the collected data, which include the questionnaires, the listening comprehension tests, the worksheets, and the interviews. The findings of the present study are presented in the following five sections. The first section presents the background information of the participants. The second section reveals the results of the pre- and post- listening comprehension tests. The findings of the change of participants' listening anxiety level before and after the intervention are shown in the third section. In the fourth section, the participants' change of metacognitive awareness of listening strategies before and after the intervention is presented. The last section summarizes the descriptive data which were collected from the worksheets in the eight-week intervention and the post-test interviews.

Results of the Background Information Questionnaire

The valid questionnaires collected from the participants were 56 in total. According to the questionnaires, all of the participants had studied English for over 6 years. Among them, 5 students (17.9%) in the experimental group and 7 students (25%) in the comparison group reported that they had studied English for over ten years. In addition, most of the participants had never lived in English-speaking countries, except for one student in the experimental group, who reported having lived in America for one year when she was 12 years old.

In terms of the materials of practicing English listening comprehension outside of school, 17 students (60.7%) in the experimental group and 21 students (75%) in the comparison group reported that they did not have extra English listening practices after class. As can be seen in Table 3, 11 students (39.2%) in the experimental group and 7 students (25%) in the comparison group reported that they practiced listening comprehension through listening to English magazines or radio programs, and only 4 students (14.3%) in the experimental group listened to English songs or watched English movies to improve their listening comprehension performance.

Table 3

Participants' Reported Materials for English Listening Practice Outside of the Classroom

Items	The Experimental Group (<i>n</i> = 28)	The Comparison Group (<i>n</i> = 28)
No extra practice	17	21
English magazines and English radio programs	11	7
Online sources	0	2
English songs or movies	4	0

Note: The materials that each participant reported might be more than one. Therefore, the total of items chosen by each group may exceed the number of students in each group.

Table 4 lists the length of time that the participants spent on extra listening practice out of class in a week. As can be seen, most of the participants were exposed to extra English listening practice for about two to four hours per week.

Table 4

The Time Spent on English Listening in a Week

Items	The Experimental Group (<i>n</i> = 28)	The Comparison Group (<i>n</i> = 28)
Less than one hour	0	3
One to two hours	4	3
Two to four hours	7	13
Four to six hours	6	2
Six to eight hours	5	7
Over eight hours	6	0

Table 5 presents the difficulties that the participants often encountered while listening to English comprehension questions. As shown in the first row of Table 5, both the experimental group and the comparison group agreed that their insufficient knowledge of English vocabulary, phrases, and grammar was the difficulty that they most frequently encountered while listening to English comprehension questions. Also, more than half of the participants reported that their lack of the background knowledge and terms of unfamiliar topics was the difficulty they often encountered while listening to English. Furthermore, half of the participants in the experimental group were also bothered by fast speaking rate.

Table 5
The Participants' Listening Difficulties

Items	The Experimental Group (<i>n</i> = 28)	The Comparison Group (<i>n</i> = 28)	Total	Percentage
Limited vocabulary, phrases, and grammar knowledge	23	21	44	78.6%
Speaking rate	14	11	25	44.6%
Lack of background knowledge and terms	13	16	29	51.8%
Speakers' unfamiliar accents	13	11	24	42.9%

Note: The difficulties that each participant reported might be more than one. Therefore, the total of difficulties chosen by each group may exceed the number of students in each group.

To further investigate whether the participants had taken and passed the GEPT tests, the participants were asked to report their test experiences and the results were as follows: five students (17.9%) in the experimental group and two students (7.1%) in the comparison group had the experience of taking the GEPT tests. Among them, only three participants (10.7%) in the experimental group and two students (7.1%) in the comparison group had passed the GEPT elementary level, and two participants

(7.1%) in the experimental group had passed the first stage of the GEPT tests, which means they passed listening and reading sections but failed in writing and speaking sections.

Results of the Listening Comprehension Tests

The listening tests applied in the study were derived from the listening section of General English Proficiency Tests (Elementary Level), which contained 30 items in each test. The participants would get 4 points for each correct answer, and the full marks in the listening comprehension test were 120. The tests were applied before and after the intervention in order to measure the participants' listening comprehension. In particular, the t-test was conducted on the pre-test and the post-test to see if there were significant differences between the two groups in listening ability before and after the experiment. Also, to investigate the effect of metacognitive listening strategy instruction on enhancing the participants' listening comprehension performance, paired-t test was applied to analyze the pre-tests and post-tests within groups.

The descriptive statistics of listening pre-test and post-test results are presented in Table 6. As can be seen, the mean score ($M = 82.14$, $SD = 25.38$) of the experimental group in the listening pre-test was higher than that of the comparison group ($M = 71.57$, $SD = 20.69$). In addition, the experimental group had higher scores of the listening post-test ($M = 78.14$, $SD = 23.29$) than that in the comparison group ($M = 68.00$, $SD = 18.98$). In both pre-test and post-test, the standard deviation of the experimental group was wider than that of the comparison group.

Table 6

Descriptive Statistics of the GEPT Listening Test

	Comparison ($n = 28$)		Experimental ($n = 28$)	
	M	SD	M	SD
Pre-test	71.57	20.69	82.14	25.38
Post-test	68.00	18.98	78.14	23.29

To further investigate if the difference of the pre-tests between the two groups reached the level of significance, independent t-test was applied to analyze the data. The results of the t-test are presented in Table 7. As can be seen, there was no significant difference between the two groups in the listening comprehension pre-test

($t = -1.71, p > .05$). In other words, the two groups' listening performance was similar before the intervention.

In addition, the experimental group's score on the listening post-test ($M = 78.14, SD = 23.29$) appeared higher than that of the comparison group ($M = 68.00, SD = 18.98$). However, with the analysis of independent t-test, the listening comprehension post-test score of the experimental group was not significantly higher than that of the comparison group ($t = -1.79, p > .05$). The results indicate that the experimental group did not significantly outperform the comparison group in the post-tests.

Table 7

Between-Group Comparison of Listening Comprehension Tests

	Comparison		Experimental		$t(54)$	p	95% CI		Cohen's D
	M	SD	M	SD			LL	UL	
Pre-test	71.57	20.69	82.14	25.38	-1.71	.09	-22.98	1.84	0.46
Post-test	68.00	18.98	78.14	23.29	-1.79	.08	-21.53	1.24	0.48

To investigate whether the metacognitive listening strategy instruction had a significant effect on the participants' listening comprehension performance, paired-t tests were conducted to analyze the data. The within-group comparisons of the listening pre-test and post-test scores are shown in Table 8. As can be seen, the comparison group's pre-test score ($M = 71.57, SD = 20.69$) was higher than its post-test score ($M = 68.00, SD = 18.98$). However, the paired-t test revealed that the difference was not statistically significant ($t = 1.53, p > .05$). In other words, even though the pre-test score of the comparison group was higher than its post-test, the difference between the two tests did not reach the significance level.

On the other hand, the experimental group's pre-test mean score ($M = 82.14, SD = 25.38$) was higher than its post-test score ($M = 78.14, SD = 23.29$) and the drop in score reached the significance level ($t = 2.16, p < .05$). It shows that the experimental group's listening scores decreased significantly from the pre-test to the post-test.

Table 8

Within-Group Comparison of Listening Comprehension Tests

Group	Pre-test		Post-test		$t(54)$	p	95% CI		Cohen's D
	M	SD	M	SD			LL	UL	
Comparison	71.57	20.69	68.00	18.98	1.53	.14	-1.23	8.37	0.29
Experimental	82.14	25.38	78.14	23.29	2.16	.04*	.20	7.80	0.41

* $p < .05$

Because both groups showed a drop in listening performance from the pre-test to the post-test, the independent t-test was used to check if there was a significant difference in the drop between the two groups. As can be seen in Table 9, the comparison group's decrease in score ($M = -3.57$, $SD = 12.38$) was slightly smaller than that of the experimental group ($M = -4.00$, $SD = 9.80$), but the difference did not reach the significance level, $t = .14$, $p > .05$.

Table 9

Between-Group Comparison of Listening Test Score Drop

Group	Score Drop		$t(54)$	p	95% CI		Cohen's D
	M	SD			LL	UL	
Comparison	-3.57	12.38	.14	.89	-5.55	6.41	-0.04
Experimental	-4.00	9.80					

In sum, the two groups had no significant difference on the listening pre-test or post-test. In addition, the comparison group did not have significant difference between its listening pre-test and post-test, even though its scores of the post-test were lower than that of the pre-test. In contrast, although the experimental group received the metacognitive listening strategy instruction, its post-test was significantly lower than its pre-test. In other words, the listening comprehension of the experimental group regressed significantly after receiving the metacognitive strategy instruction. However, the learning loss between the two groups did not reach the significance level.

Results of the Second Language Listening Anxiety Scale

Second Language Listening Anxiety Scale (SLLAS) was applied to examine the change of the participants' listening comprehension anxiety levels before and after the intervention. SLLAS is a 5-point-Likert scale with 9 items; the maximum score of the scale is 45 and the minimum score is 9. The higher the score is, the more anxious the participant is. The data collected from SLLAS were analyzed by independent t-test first to check if the pre-tests of the two groups had significant difference. Paired-t test was administered to each group's pre-test and post-test to investigate whether the two groups had made significant progress after the intervention.

Table 10 presents the descriptive statistics of the SLLAS pre-test scores and post-test scores between the two groups. As can be seen, the comparison group's SLLAS mean in the pre-test ($M = 26.36$, $SD = 6.49$) was higher than that of the experimental group ($M = 23.21$, $SD = 5.52$).

Table 10

Descriptive Statistics of the SLLAS

	Comparison		Experimental	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Pre-test	26.36	6.49	23.21	5.52
Post-test	22.82	6.25	23.43	6.69

To investigate whether the difference between the two groups reached the significance level, independent t-test was conducted to analyze the data and the results are shown in Table 11. As can be seen, the SLLAS pre-test scores between the two groups did not have significant difference ($t = 1.95$, $p > .05$). The result reveals that the listening anxiety level of the two groups before the intervention was similar. After the intervention, the comparison group's SLLAS mean in the post-test ($M = 22.82$, $SD = 6.25$) was lower than that of the experimental group ($M = 23.43$, $SD = 6.69$), but the difference between the two groups' post-tests did not reach the significance level ($t = -.35$, $p > .05$). The result indicates that there was no statistically significant difference between the two groups on the post-tests of SLLAS. In other words, compared with the comparison group, the experimental group's listening anxiety was not lowered significantly after receiving the metacognitive listening strategy instruction.

Table 11

Between-Group Comparison of SLLAS

	Comparison		Experimental		$t(54)$	p	95% CI		Cohen's D
	M	SD	M	SD			LL	UL	
Pre-test	26.36	6.49	23.21	5.52	1.95	.06	-0.09	6.37	-0.52
Post-test	22.82	6.25	23.43	6.69	-.35	.73	-4.08	2.86	0.09

Table 12 presents the paired-t test results of SLLAS within the same group. As shown in Table 12, for the comparison group, the mean score ($M = 26.36$, $SD = 6.49$) of the SLLAS pre-test was higher than the mean of SLLAS on the post-test ($M = 22.82$, $SD = 6.25$). Paired-t test showed that the post-test score of the comparison group was significantly lower than its own pre-test score ($t = 2.98$, $p < .05$), which indicates that the participants in the comparison group significantly lowered their anxiety levels after receiving the traditional listening instruction.

On the other hand, the experimental group's SLLAS pre-test score ($M = 23.21$, $SD = 5.52$) was similar to its post-test score ($M = 23.43$, $SD = 6.69$). The paired-t test further confirmed no significant difference between the two test scores ($t = -.18$, $p > .05$). The results show that the participants' anxiety level in the experimental group was not lowered significantly after they received the metacognitive listening strategy instruction. In contrast, the comparison group's anxiety level was significantly lowered after the instruction.

Table 12

Within-Group Comparison of SLLAS

Group	Pre-test		Post-test		$t(54)$	p	95% CI		Cohen's D
	M	SD	M	SD			LL	UL	
Comparison	26.36	6.49	22.82	6.25	2.98	.01*	1.10	5.97	0.56
Experimental	23.21	5.52	23.43	6.69	-.18	.86	-2.61	2.19	-0.03

* $p < .05$

Further analyses on the three dimensions of SLLAS (i.e., cognitive anxiety, somatic anxiety, and avoidance behavior) were also conducted. Independent t-test was first conducted on the pre-tests of both groups. When there was a significant

difference in pre-test score between groups, ANCOVA was conducted to compare the post-test scores by group with the pre-test score statistically controlled. Otherwise, independent t-tests were used to compare the two groups' post-test scores. Besides, paired-t test was administered to investigate whether each group made significant progress in the three dimensions of anxiety after the intervention.

Table 13 shows the descriptive statistics for the three dimensions of the SLLAS between the two groups. According to Table 13, the comparison group's pre-test scores on the three dimensions of SLLAS were higher than those of the experimental group. Similarly, the comparison group's post-test scores were higher than those of the experimental group except somatic anxiety.

Table 13

Descriptive Statistics of the Three Dimensions of SLLAS

	Pre-test				Post-test			
	Comparison		Experimental		Comparison		Experimental	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Cognitive anxiety	12.39	2.56	10.93	2.68	11.25	2.80	11.14	2.95
Somatic anxiety	7.82	3.59	6.71	2.90	5.68	2.67	6.64	3.26
Avoidance behavior	6.14	3.33	5.57	2.36	5.89	3.28	5.64	2.60

To investigate whether the differences reached significance level, independent t-test was conducted to analyze the data and the results are presented in Table 14. As can be seen, cognitive anxiety in the pre-test between the two groups had significant difference ($t = 2.09, p < .05$). The result reveals that the cognitive anxiety level of the comparison group in the pre-test was significantly higher than that of the experimental group. In the post-test, the three dimensions of SLLAS did not show significant difference between the two groups. In other words, the anxiety level of the comparison group and the experimental group did not show significant difference after the intervention.

Table 14

Between-Group Comparison of the Three Dimensions of SLLAS

		Comparison		Experimental		<i>t</i> (54)	<i>p</i>	95% CI		Cohen's
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	<i>D</i>
Pre-test	Cognitive anxiety	12.39	2.56	10.93	2.68	2.09	.04*	.06	2.87	-0.56
	Somatic anxiety	7.82	3.59	6.71	2.90	1.27	.21	-.64	2.86	-0.34
	Avoidance behavior	6.14	3.33	5.57	2.36	.74	.46	-.98	2.12	-0.20
Post-test	Cognitive anxiety	11.25	2.80	11.14	2.95	.14	.90	-1.43	1.65	-0.04
	Somatic anxiety	5.68	2.67	6.64	3.26	-1.21	.23	-2.56	.63	0.32
	Avoidance behavior	5.89	3.28	5.64	2.60	.32	.75	-1.34	1.84	-0.08

* $p < .05$

Because there was a significant difference in the two groups' cognitive anxiety level in the pre-test, to verify the above independent t-test result on post-test cognitive anxiety, ANCOVA was further conducted on the two groups' cognitive anxiety in the post-test with the pre-test score controlled. Table 15 shows the ANCOVA results of cognitive anxiety in SLLAS. According to Table 15, with the pre-test scores controlled, the scores of cognitive anxiety between the two groups on the post-test were not significantly different, $F = .85$, $p > .05$. This result confirms the independent t-test result reported above, indicating that the two groups did not differ significantly from each other in cognitive anxiety after the intervention.

Table 15

ANCOVA of SLLAS—Cognitive Anxiety

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Pre-test	100.04	1	100.04	15.30	.00*
Post-test	5.54	1	5.54	.85	.36
Error	346.63	53	6.54		
Total	7467.00	56			

* $p < .05$

Table 16 shows the paired-t test results of the three dimensions of SLLAS for the comparison group. As can be seen, the scores of the three dimensions in the post-test were lower than those in the pre-test. Paired-t test showed that the comparison group's somatic anxiety in the post-test was significantly lower than that in the pre-test ($t = 4.01, p < .05$).

Table 16

Within-Group Comparison of the Three Dimensions of SLLAS—Comparison Group

	Pre-test		Post-test		<i>t</i> (54)	<i>p</i>	95% CI		Cohen's <i>D</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Cognitive anxiety	12.39	2.56	11.25	2.80	2.01	.05	-.02	2.31	0.38
Somatic anxiety	7.82	3.59	5.68	2.67	4.01	.00*	1.05	3.24	0.76
Avoidance behavior	6.14	3.33	5.89	3.28	.42	.68	-.97	1.47	0.08

* $p < .05$

The paired-t test results of the three dimensions of SLLAS for the experimental group are presented in Table 17. As shown in Table 17, only somatic anxiety in the post-test appeared lower than that in the pre-test. Paired-t test showed that there was no significant difference between pre-test and post-test in any of the three dimensions. The result indicates that the participants in the experimental group did not lower their anxiety significantly after they received the metacognitive listening strategy

instruction.

Table 17

Within-Group Comparison of the Three Dimensions of SLLAS—Experimental Group

	Pre-test		Post-test		<i>t</i> (54)	<i>p</i>	95% CI		Cohen's <i>D</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Cognitive anxiety	10.93	2.68	11.14	2.95	-.43	.67	-1.24	.81	-0.08
Somatic anxiety	6.71	2.90	6.64	3.26	.13	.90	-1.07	1.21	0.02
Avoidance behavior	5.57	2.36	5.64	2.60	-.15	.88	-1.07	.92	-0.03

To further investigate whether the decrease in SLLAS from pre-test to post-test between the two groups reached the significance level, independent t-tests were conducted on the drop of scores (i.e., the post-test scores minus the pre-test scores). As can be seen in Table 18, the two groups differed significantly in the drop of somatic anxiety level, $t = -2.69$, $p < .05$. In other words, the comparison group's decrease in somatic anxiety was significantly larger than the experimental group's. In addition, the drop in SLLAS total scores between the two groups also had significant difference, $t = -2.25$, $p < .05$. The results show that the comparison group's decrease in overall listening anxiety was significantly larger than the experimental group's.

Table 18

Between-Group Comparison of SLLAS Score Drop

	Score Drop				<i>t</i> (54)	<i>p</i>	95% CI		Cohen's <i>D</i>
	Comparison		Experimental				<i>LL</i>	<i>UL</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
Cognitive anxiety	-1.14	3.00	.21	2.64	-1.80	.08	-2.87	.16	0.48
Somatic anxiety	-2.14	2.82	-.07	2.94	-2.69	.01*	-3.62	-.53	0.72

Table 18. (continued)

	Score Drop				<i>t</i> (54)	<i>p</i>	95% CI		Cohen's <i>D</i>
	Comparison		Experimental				<i>LL</i>	<i>UL</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
Avoidance behavior	-.25	3.15	.07	2.57	-.42	.68	-1.86	1.22	0.11
SLLAS total	-3.54	6.28	.21	6.19	-2.25	.03*	-7.09	-.41	0.6

* $p < .05$

In sum, the two groups had significant difference on cognitive anxiety in the pre-tests, but both the independent t-test and ANCOVA results show that the two groups did not have significant difference in the overall SLLAS or in any of the three dimensions of SLLAS after the intervention.

After intervention, the comparison group's SLLAS total score and somatic anxiety score were significantly lowered than the scores on the pre-test. The results indicate that the comparison group had significantly lower listening anxiety after the intervention (i.e., traditional listening instruction). In contrast, although the experimental group had received the metacognitive listening strategy instruction, their listening anxiety level was not significantly lowered. Besides, the difference of the SLLAS post-test scores between the two groups did not reach significance level. In other words, the two groups' listening anxiety levels in the post-test did not have statistically significant difference.

Results of the Metacognitive Awareness Listening Questionnaire

To examine the change of the participants' metacognitive listening awareness, Metacognitive Awareness Listening Questionnaire (MALQ) was applied before and after the intervention. MALQ is a 5-point-Likert scale with 21 items in the present study; the highest score of the scale is 105, and the lowest score is 21. If the participants get higher scores on the MALQ, it represents that they have higher awareness of metacognition while listening to English.

The data collected from MALQ were analyzed by independent t-test first to check if the pre-tests of the two groups had significant difference. Paired-t test was

administered to each group's pre-test and post-test to investigate whether the two groups had made significant progress in the post-tests after the intervention.

Table 19 reveals the descriptive statistics of MALQ. As shown in Table 19, the comparison group's MALQ mean in the pre-test ($M = 69.46$, $SD = 10.09$) was lower than that of the experimental group ($M = 70.54$, $SD = 8.78$).

Table 19

Descriptive Statistics of MALQ

	Comparison		Experimental	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Pre-test	69.46	10.09	70.54	8.78
Post-test	70.11	10.48	75.54	8.35

The between-group comparisons of MALQ are presented in Table 20. As can be seen, the MALQ pre-test scores between the two groups did not have significant difference ($t = -.42$, $p > .05$). The result indicates that the metacognitive listening awareness of the two groups before the intervention was similar.

After the intervention, the comparison group's MALQ mean in the post-test ($M = 70.11$, $SD = 10.48$) was lower than that of the experimental group ($M = 75.54$, $SD = 8.35$). The independent t-test revealed that the difference was significant ($t = -2.15$, $p < .05$). The result shows that the experimental group had significantly higher metacognitive listening awareness than the comparison group after the intervention. In other words, the experimental group significantly enhanced their metacognitive listening awareness after receiving the metacognitive listening strategy instruction.

Table 20

Between-Group Comparison of MALQ

	Comparison		Experimental		<i>t</i> (54)	<i>p</i>	95% CI		Cohen's <i>D</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Pre-test	69.46	10.09	70.54	8.78	-.42	.67	-6.14	4.00	0.11
Post-test	70.11	10.48	75.54	8.35	-2.15	.04*	-10.50	-.35	0.57

* $p < .05$

Table 21 shows the within-group comparison of the MALQ. As can be seen, the comparison group's score on the MALQ pre-test ($M = 69.46$, $SD = 10.09$) was lower than its post-test score ($M = 70.11$, $SD = 10.48$). Paired-t test revealed that the difference was not statistically significant ($t = -.40$, $p > .05$). The result indicates that the awareness of metacognitive listening strategies in the comparison group was not enhanced significantly after receiving traditional instruction.

Nevertheless, the experimental group's MALQ post-test score ($M = 75.54$, $SD = 8.35$) was higher than its pre-test score ($M = 70.54$, $SD = 8.78$). Paired-t test showed that the post-test score of the experimental group was significant higher than its pre-test score ($t = -3.46$, $p < .05$). The result reveals that the experimental group's metacognitive listening strategy awareness was significantly enhanced after they received the metacognitive listening strategy instruction.

Table 21

Within-Group Comparison of MALQ

Group	Pre-test		Post-test		$t(54)$	p	95% CI		Cohen's D
	M	SD	M	SD			LL	UL	
Comparison	69.46	10.09	70.11	10.48	-.40	.69	-3.91	2.62	-0.08
Experimental	70.54	8.78	75.54	8.35	-3.46	.00*	-7.97	-2.03	-0.65

* $p < .05$

In addition to the overall MALQ, further analyses were conducted to investigate on which factors that the two groups had significant difference. The items of MALQ were categorized into five factors, including planning and evaluation, problem solving, directed attention, mental translation, and person knowledge. Each factor of MALQ was analyzed by independent t-test first to check if the two groups had significant difference before intervention. Paired-t test was administered to analyze the pre-tests and post-tests within groups to investigate the effect of metacognitive strategy instruction on enhancing the metacognitive awareness.

Table 22 reveals the results of t-test on the five factors of MALQ. According to Table 22, the five factors between the two groups did not show significant difference in the pre-test. After intervention, the two groups did not have significant difference in the five factors. The result indicates that the experimental group did not significantly

outperform the comparison group on any of the five factors of MALQ in the post-test.

Table 22

Between-Group Comparison of the Five Factors of MALQ

		Comparison		Experimental		<i>t</i> (54)	<i>p</i>	95% CI		Cohen's <i>D</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Pre-test	Planning & evaluation	16.68	4.11	17.07	3.64	-.38	.71	-2.47	1.69	0.10
	Problem solving	22.36	4.87	22.39	4.46	-.03	.98	-2.54	2.47	0.01
	Directed attention	14.21	4.43	15.00	3.39	-.75	.46	-2.90	1.33	0.20
	Mental translation	8.00	3.22	7.39	2.63	.77	.44	-.97	2.18	-0.21
	Person knowledge	8.21	2.02	8.68	1.68	-.93	.35	-1.46	.53	0.25
Post-test	Planning & evaluation	15.46	4.33	17.21	3.05	-1.75	.09	-3.76	.26	0.47
	Problem-solving	21.93	4.71	22.86	3.49	-.84	.41	-3.15	1.29	0.22
	Directed attention	15.50	3.85	17.00	2.55	-1.72	.09	-3.25	.25	0.46
	Mental translation	8.11	2.99	9.61	2.78	-1.95	.06	-3.05	.05	0.51
	Person knowledge	9.11	2.01	8.86	2.22	.44	.66	-.88	1.38	-0.12

Table 23 presents the results of paired-t test on the five factors of MALQ for the comparison group. According to Table 23, the means of the three factors (i.e., directed attention, mental translation, and person knowledge) increased after the intervention. Paired-t test showed that the comparison group's person knowledge in the post-test was significantly higher than that in the pre-test ($t = -2.16, p < .05$). The result indicates that compared with its own pre-test, the comparison group had significant

improvement on person knowledge after the intervention.

Table 23

Within-Group Comparison of the Five Factors of MALQ—Comparison Group

	Pre-test		Post-test		<i>t</i> (54)	<i>p</i>	95% CI		Cohen's <i>D</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Planning & evaluation	16.68	4.11	15.46	4.33	1.98	.06	-.04	2.47	0.37
Problem solving	22.36	4.87	21.93	4.71	.53	.60	-1.22	2.08	0.1
Directed attention	14.21	4.43	15.50	3.85	-1.76	.09	-2.79	.21	-0.33
Mental translation	8.00	3.22	8.11	2.99	-.22	.83	-1.13	.91	-0.04
Person knowledge	8.21	2.02	9.11	2.01	-2.16	.04*	-1.74	-.046	-0.41

**p* < .05

On the other hand, the results of paired-*t* test on the five factors of MALQ for the experimental group are presented in Table 24. As can be seen, the experimental group's post-test scores on the five factors of MALQ were higher than those of the pre-test. Paired-*t* test showed that the experimental group's directed attention in the post-test was significantly higher than that in the pre-test ($t = -3.07, p < .05$). Similarly, the experimental group's mental translation in the post-test was significantly higher than that in the pre-test ($t = -2.98, p < .05$). Note that items on mental translation were reverse-scored, so a higher score on mental translation indicated less use of mental translation strategies, a desirable tendency. The results indicate that the experimental group had significant improvement on the two factors of MALQ (i.e., directed attention and mental translation) after receiving the metacognitive listening strategy instruction.

Table 24

Within-Group Comparison of the Five Factors of MALQ—Experimental Group

	Pre-test		Post-test		<i>t</i> (54)	<i>p</i>	95% CI		Cohen's <i>D</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Planning & evaluation	17.07	3.64	17.21	3.05	-.22	.83	-1.48	1.20	-0.04
Problem solving	22.39	4.46	22.86	3.49	-.63	.53	-1.98	1.05	-0.11
Directed attention	15.00	3.39	17.00	2.55	-3.07	.01*	-3.34	-.66	-0.58
Mental translation	7.39	2.63	9.61	2.78	-2.98	.01*	-3.74	-.69	-0.56
Person knowledge	8.68	1.68	8.86	2.22	-.49	.63	-.93	.58	-0.09

**p* < .05

To further investigate whether the differences between the pre-test and the post-test (the gain score here) by group reached the significance level, the independent t-tests were conducted. As can be seen in Table 25, the gain score (i.e., the post-test scores minus the pre-test scores) by group in the factor of mental translation reached the significance level, $t = -2.36$, $p < .05$. In other words, the experimental group had statistically greater improvement on the awareness of mental translation after receiving the metacognitive listening strategy instruction. In addition, the gain score in MALQ total by group also reached the significance level, $t = -2.03$, $p < .05$. The results show that the experimental group had statistically significant improvement in MALQ and outperformed the comparison group on the metacognitive listening awareness after the metacognitive instruction.

Table 25

Between-Group Comparison of Gain Scores

	Gain Score				<i>t</i> (54)	<i>p</i>	95% CI		Cohen's <i>D</i>
	Comparison		Experimental				<i>LL</i>	<i>UL</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
Planning & evaluation	-1.21	3.25	.14	3.45	-1.52	.14	-3.15	.44	0.40
Problem solving	-.43	4.26	.46	3.90	-.82	.42	-3.08	1.29	0.22
Directed attention	1.29	3.87	2.00	3.45	-.73	.47	-2.68	1.25	0.19
Mental translation	.11	2.63	2.21	3.93	-2.36	.02*	-3.90	-.32	0.63
Person knowledge	.89	2.18	.18	1.94	1.29	.20	-.39	1.82	-0.34
MALQ total	.64	8.42	5.00	7.65	-2.03	.05*	-8.67	-.047	0.54

**p* < .05

In sum, the pre-tests of the two groups did not show significant difference. After the intervention, the experimental group's MALQ total score on the post-test was significantly higher than that of the comparison group.

In addition, compared with the pre-test, the experimental group made statistically significant improvement on the total scores of MALQ, the factor of directed attention, and the factor of mental translation in the post-test. Also, their gain scores on MALQ total and the factor of directed attention were significantly higher than that of the comparison group.

On the other hand, even though the comparison group had higher mean scores on the three factors (i.e., directed attention, mental translation, and person knowledge) in the post-test, only the improvement in the factor of person knowledge reached the significance level. Furthermore, the comparison group made regression on two factors of MALQ (i.e., planning and evaluation, and problem solving) though the regression did not reach the significance level.

The results indicate that the experimental group had enhanced their

metacognitive awareness significantly after receiving the metacognitive listening strategy instruction. The comparison group with the traditional listening practice also had improvement on their metacognitive awareness in listening, but their progress on metacognitive awareness was not as large as that of the experimental group receiving strategy instruction.

Results of the Worksheets and the Interviews

Results of the Worksheets

In this study, qualitative data collected from the worksheets completed by the experimental group brought out several interesting points regarding the participants' opinions about the metacognitive listening strategies they learned. From the worksheets, the participants' awareness of metacognitive strategies was gradually enhanced. At the first two classes, most of them did not know how to regulate their listening process, and they seldom developed their own strategies to solve the possible difficulties that they might encounter in the following listening tasks. However, the more they learned, the more listening strategies they applied in the listening tasks.

Strategies Assisting Listening Comprehension

The participants in the experimental group wrote down the strategies they applied to help comprehend listening messages during the sixteen classes. Four strategies were already listed on the worksheets, and the participants could choose whether to apply these strategies to solve the upcoming listening difficulties or not. Also, the participants could raise new strategies and tested if they were effective in the treatment, and then recorded the results in the worksheets.

According to Table 26, most of the strategies taught by the instructor/researcher were used by more than 60 % of the students. Also, more than 12% students chose to apply new strategies to help them understand the listening messages.

Table 26

The Strategies Reported in the Worksheets

Strategies	Times	%	Matched MALQ Factors
Predicting the keywords	883	65.70	Planning and evaluation
Relax oneself	917	68.23	Person knowledge
Pay attention to the listening passage	1023	76.12	Directed attention
Inference the unknown words from the context	794	59.08	Problem solving
Others	162	12.05	

The experimental group reported some new strategies they applied while listening. These strategies were grouped according to the five factors of MALQ and were presented in Table 27. The result indicates that the experimental group not only learned listening strategies but also tried to apply self-developed strategies to deal with the listening tasks, which requested high awareness of metacognitive strategy.

Table 27

Students' Self-Developed Strategies Reported in the Worksheets

Factors	Description of the Strategies
Planning & evaluation	Reconsider the Applied Strategies: Modify the unhelpful strategies to improve listening performance.
Problem solving	Repetition: Repeat what was heard in the brain in order to catch up with the speakers' speaking speed and have better understanding of the messages.
Directed attention	Ignore the Unknown Words: Ignore the words that they could not understand and redirect focus on the related information which might be important clues for the questions.

Table 27. (continued)

Factors	Description of the Strategies
Mental translation	No Chinese Translation while listening: Think in English, without translating the key words into Chinese.
Person knowledge	Positive Self-talk: Encourage themselves to listen actively, especially when they cannot understand what they hear and feel stressed.

Responses of the Interviews

The responses of the post-study interviews with the experimental and the comparison groups also provided possible explanations for why some participants, with or without metacognitive listening strategy instruction, made great progress or regress after the intervention. As reported in chapter 3, five participants from each group whose listening performance improved the most and five participants from each group whose performance regressed the most after the eight-week experiment were chosen as the interviewees.

Interviews With the Comparison Group

According to the interviews with the comparison group, the interviewees who made great progress and regress had difference in three aspects: attitude, practice, and strategy use.

First, the attitude toward listening practices of those who made progress was more positive than those who made regress. They were more willing to do the practices and even thought the practices might be very effective to enhance their listening comprehension. On the other hand, those who made great regress pointed out that taking six listening practices a week was not helpful but tedious, because they could not understand the listening messages well and the instructor did not explain the content of the listening materials. As a result, they did not know how to listen and had lower motivation toward listening comprehension. Some interviewees described their experience as follows: “I could not understand their accents and they spoke too fast.” “I did not feel nervous when I took the post-test, but I felt bored and could not concentrate on it.” “I do not think listening to English is interesting.” As they indicated, their attitude toward the listening comprehension test seems to be negative

in the listening post-tests. They also admitted that they did not care about the post-test; therefore, they did not feel nervous on the post-test.

Having extra listening practices was one important reason for the comparison group to have better performance on the post-test. All of the interviewees who made great progress reported that they had extra listening practices after school. One of them listened to English news report two hours a week, another one listened to English magazines three hours a week, and the other three of them practiced English conversation with foreign teachers every week. They thought listening to six listening comprehension questions every week without instruction was not very effective for improving their English listening performance, but it could lessen their nervousness. One interviewee reported that she was less nervous in the post-test than in the pre-test because she had done similar listening practices in the eight weeks. The statement was consistent with the results of SLLAS of the comparison group, which showed lower anxiety in the post-test than in the pre-test.

Another reason for those interviewees to have better performance on the listening post-test was that they developed their own listening strategies, such as positive self-talk and writing down the key words. As one interviewee reported, she would read the options of the questions first and then listened to the messages. Another interviewee reported that he would ask himself to maintain focus while taking the listening tests. Also, he would guess the meanings of the unknown words from the context.

In sum, the participants in the comparison group thought that only providing listening practices without instruction does not seem to be beneficial to their listening comprehension but it might lower their anxiety levels. This finding might explain why the comparison group's listening performance on the post-test was not better than the experimental group's, but their anxiety levels were significantly decreased in the post-tests.

Interviews With the Experimental Group

According to the ten interviewees of the experimental group, including those who made great progress and regress, nine of them liked the metacognitive strategy instruction, and they could describe the strategies they learned correctly. Also, most of them agreed that the metacognitive listening strategy instruction had positive effect on their learning attitude and confidence. In addition, all of the interviewees reported that they had better understanding in listening comprehension after receiving the

metacognitive strategy instruction. The following are the excerpts translated into English from some of the interviewees' responses to the similar questions from the semi-structured interviews.

I'm more confident in listening now because I know how to find the key words after training. (Student 1)

Learning listening strategies is very beneficial to me. I would read the options or the pictures on the test paper before listening, and I think I have better performance on preparation. (Student 4)

Metacognitive listening strategy instruction is very effective because it helps me to refocus whenever I feel tired or cannot understand the content of listening. (Student 5)

However, the interviewees in the experimental group still had different listening performance after receiving the metacognitive strategy instruction. According to those who made great progress and those who made great regress, their differences can be explained in three aspects: attitude, anxiety, and strategy use.

The attitude toward the metacognitive strategy instruction among the ten interviewees in the experimental group was slightly different. The interviewees who made great progress all liked the metacognitive strategy instruction. Whereas, one of the five interviewees who made great regress reported that he disliked the instruction. In addition, the interviewees' confidence in listening to English was not exactly the same. All of the interviewees who made great progress thought they had more confidence in listening to English after receiving the strategy instruction. However, two out of the five interviewees who made great regress pointed out that they did not have more confidence in listening to English after receiving the metacognitive listening strategy instruction.

When it comes to the anxiety of listening, half of the ten interviewees still felt nervous while listening to English in the post-test. Among these five interviewees, four of them were those who made great progress and one of them was those who made great regress. The result was consistent with the quantitative analysis of the experimental group's listening anxiety, which shows the anxiety level of the

experimental group was not significantly decreased after receiving the metacognitive listening strategy instruction. Those who had higher expectation on themselves might not easily lessen their anxiety even though they had better listening performance on the post-test.

In addition, the strategies that the interviewees of the experimental group thought as effective ones were also different. As can be seen in Table 28, the interviewees who made great progress reported that monitor, evaluation, and prediction were the most effective. However, the least effective metacognitive strategies they reported also included prediction and monitor.

Table 28

The Most and the Least Effective Strategies Reported by Those Who Made Progress

	Strategy	Excerpts From the Interview
The Most Effective Strategies	Monitor	<i>Writing down the key words is very useful.</i>
	Evaluation	<i>Checking overall understanding of information helps me have better understanding of the message.</i>
	Planning	<i>I have better preparation on listening by predicting possible keywords.</i>
The Least Effective Strategies	Monitor	<i>It is not easy to direct the incorrect prediction and listen to new information at the same time.</i>
	Planning	<i>I did not have enough time to predict the possible listening content or guess the key words.</i>

On the other hand, the interviewees who made great regress in the experimental group also reported the strategies they thought to be the most effective and the least effective. As can be seen in Table 29, some of the interviewees who made regress in the post-test thought monitoring and planning were the most effective strategies. However, the least effective strategies others in the same group reported also included planning, monitoring, and problem-solving.

Table 29

The Most and the Least Effective Strategies Reported by Those Who Made Regress

	Strategy	Excerpts From the Interview
The Most Effective Strategies	Planning	<i>Predicting the possible words makes me have better preparation for the following listening tasks.</i>
	Monitor	<i>Taking notes is very effective.</i>
The Least Effective Strategies	Planning	<i>Prediction was not necessarily correct and might confuse the correct messages.</i>
	Monitor	<i>My limited knowledge could not help me monitor the listening process correctly.</i>
	Problem-solving	<i>I do not know how to solve the difficulties I encounter while listening to English.</i>

The tables shown above indicate that the experimental group had learned how to arrange their listening strategies after receiving the metacognitive listening strategy instruction and they also started to consider whether these strategies were beneficial for their listening comprehension or not. This can explain why the listening strategies which the interviewees thought as effective are so different. For example, some of the interviewees thought monitor is the most effective strategy but others regarded monitor as the least effective one.

In sum, the interviews show that the metacognitive listening instruction had some positive effect on the participants' listening performance but might not be so effective on reducing their levels of listening anxiety. In addition, even though all of the participants in the experimental group received the metacognitive listening strategy instruction, their attitude toward the instruction was not exactly the same. Also, the strategies they thought to be effective and ineffective were very different.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

This study aimed to investigate whether metacognitive strategy instruction has positive effect on EFL learners' listening performance, listening anxiety, and metacognitive awareness. In the present study, data were collected through listening tests, questionnaires, and interviews. A total of 56 eighth grade students from a junior high school in northern Taiwan participated in the study. Two listening tests derived from the listening comprehension sections of General English Proficiency Tests (GEPT) were used to assess the participants' listening performance. Second Language Listening Anxiety Scale (SLLAS) was employed to investigate the participants' listening anxiety levels. The Metacognitive Awareness Listening Questionnaire (MALQ) was applied to reveal the participants' metacognitive awareness. Independent t-tests were conducted to see if the difference in the pre-tests and the post-tests by group reached the significance level. Paired t-tests were applied to see if there was significant difference between the pre-test and post-test within groups. When there was a significant difference in the pre-tests between groups, ANCOVA was further conducted to compare the two groups' post-test scores with the pre-test scores controlled. Listening strategy learning worksheets collected from the experimental group and interviews with a selected group of students from both the experimental and comparison groups were analyzed to reveal possible explanations for the results of statistical analyses.

This chapter draws upon the major findings to address the research questions of the present study. Possible explanations for the results are then discussed. Last, pedagogical implications, limitations of the current study, and suggestions for further research are provided.

Metacognitive Strategy Instruction and Listening Performance

Independent t-test and paired-t test were conducted to answer the first research question: Does metacognitive listening strategy instruction improve EFL junior high school students' English listening performance? As revealed in the previous chapter, the two groups did not differ significantly on listening comprehension before or after the experiment. When it comes to the within-group comparison, the comparison group's listening performance did not have significant difference before or after the experiment though their post-test scores were lower than their pre-test scores. In contrast, the experimental group's listening score on the post-test was significantly

lower than that on the pre-test. As both of the experimental and comparison groups showed a drop in listening scores from the pre-test to the post-test, the post-test might be more difficult than the pre-test.

The results show that the metacognitive strategy instruction did not have statistically significant effect on enhancing the learners' listening comprehension in the present study. In other words, those who received metacognitive listening strategy instruction did not significantly outperform those who received traditional listening instruction in listening comprehension performance after the treatment. Previous research (e.g., Lin, 2012; Ranjbar, Kargar, & Behjat, 2014) also found similar results, which showed that metacognitive listening strategy instruction did not significantly enhance learners' listening performance. Those researchers (Lin, 2012; Ranjbar et al., 2014) indicated that the instruction positively influenced the learners' listening comprehension but the difference between the pre-test and the post-test did not reach the significance level. In Ranjbar et al.'s study (2014), they thought insufficient instruction was the main reason for their failure to facilitate a large improvement in listening comprehension in their study, which contained only 12 sessions and lasted for 12 weeks. Although the present study contained 16 sessions, the length of the experiment only lasted for eight weeks, and the experimental group received the metacognitive listening strategy instruction twice per week. The intensity of metacognitive listening strategy instruction might exhaust the experimental group. Hence, one possible explanation for the failure of metacognitive strategy instruction to improve the listening comprehension of the experimental group in the present study may be inappropriate instructional length and the high frequency of metacognitive strategy instruction. The instructional length reported in the previous metacognitive strategy instruction studies in Taiwan (Hung, 2010; Li, 2009; Lin, 2012) lasted for at least three months (or 12 weeks), and the metacognitive strategy instruction was conducted only once a week. The results of these studies show that their participants' listening performance was improved after receiving the metacognitive strategy listening instruction. Therefore, if the instructional length could have lasted for longer and the frequency had been changed into once a week, the learners might have felt more comfortable, having more time to consider how to apply the metacognitive strategies they learned. Their listening comprehension performance might have been better.

The experimental group produced a significantly lower score on the post-test than

on the pre-test. The finding indicates that the metacognitive listening strategy instruction did not improve the learners' listening comprehension performance; instead, it led to poorer listening comprehension performance on the post-test. The result of the present study seems to contradict the previous research (e.g., Chang, 2010; Chien, 2006; Chin, 2010; Coşkun, 2010; Hung, 2010; Li, 2009; Thompson & Rubin, 1996) which revealed that metacognitive strategy instruction had significantly positive effect on listening comprehension. The reason underlying the disappointing result of the current study might be the complexity of the metacognitive strategy instructional sequence, which could interfere with the learners' listening comprehension process, especially when the listening messages were played only once. In other words, the participants might have tried to apply the metacognitive listening strategies they had learned in class while taking the listening post-test, but the metacognitive strategy stages they learned were too complicated for them to manipulate the strategies in the short period of time. Because they could not apply these metacognitive listening strategies fluently and automatically, and the listening content was only played once, the application of the metacognitive strategies might take them too much time and distract them from focusing on the listening messages and resulted in worse scores in listening.

When it comes to the within-group comparison, the comparison group's post-test did not differ significantly from its pre-test. The reason why the comparison group's listening score did not regress significantly might be due to the traditional listening instruction which the comparison group received. Although the traditional listening instruction only provided listening practices instead of teaching listening strategies, it was still beneficial to maintain the learners' listening comprehension performance. According to the interview results, some participants in the comparison group even developed listening strategies by themselves through the listening practices.

To conclude, the metacognitive strategy instruction did not significantly improve the learners' listening performance in the present study. Even though the two groups did not differ significantly before or after the experiment, the experimental group's listening performance significantly decreased after receiving the metacognitive strategy instruction. The reasons for the results might be the experimental group's inappropriate instructional length and frequency for the experimental group and the complexity of the instructional procedure. In contrast, the comparison group's listening maintained the same with the help of the traditional listening instruction. The

results reported here do not totally support the findings of previous research on the effect of metacognitive listening strategy instruction. Further research is needed to probe the effectiveness of metacognitive listening strategy instruction in enhancing EFL junior high school students' listening performance.

Metacognitive Strategy Instruction and Listening Anxiety

Independent t-test, paired-t test, and ANCOVA were conducted to answer the second research question: Does metacognitive listening strategy instruction reduce EFL junior high school students' listening anxiety? The results in the previous chapter demonstrated that the two groups had no significant difference on the SLLAS pre-tests, except the cognitive anxiety, and the post-tests. Although the two groups' cognitive anxiety levels had significant difference before the experiment, the ANCOVA result showed that the scores of cognitive anxiety between the two groups did not differ significantly on the SLLAS post-tests with the pre-test scores controlled. Besides, the experimental group's pre-test and post-test scores on overall SLLAS and the three dimensions of listening anxiety (i.e., cognitive anxiety, somatic anxiety, and avoidance behavior) did not differ significantly. The results indicated that the metacognitive strategy instruction in this study failed to reduce the experimental group's listening anxiety significantly. In contrast, the comparison group's overall listening anxiety and somatic anxiety were found to decrease significantly after the experiment. The results show that the traditional listening instruction helped to decrease the comparison group's listening anxiety.

There are at least two possible explanations for why the experimental group's listening anxiety score did not decrease significantly after the experiment. One potential reason is high expectation, and the other might be the complex procedures of the metacognitive listening strategy instruction. According to Kim (2000), tension (i.e., worry over English listening) is one main factor of anxiety. The experimental group might notice that they participated in an experiment and they received the metacognitive listening strategy instruction which other classes did not receive. Therefore, they might expect themselves to have better performance on the listening post-test after receiving the metacognitive listening strategy instruction. This high expectation might make them worry about their listening performance while taking the listening post-test; thus, their anxiety was not reduced. As shown in the previous chapter, the fact that the experimental group increased the most, though not significantly, in the dimension of cognitive anxiety seems to support this speculation.

Cognitive anxiety, according to Cheng's (2005) definition, "refers to the mental aspect of anxiety experience, including negative expectations, preoccupation with performance, and concern about others' perceptions" (p. 316). It seems that the experimental group indeed tended to concern and to worry more about their listening performance on the post-test. The similar result could also be seen from the interviews. According to the interviews, half of the ten interviewees from the experimental group reported that they still felt nervous while taking the listening post-test, though four of them were those who made great progress from the listening pre-test to the post-test. The results showed that metacognitive listening strategy instruction could not help to decrease listening anxiety. Also, learners' listening anxiety levels were not necessarily related to their actual listening performance. No matter how skilled the learners were, once they believed they would do poorly on the listening tests, they would feel anxious about listening comprehension (Ranjbar et al., 2014). Previous research (e.g., Onwuegbuzie & Daley, 1999; Ranjbar et al., 2014; Satio & Samimy, 1996) also proved that students with high language competence may not regard themselves as competent language learners and their anxiety may not be lower than others.

The other reason to explain why the experimental group's listening anxiety did not decrease significantly after the experiment could be the complexity of the design of metacognitive strategy instruction. The metacognitive pedagogical sequence for listening in the present study consisted of eight steps, which might be too complicated and not suitable for short listening conversations or short listening paragraphs in GEPT listening tests, especially when the listening content was played once. As the experimental group reported in the interviews, the post-test was more difficult and the time was so short that they did not have enough time to follow the metacognitive pedagogical sequence and to apply the metacognitive strategies they learned. The limited time for them to apply the complicated metacognitive strategy sequence to respond to the listening questions was a great pressure for them, as some participants reported in private. Thus, their anxiety toward listening comprehension did not reduce in the listening post-test.

On the other hand, the comparison group's overall listening anxiety and somatic anxiety dropped significantly from the pre-test to the post-test. The findings imply that although the comparison group did not receive any listening strategy instruction, the traditional listening instruction, which only provided listening practices for the learners to get familiar with the question types, was still beneficial in terms of

lowering listening anxiety. Listening anxiety often occurs when the students face a task which they feel unfamiliar with (Scarcella & Oxford, 1992). As reported in the interviews, the comparison group felt more stressed on the listening pre-test because the participants in the comparison group had never taken similar tests before. They were unfamiliar with the GEPT listening question types, and they were afraid they would make mistakes in the test and felt embarrassed when they failed. However, after they did many similar listening practices through the traditional listening instruction and became familiar with the question types of the test, their listening anxiety decreased significantly while taking the listening post-test. In addition, the comparison group did not notice that they were involved in an experiment and they regarded the listening post-test as another normal listening practice and would not influence their academic performance, so they felt more relaxed when they took the post-test.

In sum, the metacognitive listening strategy instruction offered in this study did not significantly reduce EFL junior high school students' listening anxiety, and the most likely explanations rest in the students' high expectation and the complexity of the metacognitive strategy instruction procedure which made it hard for the learners to apply the strategies spontaneously within a short period of time. On the other hand, the traditional listening instruction was surprisingly beneficial because it significantly decreased the comparison group's listening anxiety. A possible explanation for this is that the learners became familiar with the question types through the listening practices, and their anxiety for the unfamiliar listening questions decreased significantly afterward.

Metacognitive Strategy Instruction and Metacognitive Awareness

Independent t-test and paired-t test were conducted to answer the third research question: Does metacognitive listening strategy instruction enhance EFL junior high school students' metacognitive awareness? As shown in the previous chapter, the two groups' metacognitive awareness was similar before the experiment. After the experiment, the experimental group's overall metacognitive awareness of listening improved significantly compared to its pre-test and the comparison group's post-test. In addition, the difference in MALQ total by group reached the significance level. The results show that the experiment influenced the two group's overall awareness of strategies. Specifically, the metacognitive strategy instruction significantly enhanced the experimental group's overall awareness of metacognitive listening strategies, but

the traditional listening instruction did not significantly improve the comparison group's overall awareness of metacognitive listening strategies. Some interviewees of the experimental group also reported that they had more metacognitive knowledge and higher confidence in listening after the instruction. The finding that the metacognitive strategy instruction significantly enhanced the learners' metacognitive awareness of listening is consistent with previous studies (e.g., Flavell, 1987; Goh & Taib, 2006; Li, 2009; Lin, 2012; Movahed, 2014; Vandergrift, 2002). According to Paris and Winograd (1990), metacognition could foster independent learning and improve learning performance. Even though in this study the experimental group's listening performance did not improve after the experiment, their enhanced metacognitive awareness might help them learn independently; in the long run, their listening performance might improve.

In addition, the experimental group's scores on the five factors of MALQ all improved from the pre-test to the post-test and the improvement in the factors of directed attention and mental translation reached the significance level. Furthermore, a comparison of the improvement from the pre-test to the post-test between groups showed that the experimental group's improvement in awareness of mental translation and overall metacognitive listening strategies significantly outperformed those of the comparison group.

Directed attention are the strategies that listeners apply to concentrate on the listening tasks when they lose concentration or when they have difficulty in comprehending the texts (Rost, 2002), and mental translations are the translation strategies that learners should avoid applying in listening comprehension if they want to become advanced listeners (Vandergrift, 2003). The results show that the participants in the experimental group already knew it was important to avoid using useless strategies such as mental translation after receiving the strategy instruction. Also, they knew how to maintain the useful strategies like directed attention. The findings were consistent with the data collected from the worksheets, which recorded the experimental group's strategy use in class. According to the worksheets, the strategies the experimental group applied in listening comprehension included no Chinese translation while listening, refocusing on the listening messages, making inferences about unknown words from the context, etc. Through the worksheets, we learned that the experimental group became more aware of the metacognitive listening strategies after receiving the metacognitive strategy instruction. Nevertheless,

as reported in the interviews, the listening strategies used by those who had made progress and regress were quite similar. Use of certain strategies did not seem to ensure improvement in listening comprehension. In fact, Oxford (2003) indicated that no certain strategy is always applied by “good language learners.” The only difference between the more skillful learners and less skillful learners is the way they apply the strategies. Less skillful learners use strategies in a “random, unconnected, and uncontrolled manner,” and more skillful learners know how to combine the strategies and use them fluently and automatically (Oxford, 2003). If sufficient time had been provided for instruction and practice, students in the experimental group might have developed better ability to use the strategies more skillfully so as to perform better on the post-test.

Unlike the experimental group, the comparison group made a significant improvement from the pre-test to the post-test only in the factor of person knowledge. Person knowledge strategies include learners’ self-efficacy and their perceptions of the difficulty of listening tasks (Sparks & Ganschow, 2001). The questionnaire result seems to be consistent with the interview results because all the interviewees from the comparison group who made great progress reported that they had high interest in listening comprehension and high self-efficacy and motivation toward learning English. The findings demonstrate that person knowledge, which contains listeners’ awareness of the difficulty of L2 listening and their self-efficacy in L2 listening, may be improved by doing traditional listening practices. However, most other metacognitive strategies need explicit instruction to help learners learn how to apply them. That is, explicit instruction of metacognitive listening strategies was more effective in enhancing learners’ metacognitive awareness in listening.

In conclusion, the metacognitive listening strategy instruction significantly enhanced the experimental group’s metacognitive awareness. Although the comparison group who received the traditional listening instruction also made some improvement on metacognitive awareness, the experimental group’s improvement in metacognitive awareness outperformed the comparison group’s. The results support the effectiveness of explicit metacognitive strategy instruction in enhancing metacognitive awareness, even within a short period of time.

Implications of the Study

Based on the results of the study, a number of pedagogical implications for strategy instruction can be provided.

First, contradictory to previous studies (e.g., Coşkun, 2010; Hung, 2010; Li, 2009; Lin, 2012; Thompson & Rubin, 1996), the present study failed to support the effectiveness of metacognitive strategy instruction in enhancing students' listening performance. The results suggest that improving learners' listening competence of foreign language might require more than metacognitive strategies. Although metacognitive strategies have been proved to be effective to both young and adult learners in previous studies (e.g., Hung, 2010; Lin, 2012; Movahed, 2014) and are often used by successful L2 learners around the world at all levels of proficiency (Oxford, 2011), metacognitive strategies are reported to be indirectly related to the learners' learning performance (Purpura, 1997). Compared to metacognitive strategies, cognitive strategies help learners to manipulate the language material more directly (Oxford, 2003). Since the metacognitive strategies are the strategies which have "direct effect on cognitive strategy use" (Oxford, 2003, p.12), cognitive strategies should be taught before metacognitive strategies. O'Malley and Chamot (1990) also indicated that metacognitive strategies are important in language learning; however, the effectiveness of the metacognitive strategies would be lessened without the appliance of appropriate cognitive strategies. Similarly, Rubin (1990) reviewed related literature and concluded that to improve learning it is most effective to teach both cognitive and metacognitive strategies. EFL learners, especially junior high school students, who do not have much knowledge on listening strategies, may perform better with the help of cognitive strategies because they are more directly related to answering the listening comprehension questions. Besides, probably only after learners gain sufficient knowledge of cognitive strategies could they exercise metacognitive strategies to ensure proper use of cognitive strategies in listening comprehension. As a result, it is recommended for future research to investigate the learners' awareness of cognitive strategies in listening before conducting metacognitive listening strategy instruction. In addition, it is essential to find effective strategies to improve EFL listening (Hung, 2010). The strategies should include metacognitive strategies and other strategies which are also beneficial for listening. Hence, EFL teachers in Taiwan are recommended to incorporate more listening strategies, including cognitive, metacognitive, and other effective strategies, into listening instruction so that the learners may choose strategies according to the needs of different listening tasks and become independent and autonomous learners.

Second, the study provided EFL teachers with a potential model of

metacognitive strategy instruction, which was designed according to Vandergrift and Goh's strategy training model (2012). The strategy instruction helped the students understand how to apply metacognitive strategies as a sequence in the listening process, and it provided stages for the students to follow while doing the listening practices. However, the design of the metacognitive strategy instruction procedure was too complicated and so were the worksheets. Almost every participant in the experimental group did not know what to do or how to fill in the worksheet at the first instructional session. Besides, they easily got tired after finishing the whole metacognitive listening strategy steps for one listening question. This metacognitive strategy model required the students much time to complete the listening process and it was not easy for learners to manipulate the strategies spontaneously and autonomously within one or two minutes, which was about the time needed for answering one listening comprehension question. The instructor also found that the participants wondered why they had to follow the metacognitive instructional steps, especially when the listening content was so easy that they could answer it without using any metacognitive strategies. To solve this problem, simplification of the procedures for manipulating metacognitive strategies is necessary. Lin's (2012) model could be one example to follow. Though Lin (2012) also followed Vandergrift's pedagogical cycle (2004), she only divided the metacognitive strategy instructional cycle into three stages, and the worksheet she applied was simple and easy to understand. Simplified of the instructional stages and the worksheets were recommended so that students could understand the learning focus of the metacognitive strategy instruction better.

Third, the learners might learn better if the instructor explained and modeled the metacognitive listening strategies individually. According to the models like Chamot and O'Malley's Cognitive Academic Language Learning Approach (1994) and Oxford's instructional model (1990), modeling and explaining new strategies constitutes a stage of strategy instruction, in which the instructor can emphasize the value of a strategy and the learners can model after the instructor how to transfer the strategy to new tasks or combine it with other strategies they have already known. However, the strategy model of the present study did not require the instructor to explain and model the metacognitive strategies separately and clearly first before asking the students to follow the metacognitive pedagogical sequence for listening. If this stage had been included, the students' understanding and motivation of using

these strategies might have been enhanced. Their learning outcomes might thus be more positive. Therefore, it is recommended that future strategy instruction program incorporate this stage.

Finally, in addition to the listening strategies, learners' language proficiency is essential in deciding the success of L2 listening. According to the handouts collected from the experimental group, some students reported that they could not understand the listening messages because their proficiency levels of English were low. As Tsai (2010) indicated in her study, overall English proficiency appeared to predict the success of listening comprehension. Therefore, she recommended that learners need to improve their general proficiency of English in order to have better performance in listening. EFL teachers should also try to enhance their students' language proficiency if they want to improve their listening competence.

To sum up, although the experimental group who received the metacognitive strategy instruction in the present study did not outperform the comparison group in listening comprehension, their awareness of metacognitive strategies improved greatly after the instruction. Hence, it would be beneficial for EFL teachers to instruct listening strategies and encourage their students to learn the strategies.

Limitations and Suggestions for Future Research

There are some limitations of the experiment. First, the participants were not randomly selected, so the results of the study could not be generalized to all the junior high school students in Taiwan. In addition, the sample size in the current study was small. Some of the results did not reach the significance level probably because the number of the participants was not large enough. Therefore, more participants from different districts of Taiwan should be included in further studies to explore the effect of metacognitive strategy instruction on EFL junior high school students' listening performance.

Second, the questionnaires could only provide a general picture of the participants' listening awareness and listening anxiety. The questionnaires might not precisely demonstrate their actual anxiety levels and metacognitive awareness involved in the listening process. Even though the study included interviews, the number of the interviewees was not large enough to represent all the participants in the two groups. Therefore, it is suggested to include more interviewees in future research. It may also help obtain more in-depth data to include think-aloud procedure in the study.

Third, the experiment lasted only for eight weeks and there were two classes per week. The instructional time seems to be too short to train the learners into proficient users of metacognitive listening strategies. On the other hand, the intensity of metacognitive listening strategy practice seems to be exhausting to the students. The participants might also feel frustrated and annoyed because their efforts did not seem to provide immediate success. Based on these observations, it is recommended that the metacognitive strategy instruction be conducted less intensively, and the instructional length be expanded.

Fourth, the instruction model used in the present study teaches several metacognitive strategies together in sequence; some students might not understand individual metacognitive strategy clearly. Some instructors in similar research (e.g., Hung, 2010; Li, 2009) instructed one metacognitive strategy per week, and the learners seemed to be more able to apply the strategies after they learned every strategy individually. Future research could consider teaching strategies one by one.

Fifth, mixed-ability grouping was not adopted for the experimental group, so that one of the interviewees reported that he felt frustrated because neither he nor his partner understood the listening texts, and they did not know how to discuss the listening content or helped each other. If the students of different listening skills are grouped together, the more skilled student can help the less skilled one, and the less skilled can learn better from his partner, who will have better confidence as well.

Sixth, the listening exercises were reported to be too easy by some of the participants from the experimental group. The content of the listening exercises did not seem appropriate for the practice of metacognitive sequence, which contains eight steps. Therefore, it is suggested that more appropriate listening materials be chosen as the listening exercises for the metacognitive strategy instruction.

Seventh, cognitive strategies were not taught before metacognitive strategies. Because metacognition monitors and manipulates cognitive processes (Flavell, 1976), if students do not have knowledge of cognitive strategies, instructing them metacognitive strategies may confuse them because they did not know what to manipulate. Therefore, it is suggested to instruct cognitive strategies before metacognitive strategies. In addition, this study did not investigate the participants' cognitive strategy awareness. If the data of the two groups' awareness of cognitive strategies had been collected, the researcher might have known whether the comparison group had higher cognitive strategy awareness than the experimental

group and whether it affected the results of the present study. An investigation of the learners' cognitive awareness is also suggested for future studies.

Conclusion

Although the results of this study failed to prove the effectiveness of metacognitive strategy instruction in raising EFL junior high school students' listening comprehension performance and reducing their listening anxiety, it still proved that the metacognitive strategy instruction significantly enhanced EFL junior high school students' metacognitive awareness in listening. Even though the effects of metacognitive strategy instruction on listening performance and listening anxiety did not improve within the eight-week intervention, it does not mean that the participants who received the metacognitive strategy instruction would never benefit from it and would not have better listening performance or lower anxiety in the future. Since metacognition refers to learners' ability to monitor and control their thinking and to regulate their learning process (Vandergrift & Goh, 2012), metacognitive strategy instruction may help students regulate their thinking and learning process, and may eventually help them become independent learners in the long run. Hence, it is suggested that junior high school teachers modify the instructional model adopted in this study based on the instructional suggestions offered in the previous two sections and include metacognitive strategy instruction into their language courses. It is hoped that the instructional suggestions could help EFL teachers design more effective listening strategy instruction for their students.

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Appendix A

Background Information Questionnaire (Chinese Version)

基本資料

1. 性別: 男性 女性
2. 已學習英語 _____ 年
3. 哪種英語能力對您而言最困難?(單選)
 聽 說 讀 寫
4. 你是否在母語為英文的國家居住過(如英國、美國、加拿大、澳洲等)?
 是, 國家名稱: _____。居住時間: _____ 年 / _____ 個月 / _____ 週
 否
5. 你一星期會聽到多少英文?(包含上英文課時聽到英文的時間):
 不超過 1 小時 1~2 小時
 2~4 小時 4~6 小時
 6~8 小時 超過 8 小時
6. 除了學校的英語教材和作業, 請問您通常還會聽那些課外英語材料?
 我通常不太聽課外英語材料
 我通常會聽下列英語材料:(可複選)
 市售英語教材(如:大家說英語、空中英語教室、Live ABC 等)
 英語廣播 (如: ICRT 等)
 線上資源 (如: Voice Tube、美國之音等)
 其它(請略述) _____
7. 你認為自己聽英語時最常遇到的問題為何? (可複選)
 對英語字彙、片語、文法的知識有限
 說話者的速度太快
 缺乏相關背景知識及用語
 聽不懂說話者的口音
 其他 _____
8. 是否參加並通過任何國內外承認之英語檢定?
 是, 檢定名稱:
 全民英檢初級 / 初試

全民英檢中級/初試

其他_____

否



Background Information Questionnaire

(English Translation)

1. Gender: Male Female
2. You have learned English for _____ years.
3. Which language skill is the most difficult for you? (Choose one skill.)
 Listening Speaking Reading Writing
4. Have you ever lived in an English-speaking country (e.g., U.K., USA, Canada, etc.)?
 Yes. The name of the country is _____.
You have lived there for: _____ years / _____ months / _____ weeks.
 No.
5. How much time do you spend on English listening in a week (including in English classes)?
 Less than one hour One to two hours
 Two to four hours Four to six hours
 Six to eight hours Over eight hours
6. What kind of English materials do you listen to except those used at school?
 I usually do not listen to extra listening materials.
 I usually listen to: (Multiple choices are allowed.)
 English magazines (like *Let's Talk in English*, *Studio Classroom*, *Live ABC*, etc.)
 English radio programs (like *ICRT*, etc.)
 On-line English programs (like *Voice Tube*, *Voice of America*, etc.)
 Others: _____ (Please describe them briefly.)
7. What is the most frequently encountered problem in English listening to you?
(Multiple choices are allowed.)
 Limited vocabulary, phrases, and grammar knowledge
 Fast speaking rate
 Lack of background knowledge and technical terms
 Unfamiliar accents
 Others: _____

8. Have you passed any language test in Taiwan or other countries?

Yes. The name of the test is:

GEPT elementary level / Only first stage

GEPT intermediate level / Only first stage

Others: _____

No.



Appendix B

Metacognitive Awareness Listening Questionnaire (Chinese Version)

英語聽力後設認知問卷

以下 21 題敘述，請根據您做英語聽力測驗時的情形，圈選一個適當的數字。

	非常 不同意	←————→	非常 同意
1. 在聽英語之前，我腦海中已經計畫好要如何去聽。	1	2 3 4	5
2. 當我有理解的困難時，我會更專注於正在聽的內容。	1	2 3 4	5
3. 我認為英語的聽力理解比英語閱讀、口說、寫作困難。	1	2 3 4	5
4. 在聽英語時，我會邊聽邊將聽到的東西翻譯成中文。	1	2 3 4	5
5. 在聽英語時，我會用懂的字來猜測不懂的字義。	1	2 3 4	5
6. 在聽英語時，若發現自己分心，我會立刻設法恢復自己的注意力。	1	2 3 4	5
7. 在聽英語時，我會把聽懂的內容跟自己對這個主題的知識進行比對。	1	2 3 4	5
8. 我認為英語聽力理解對我來說是一種挑戰。	1	2 3 4	5
9. 我會使用自身的經驗和知識來幫助自己聽懂內容。	1	2 3 4	5
10. 在聽英語之前，我會先回想自己可能曾聽過的類似內容。	1	2 3 4	5
11. 在聽英語時，我會邊把關鍵字翻成中文。	1	2 3 4	5
12. 在聽英語時，發現自己不專心，我會試圖讓自己恢復專注力。	1	2 3 4	5

13. 在聽英語時，當發現自己理解錯誤，我會很快地導正自己。	1	2	3	4	5
14. 聽完之後，我會回想剛才是如何聽的，並且思考下次可以怎麼改善。	1	2	3	4	5
15. 在聽英語時，我並不會緊張。	1	2	3	4	5
16. 當我聽不懂英語時，我就會放棄、不聽了。	1	2	3	4	5
17. 我會運用英語聽力內容的主旨大意來幫助自己猜測不了解的字義。	1	2	3	4	5
18. 在聽英語的時候，我會逐字翻譯成中文。	1	2	3	4	5
19. 在猜測字義時，我會回想我所聽到的內容，以判斷自己的猜測是否合理。	1	2	3	4	5
20. 在聽英語時，我會反問自己是否滿意當下的理解程度。	1	2	3	4	5
21. 在聽英語時，我心中已設定好目標要聽什麼。	1	2	3	4	5



Metacognitive Awareness Listening Questionnaire

(English Translation)

Listed below are 21 statements about listening awareness. Please circle the number to indicate the extent to which you agree or disagree with each statement based on your performance while taking the listening test.

		(Strongly disagree)	←————→	(Strongly agree)	
1. Before I start to listen, I have a plan in my head for how I am going to listen.	1	2	3	4	5
2. I focus harder on the text when I have trouble understanding.	1	2	3	4	5
3. I find that listening in English is more difficult than reading, speaking, or writing in English.	1	2	3	4	5
4. I translate in my head as I listen.	1	2	3	4	5
5. I use the words I understand to guess the meaning of the words I don't understand.	1	2	3	4	5
6. When my mind wanders, I recover my concentration right away.	1	2	3	4	5
7. As I listen, I compare what I understand with what I know about the topic.	1	2	3	4	5
8. I feel that listening comprehension in English is a challenge for me.	1	2	3	4	5
9. I use my experience and knowledge to help me understand.	1	2	3	4	5
10. Before listening, I think of similar texts that I may have listened to.	1	2	3	4	5
11. I translate key words as I listen.	1	2	3	4	5
12. I try to get back on track when I lose concentration.	1	2	3	4	5
13. As I listen, I quickly adjust my interpretation	1	2	3	4	5

if I realize that it is not correct.					
14. After listening, I think back to how I listened, and about what I might do differently next time.	1	2	3	4	5
15. I don't feel nervous when I listen to English.	1	2	3	4	5
16. When I have difficulty understanding what I hear, I give up and stop listening.	1	2	3	4	5
17. I use the general idea of the text to help me guess the meaning of the words that I don't understand.	1	2	3	4	5
18. I translate word by word, as I listen.	1	2	3	4	5
19. When I guess the meaning of a word, I think back to everything else that I have heard, to see if my guess makes sense.	1	2	3	4	5
20. As I listen, I periodically ask myself if I am satisfied with my level of comprehension.	1	2	3	4	5
21. I have a goal in mind as I listen.	1	2	3	4	5

Appendix C

Second Language Listening Anxiety Scale (Chinese Version)

英語聽力焦慮問卷

以下9題敘述，請根據您做英語聽力測驗時的感受，圈選一個適當的數字。

	非常 不同意	←————→			非常 同意
1. 聽英語時，我常常擔心自己會漏聽訊息。	1	2	3	4	5
2. 聽英語時，我常常擔心自己會聽錯。	1	2	3	4	5
3. 聽英語時，我常擔心自己的聽力表現會比別人差。	1	2	3	4	5
4. 聽英語時，我常常會感到心跳加速。	1	2	3	4	5
5. 聽英語時，我常常會緊張到發抖。	1	2	3	4	5
6. 聽英語時，我常常會冒冷汗。	1	2	3	4	5
7. 聽英語時，我常常會聽一下就放棄，不聽了。	1	2	3	4	5
8. 做英語聽力練習時，我常常會敷衍了事。	1	2	3	4	5
9. 我通常會儘可能避免聽英語。	1	2	3	4	5

Second Language Listening Anxiety Scale

(English Translation)

Listed below are 9 statements about listening anxiety. Please circle the number to indicate the extent to which you agree or disagree with each statement based on your performance while taking the listening test.

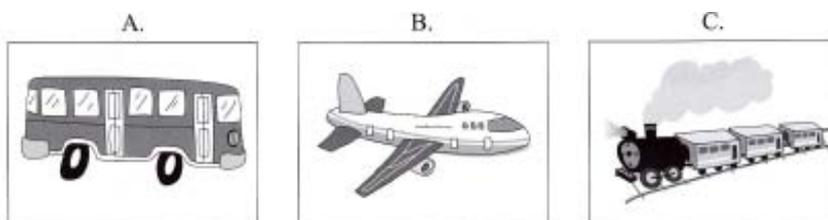
	Strongly disagree	←————→	Strongly agree		
1. When listening to English, I often worry that I will miss information.	1	2	3	4	5
2. When listening to English, I often worry that I will misunderstand something.	1	2	3	4	5
3. When listening to English, I often worry that my listening comprehension performance is worse than others'.	1	2	3	4	5
4. When listening to English, I often feel my heart pounding.	1	2	3	4	5
5. When listening to English, I often get so nervous that I tremble.	1	2	3	4	5
6. When listening to English, I often sweat and perspire.	1	2	3	4	5
7. When listening to English, I often give it up easily.	1	2	3	4	5
8. I often skimp over English listening comprehension exercises.	1	2	3	4	5
9. I usually do my best to avoid listening to English.	1	2	3	4	5

Appendix D

A Sample of Listening Strategy Learning Worksheet (Chinese Version)

英語聽力策略課程學習單(範例)

Question 1:



I. Planning (計畫): 根據上面的選項, 請預測可能會在聽力題目中出現的內容

預測內容, 請在()內打✓	正確與否	預測的英文單字	正確與否
1. when ()			
2. what ()			
3. where ()			
4. who ()			
5. how ()			

你會使用下列哪些方法, 讓自己順利解決可能出現的聽力問題:

1. 預測可能出現的關鍵字	
2. 讓自己放鬆	
3. 注意力集中	
4. 從前後文推測聽不懂的字	
5. 其他: _____	

II. Monitoring (監控): 請留意剛剛所做的預測是否正確, 預測正確者在後方欄位中打○, 錯誤者打✕。並在下方欄位寫下第一次聽力時聽到的解題的關鍵字。

注意: 不需聽懂並且寫下每個字, 只要能聽懂題目所問的解題關鍵字、詞彙即可。

聽到的內容, 請在()內打✓	聽到的英文單字	正確與否
1. when ()		
2. what ()		
3. where ()		
4. who ()		

5. how ()		
------------	--	--

根據上方表格的內容，與同學討論(兩人一組)是否聽到相同或相異的關鍵字？請將同學與你聽到的相同及相異處寫在下方表格中。

相同：	
相異：	

● 聽完後，你覺得自己對這個題目的了解：

完全聽懂 大部分聽懂 聽懂一半 聽懂一點點 完全聽不懂

III. Problem-solving (問題解決)：聽完第二遍後，針對上方表格中的相異處，填寫正確者在後方欄位中打○，錯誤者打×。若有其他修正請寫在下方表格中。

聽到的內容，請在()內打 √	聽到的英文單字(修正後)	正確與否
1. when ()		
2. what ()		
3. where ()		
4. who ()		
5. how ()		

● 若有聽不懂的字請寫出_____，並盡量從上下文中來猜測意思：_____

● 跟第一次聽相比，你有沒有使用新的策略？

是，新策略是：_____

否

● 跟第一次聽相比，你覺得自己對這個題目的了解：

完全聽懂 大部分聽懂 聽懂一半 聽懂一點點 完全聽不懂

IV. Evaluation (評估)：根據聽力稿的內容，檢視剛剛做的預測及推論是否正確。

● 預測階段，正確的有_____項，錯誤的有_____項。

● 監控階段，正確的有_____項，錯誤的有_____項。

● 問題解決階段，我遇到_____的問題，我用_____

方式解決。是否成功？ 是 否

- 我對本題作答情況的滿意度：

良好 尚可 不佳

省思與下堂課的目標：

A. 我覺得今天我在…方面做得很好。

預測 監控 問題解決 評估

B. 我今天的策略使用：

聽錄音內容前	有使用請打勾	是否有效
1. 我明白該注意聽的部分。		
2. 對於將要聽到的內容，我做了預測。		
3. 我準備好要注意聽並且專心在將聽到的內容。		
4. 我鼓勵自己能完成這個聽力內容。		

聽錄音內容後	有使用請打勾	是否有效
1. 我很專心聽聽力內容，直到完成。		
2. 我試著證實自己的預測是正確的。		
3. 我修正了自己的預測。		
4. 我把注意力放在這個題目所需要的資訊上。		
5. 說話者的語調、其它線索幫助我猜測不懂的單字意思。		
6. 我使用關鍵字來了解題目。		
7. 我運用了上下文的知識，文章的結構來了解題目。		
8. 我評估了我所了解的內容是否合邏輯。		

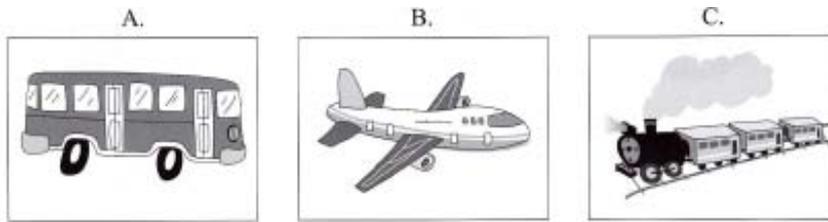
C. 對於自己今天整體聽力表現的滿意度：

良好 尚可 不佳

D. 我下次還可以改進的部分是 _____

**A Sample of Listening Strategy Learning Worksheet
(English Translation)**

Question 1:



I. Planning: Please predict the words you may hear in the following listening messages.

Prediction	Correct or Not	Predicted Words	Correct or Not
1. when ()			
2. what ()			
3. where ()			
4. who ()			
5. how ()			

What strategies will you use to solve the listening difficulties you may encounter?

1. Predict keywords	
2. Relax	
3. Focus on the content	
4. Infer the unknown words from the context	
5. Others: _____	

II. Monitoring: Pay attention to the correctness of the prediction you just made. If you predict correctly, place a circle in the last column; if you predict wrongly, place a cross in the column. Write down the key words you heard in the second column.

Note: You do not have to write down everything you heard. Just write the key words or key terms down.

Tick What You Heard	The Vocabulary You Heard (Revised)	Correct or Not
1. when ()		
2. what ()		
3. where ()		
4. who ()		

5. how ()		
------------	--	--

Discuss the table shown above with your partner. Did you hear the same keywords?

Write down the same and the different key words on the following table.

Similar:	
Different:	

● After listening for the first time, how much do you understand the question?

- Totally understand Mostly understand
 Half understand Understand a little bit
 Do not understand at all

III. Problem-solving: After listening for the second time, examine the answers in the second table that are different from your partner's. Place a circle after it if your answer is correct, and place a cross if the answer is wrong. If you have other corrections, write it down in the following table.

Tick What You Heard	The Vocabulary You Heard (Revised)	Correct or Not
1. when ()		
2. what ()		
3. where ()		
4. who ()		
5. how ()		

● Write down unfamiliar words here _____; and guess their meanings from the context: _____

● Did you use new strategies which were different from what you used during the first listening?

- Yes. The new strategies were : _____
 No

● Compared to your understanding at the first listening, now you think you understand the question:

- Totally understand Mostly understand
 Half understand Understand a little bit
 Do not understand at all

IV. Evaluation: According to the listening script, check how many of your predictions were correct.

- At the planning stage: Correct for _____ items; Incorrect for _____ items
- At the monitoring stage: Correct for _____ items; Incorrect for _____ items
- At the problem-solving stage: I faced a problem about _____.
I solved the problem by using (... strategy) _____.
Did it work? Yes No
- I answered the question _____ : perfectly acceptably badly

Reflection and setting goals for next class:

A. I think I did well at the stage of _____.

- planning monitoring problem-solving evaluation

B. The listening strategies I used today:

Before Listening	Tick What You Used	Tick If It Helped
1. I know which part I should pay attention to.		
2. I make prediction for the upcoming listening content.		
3. I'm ready to focus on the upcoming listening content.		
4. I encourage myself to finish the listening task.		

After Listening	Tick What You Used	Tick If It Helped
1. I focused on the listening content until it finished.		
2. I tried to prove my prediction was correct.		
3. I corrected my predictions.		
4. I focused on the information crucial for answering the questions.		

5. The speakers' intonation and other clues in the listening messages helped me guess the unknown words.		
6. I used the keywords to understand the listening content.		
7. I used the contextual knowledge and text organization to understand the listening messages.		
8. I evaluated what I have heard to see if my understanding made sense.		

C. My listening performance today is ____: excellent OK bad

D. The part on which I can do better next time is _____



Appendix E

Semi-structured Interview Guidelines (Chinese Version)

訪談大綱

A. 針對實驗組

1. 你喜不喜歡這段時間的聽力策略教學？你還記得學習了哪些策略嗎？能否大略描述一下？
2. 現在當你聽英語時，會比較不緊張嗎？
3. 你現在對自己的英語聽力，是不是比較有信心？為什麼？
4. 整體而言，使用聽力策略是否幫助你理解得更好？
5. 在所學的聽力策略中，你覺得哪一項策略最有用？為甚麼？
6. 你最常用的聽力策略是哪個？最少用的聽力策略是哪個？為什麼？
7. 你覺得聽力策略中的哪個策略對你來講沒有幫助？為甚麼？
8. 你除了在英語課堂上使用後設聽力策略以外，是否在其他時間也有使用這些策略？在甚麼樣的情況底下使用？
9. 對於這個聽力課程，你還有其它的疑問、感想、建議嗎？

B. 針對對照組

1. 你在第二份聽力測驗的成績進步(或退步)了很多，是為什麼呢？
2. 你在這兩份考卷作答時，是否使用了不同的方式來答題？分別使用了哪些方法呢？
3. 你在做前後兩份考卷時，答題時的態度和感覺有沒有甚麼不同？在哪些方面有所不同？(像是比較不緊張，在做第一份或第二份考卷時對英文聽力比較有興趣等。) 為什麼會有這些改變？
4. 在這八週裡，你是否在校外時間有練習英文聽力呢？大約是一週幾小時？是否有練習對象？對象是？
5. 在這八週裡，你放學後是否有參加任何英文相關的課程？如補習班或英文家教？你一週花多久的時間在這些英文課程上？

Semi-structured Interview Guidelines

(English Translation)

A. For the experimental group

1. Do you like the instruction of metacognitive listening strategies? Do you remember the listening metacognitive strategies introduced in class? Can you describe them briefly?
2. Do you feel less nervous while listening to English comprehension questions after receiving the metacognitive listening strategy instruction?
3. Do you have more confidence in your English listening ability now? Why or why not?
4. Does metacognitive listening strategy instruction enhance your listening performance?
5. Among the four metacognitive strategies, which strategy is the most beneficial to you? Why?
6. Which strategy is used the most often by you? Which strategy is used the least often by you? Why?
7. What metacognitive listening strategy is the least beneficial to your listening performance? Why?
8. Did you use the metacognitive strategies outside the class? Under what kind of circumstances?
9. Do you have any other questions, feeling to share, or suggestions about the listening project?

B. For the comparison group

1. You made great progress (or regress) on the post-test. Why did you make great progress (or regress)?
2. Did you use different strategies to answer the pre-test and the post-test? What strategies did you use in each of the tests?
3. Did your attitudes or feelings toward the pre-test and the post-test differ? How did your attitudes or feelings change? (e.g., Did you feel less stress or have more interest in English listening while taking the pre- or post-test?)
4. Did you practice English listening outside the classroom in the past eight weeks? If yes, how many hours a week? Who did you practice listening comprehension with?

5. Did you join any other English related programs after school in the past eight weeks? For example, did you attend cram schools or have an English tutor? How much time per week did you spend on these programs?

