THE UTILIZATION OF LISTENING STRATEGIES IN THE DEVELOPMENT OF LISTENING COMPREHENSION AMONG SKILLED AND LESS-SKILLED NON-NATIVE ENGISH SPEAKERS AT THE COLLEGE LEVEL

A Dissertation

by

YI-CHUN LIU

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2009

Major Subject: Curriculum and Instruction

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Approved by:

Chair of Committee,	Lynne Walters
Committee Members,	Janet Hammer
	Erin McTigue
	Fuhui Tong
Head of Department,	Dennie Smith

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ABSTRACT

The Utilization of Listening Strategies in the Development of Listening Comprehension among Skilled and Less-skilled Non-native English Speakers at the College Level.

(December 2009)

Yi-Chun Liu, B.A., Chinese Culture University;

M.Ed., University of North Carolina Charlotte

Chair of Advisory Committee: Dr. Lynne Walters

This study aimed to explore Chinese and Korean EFL learners' perceptions with regards to the use of listening strategies. The purpose is to learn whether Chinese and Korean students achieve academic listening comprehension through specific listening strategies. The data were collected from first and second year students currently studying abroad in the US. Although they are immersed in an English speaking environment, the use of listening strategies still affects their development of academic listening comprehension based on what they have learned in their home countries. For this reason, this study provides a corpus for understanding Chinese and Korean EFL students' listening behavior and what constrains their English listening comprehension.

The research design is one hundred and sixty-six college level students from three public universities in Texas who completed web-based questionnaires. Skilled and less-skilled groups were differentiated according to their TOEFL listening scores. If the student had a score of more than 570, he/she was categorized into the skilled listeners

group; below 570, they belonged to the less-skilled listeners group. In terms of the need for additional research on the different factors that affect developmental outcomes in L2 listening comprehension, the following research questions were investigated: 1) Is there a statistically significant relationship between the self-reported use of listening strategies and self-reported listening comprehension scores on the TOEFL? 2) Is there a difference between skilled and less-skilled non-native English speakers in the self-reported use of four categories of listening strategies (memory, cognitive, meta-cognitive, and socio-affective)? 3) What factors influence the use of self-reported listening strategies?

The findings show that students in this sample tended to employ memory strategies as a means of achieving listening comprehension. In theory, cognitive and metacognitive strategies are more difficult than memory strategies, prompting a lack of sophisticated strategies for Chinese and Korean students. In addition, students' listening skills are not mature. The pedagogical implications of this study for EFL education are that teachers, while teaching listening, should be alert to spot such phenomena and, specifically, instruct students to reach listening maturity via cognitive and metacognitive strategies.

DEDICATION

To my parents and grandparents

ACKNOWLEDGEMENTS

I believe that Rome was not built in a day. Without the contributions of so many people, this dissertation would have been impossible to complete. This is my tribute to all of the people who have had a role in my development, my growth as a researcher and a scholar. I am so grateful to those people who have been so helpful and supportive both in my academic circle and my circle of friends, adding color and life to my journey through my time studying abroad.

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CHAPTER I

INTRODUCTION

Language proficiency encompasses four areas: Listening, reading, speaking, and writing. According to Feyten (1991), listening provides more than 45% of our total communication ability, followed by speaking (30%), reading (16%), and writing (9%). Although it has been shown to be the one that develops the earliest, listening is the least studied of all communication skills (Alderson & Banerjee, 2002; Buck, 2001; Vandergrift, 2007). It is also an extremely important skill for non-native English speakers (NNES) because listening is their first encounter with the language as they work toward becoming literate in English (Berne, 2004; Long, 1989; Lund, 1991). Mastering auditory comprehension of basic conversation is the first step towards fully acquiring a second language (L2) or foreign language (FL). In addition, a NNES' first language (L1) proficiency, background and language experiences influence his or her communication fluency, including the processes of listening and speaking, and as such, is certain to affect their L2 or FL communication processes overall (Chang & Read, 2006; Chiang & Dunkel, 1992; Lynch, 1997). Therefore, there is a significant need to examine the overall listening processes of NNES and determine ways to successfully employ listening strategies to attain effective listening comprehension.

It is noteworthy that the number of adults who are learning English as a foreign or second language (EFL/ESL) is steadily increasing, whereas many instructors do not

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This dissertation follows the style of *Language Learning.*

have sufficient knowledge and training to teach listening comprehension strategies to these students (Oxford, 1993; Vandergrift, 1999). Given that listening comprehension is a crucial element for successful English language learning, teacher training should contain an emphasis on strategies to effectively assess and develop listening comprehension.

Statement of the Problem

Learning to listen in another language is challenging because it is a complex, covert, and meaning-building process, yet this process has received less attention than those that develop speaking, reading, and writing skills (Alderson & Banerjee, 2002; Mecartty, 2000; Vandergrift, 2007). Listening is the least understood procedure in language acquisition, even though it plays a critical role in language development and communicative skills (Mendelsohn, 2001). In addition, listening is ignored or poorly taught (Vandergrift, 1997; Osada, 2001). How to listen efficiently is rarely covered in academic settings and its significance is underexplored (Chiang & Dunkel, 1992; Read, 2002; Vandergrift, 2007).

Academic language proficiency includes critical thinking, problem solving, and question analysis, which takes longer to acquire; therefore it is more challenging for NNES. Academic settings include lectures in classrooms, seminars, and workshops. English as a second language (ESL) college students listen to lectures almost every day when taking classes. Thus, understanding lectures is a prerequisite for students attending classes. They have to pay attention to what the instructor delivers in class. Sometimes

ESL students nod their heads at teachers, but such actions might not mean that they understand as much information as it might appear. ESL students learn best when they employ efficient learning strategies. Therefore, it is necessary for them to understand what the lecture is about before they can be ready to absorb and process the course content. Many students may do well with their interpersonal communication skills in English, but not perform as well in their academic language activities.

Purpose of the Study

The preparation offered to non-native English speakers (NNES) in college English courses is geared toward academic purposes. Thus, the purpose of this study is to explore NNES' listening strategies used when auditorially exposed to academic lectures and participating in academic discussions in English in a classroom setting in the US. This study will investigate the differences between listening strategies used by skilled and unskilled listeners, and increase awareness of the importance of academic listening comprehension (Kao, 2006; Shang, 2008; Vandergrift, 2003b).

Theoretical Framework

The taxonomy of listening skills includes conversational and academic listening, such as listening to lectures (Richards, 1983). Academic listening is the major focus in this study. NNES are expected to have abilities to, for instance: (a) identify the topic of the lecture; (b) understand the main ideas and supporting ideas within a discourse; (c) infer conclusions from the context. Moreover, listening skills are a predictor for L2

proficiency (Feyten, 1991; Oxford, 1993). Thus, learning English for academic purposes is the main goal for reaching listening proficiency, and further for English language proficiency.

Adults need to develop a set of increasingly complex listening comprehension strategies that they may apply to the academic information to which they are exposed. Therefore, NNES, as they acquire cognitive and academic language proficiency (CALP) in the L2 or foreign language (FL), should receive formal instruction on listening comprehension skills that can be utilized when engaging in academic endeavors. The use of these strategies should facilitate their success in formal academic activities.

Research Questions

The following questions will guide this study:

1. Is there a statistically significant relationship between the self-reported use of listening strategies and self-reported listening comprehension scores on the TOEFL?
2. Is there a difference between skilled and less-skilled non-native English speakers in the self-reported use of four categories of listening strategies (memory, cognitive, meta-cognitive, and socio-affective)?
3. What factors influence the self-reported use of listening strategies?

Definition of Terms

L1: stands for the first or native language. This language can be Spanish, Chinese, or other languages. It depends upon the participant's mother tongue or native language (Oxford, 2003).

L2: means second language, foreign language, or target language. In my study, L2 is English.

English as a Foreign Language (EFL): English as a foreign language learners are those students for whom English is a foreign language. They do not learn or speak English outside of a classroom. For instance, they may learn English for two hours a week while at school.

English as a Second Language (ESL): English as a second langue learners are those students whose second acquired language is English. For example, if a child's native language is Spanish, English might become their second language after immigrating to the United States.

Non-Native English Speakers (NNES): From a grander perspective, non-native English speakers include all EFL/ESL learners. In my study. NNES and ESL are interchangeable.

Listening Comprehension (LC): Listening is a mental, cognitive, and inferential process which is used to receive acoustic inputs into meaning. The process is called listening comprehension (Buck, 2001). There often is little time to think about the meaning of a spoken sentence, as compared to a written text. This process involves a listener's knowledge, personal experience, and intelligence if they are to interact with speakers

and also interpret texts. This process also refers to a language learner's listening performance. In my study, academic listening comprehension is the main focus.

Listening Strategy (LS): Listening strategy is an approach or skill applied during listening comprehension procedures in order to listen more efficiently.

Skilled Listeners: they are able to employ a wide variety of efficient strategies frequently, such as cognitive and meta-cognitive strategies. They pay more attention to the overall text, and they can reflect on what they hear prior to linguistic and background knowledge, and further develop their interpretation of the meaning in order to achieve comprehension.

Less-Skilled Listeners: translate word by word as their main strategy; they do not connect what they hear to their prior experiences, and they make few inferences. They have difficulty summarizing content, offering little information in response to questions, and face problems refocusing when losing their focus on the meaning. In other words, they are constrained by their limited linguistic knowledge.

Significance of the Study

This study is significant for the following reasons. First, few studies investigate former EFL learners who are studying abroad and who have now become ESL learners because of their educational environment (Oxford, 1993, 2003). I conduct this study to follow up on the English listening progress of international students who come to the US to study, and to explore research questions by expanding upon the work done by Kao (2006) and Shang (2008), as it applies to my sample. Next, findings from this study

have implications for teaching guidelines regarding the use of listening strategies used by different proficiency-level students.

Organization of the Study

Chapter I introduces the topic, chapter II synthesizes the previous studies and finds the gap between the previous research and the current study, chapter III discusses how this study is going to answer research questions and the procedures of data collection, chapter IV reports the results of the data analysis, chapter V concludes with the discussion of the study's findings, implications for teacher practice, the limitations of the study, and suggestions for future research.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter presents an overview that situates this research study within the following fields: second language (L2) acquisition, perception, BICS/CALP, listening comprehension, listening strategies (the main four categories of which are memory, cognitive, metacognitive, and socio-affective strategies), the relationship between listening strategies and second language listening comprehension, the differences between skill levels, the discrepancies between the use of listening strategies and listening comprehension among skilled and less-skilled non-native English speakers, and the assessment of listening comprehension.

Second Language Acquisition

Language acquisition is the notion of the procedures that learners acquire any language. Similar to first language (L1) acquisition, second language acquisition copes with language learning from childhood to adults (Ellis, 2002; Krashen, 1986). Krashen differentiated between acquisition and learning. Acquisition is the process children use to learn their L1 unconsciously; instead, learning is considered to be conscious knowledge. Language learners know the rules and speak in a second language (L2). In Krashen's theory of comprehensible input known as input hypothesis, he refers to previously acquired linguistic competence and knowledge and then L 2 learners acquire extra new language structure. Applying comprehensible input to listening skills, the

theory is related to how listeners receive acoustic input, decode the incoming messages, and then internalize in the brain. Furthermore, the input must be comprehensible, especially for L2 listeners to comprehend the meaning. Long (1989) agreed with Krashen's comprehensible input, but he was concerned with how input is understood. Krashen's theory has been criticized for lacking a hypothesis that can be tested by empirical research (Lightbown & Spada, 2003). Based on Chomsky's theory (1986), learners possess Universal Grammar which is the principle grammar rule shared by all languages. The process connects to listening comprehension by constantly asking questions, hearing what other people are saying to attain comprehension. Simultaneously, a L2 is learned at the same stage of L1 development in terms of the environment and the linguistic input even though learners may not acquire the complete L2 grammar.

Rationale- BICS/CALP

Skutnabb-Kangas and Toukomaa (1976) distinguished between social and academic language ability. They investigated Finnish immigrant children in Sweden, discovering that these students had no difficulties communicating in Swedish but still performed poorly in academic work. Cummins (1980) conducted extensive research in Quebec based on the above mentioned research. He addressed the language used for basic social interaction or interpersonal communication skills (BICS), and the language used for academic learning or cognitive academic language proficiency (CALP). The relationship of BICS and CALP is shown in Figure 1.

BICS is distinguished from interpersonal communication skills in L1 and L2. It

refers to the type of discourse used between friends in the school hallway, during lunch, at recess, on the school bus, on the telephone, or at the mall. CALP is the language students need in order to think critically, understand new concepts, and communicate in academic contexts.

BICS and CALP are divided along a two-way continuum within Cummins' Quadrants associated with language and content activities (Cummins, 1980; Walter, 1996). The quadrants include context-embedded (clues) and context-reduced (no clues) language along one axis, and cognitively demanding (difficult) and cognitively undemanding (easy) tasks on the other.

To acquire basic conversational fluency in the L2, BICS takes around a two-year exposure, while attaining CALP or a native speaker's proficiency in academic language takes a bilingual child approximately five years. This might be an even longer process for an adult learning a foreign/second language. BICS focuses on conversational communications geared toward oral language development, including listening and speaking, whereas CALP covers all four domains which are listening, reading, speaking, and writing in order to determine English language proficiency.

To develop CALP, a level of proficiency essential for academic performance, all NNES have to develop listening comprehension skills as the prerequisite step. However, listening comprehension is not often focused on as an important measure of academic achievement. NNES have to be formally taught listening strategies that will enable them to develop strong listening comprehension skills which will directly affect their academic achievement.

Figure 1 indicates Cummins' theoretical model in language proficiency and years of formal instruction to reach cognitive academic language proficiency and interpersonal communication skills.

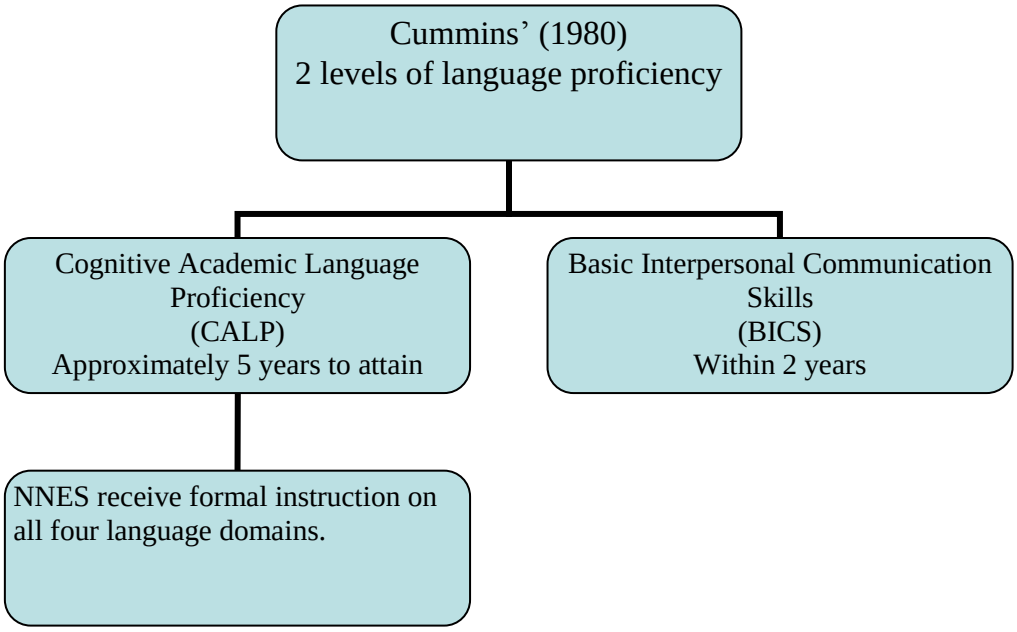


Figure 1 Cummins' theoretical model in language proficiency

Cummins' CALP is a generalization of language proficiency; however, he did not clearly address CALP to listening comprehension. When given enough exposure to L2 learners and with the right motivation to learn, older learners will perform better (Peregoy & Boyle, 2005). In addition, there is some criticism published with respect to CALP. First, Edelsky (1990) argued that the concepts of BICS and CALP lack a position with regards to social aspects in practice. Second, there is no consensus on language proficiency and the relationship to academic achievement that makes educators

misunderstand. Also, the reason for the failure of bilingual students is relevant to low cognitive academic proficiency, instead of inappropriate formal instruction.

Listening Comprehension

Listening comprehension is a critical language skill to develop fluency or mastery. It is essential for L2 learning, and necessary in the development of the other three language skills (Rost, 2002; Vandergrift, 2007). Thus, developing listening comprehension is important, although NNES are seldom taught how to listen efficiently (Berne, 2004; Mendelsohn, 2001; Vandergrift). Listening comprehension is the least researched skill, because acoustic input is transient, embedded in the context, and the process is often difficult to access. According to studies by Graham (2006), Hasan, (2000) and Vandergrift, English language learners (ELLs) reported that listening comprehension is the most difficult language skill to learn. Therefore, it seems essential to further research the listening process and to develop a better understanding about which types of strategies teachers should use to facilitate the listening comprehension of NNES.

Theoretical Models

Listening occurs in the mind, in that the mind needs to have a concrete image to connect with the content in order to grasp the intended meaning. Listeners rarely get a second chance to hear exactly the same text, and therefore listening is affected by the nature of the acoustic input, stress, intonation, and memory capacity. All are factors in the

listener's ability to listen successfully. Basically, listening is the process of hearing sounds, identifying and understanding them as words, translating those words to the first language, and responding back to the speaker in the second language (Hasan, 2000; Long, 1989; Lund, 1991; Wilson, 2003). After fully understanding the listening process, test developers can consider the proper types of testing items.

Above all, listening comprehension is an active and cognitive process that requires exposure, practice, and the application of specific strategies (Field, 2003; Rost, 2007). Therefore, the more skilled listener will be more likely to utilize more complex and self-evaluative strategies, incorporate contextual cues with greater ease, and engage in metacognitive processes more naturally. The less skilled learner will be more likely to utilize memory strategies and will be more likely affected by social and affective factors such as anxiety.

Besides a cognitive operation, listening involves the interaction of linguistic and non-linguistic knowledge. Buck (2001) discussed how listeners take incoming signals and explain them in terms of linguistic and nonlinguistic knowledge. Linguistic knowledge is composed of discrete elements of language such as vocabulary, phonology, syntax, semantics, and discourse. Non-linguistic knowledge regards the topic, the context, and how that knowledge applies to the incoming sounds. Listeners receive acoustic input, apply prior knowledge, and use the context to build on mental representations of meaning.

In terms of listening comprehension, it "takes place within the mind of the listener, and the context of interpretation is the cognitive environment of the listener" (Buck, 2001, p.29). Listening comprehension is a means of communication and an essential part

of oral language competence. It is difficult for NNES to practice their listening skills in order to enhance listening comprehension because they often face a limited amount of exposure to English in their daily lives, especially when learning academic English (Chang, 2007; Chang & Read, 2006; Chiang & Dunkel, 1992; Kao, 2006).

Although there is no specific listening comprehension theory, Nagle and Sanders (1986) presented a model of listening comprehension processing for adult language learners. This model, which has been used for over 20 years, suggests that listening comprehension activities assist the development of linguistic knowledge in the process of successful foreign language acquisition. In addition, linguistic and background knowledge both act as important variables to affect NNES' language learning, especially in their listening comprehension (Richards, 1983).

Figure 2 demonstrates the cycle of listening process that listeners employ listening strategies while listening. They derive meaning from speakers or conversation and decode the input in order to attain listening comprehension. After the listening comprehension process, listeners will be able to reach successful English language learning and academic achievement.

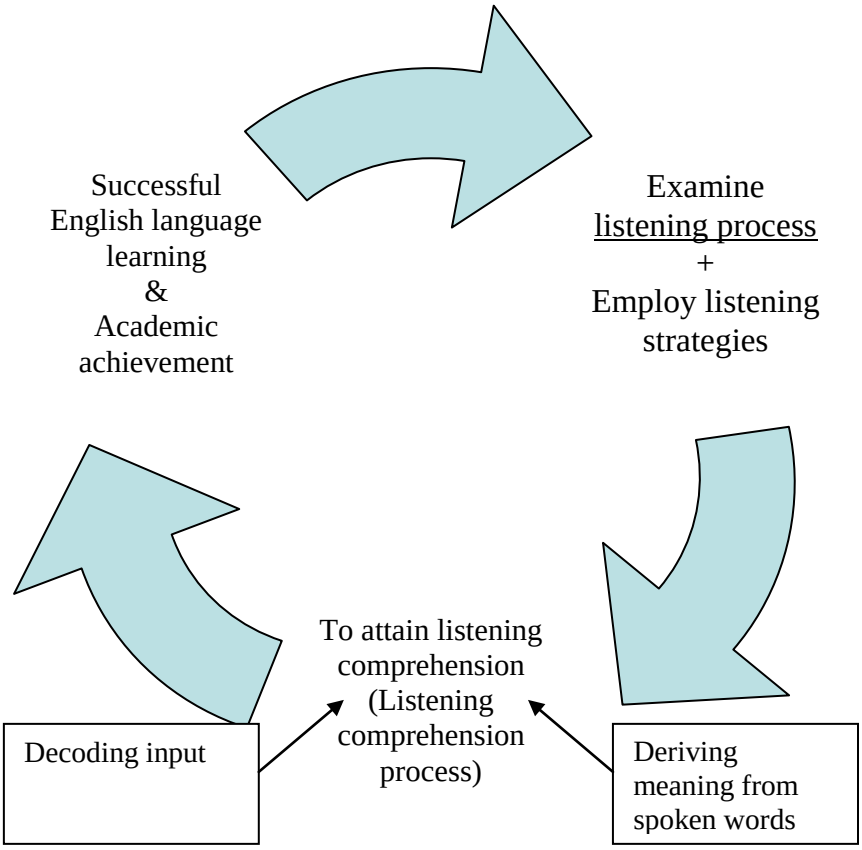


Figure 2 The cycle of listening process

The Three-phase Language Comprehension Model

The process of listening is a complex process, involving acoustic input, vocabulary knowledge, linguistic knowledge, and background knowledge. In contrast, listening comprehension involves other processes such as decoding input and deriving meaning from spoken words. Anderson (1995) proposed a three-phase language comprehension model: "perception, parsing, and utilization" (p. 379). This three-phase model is recursive and overlapped representing three levels of processing (see Figure 3). Each phase of the model refers to: perceptual processing (segmenting phonemes), parsing (segmenting

words), and utilization (using long-term information sources to explain the meaning).

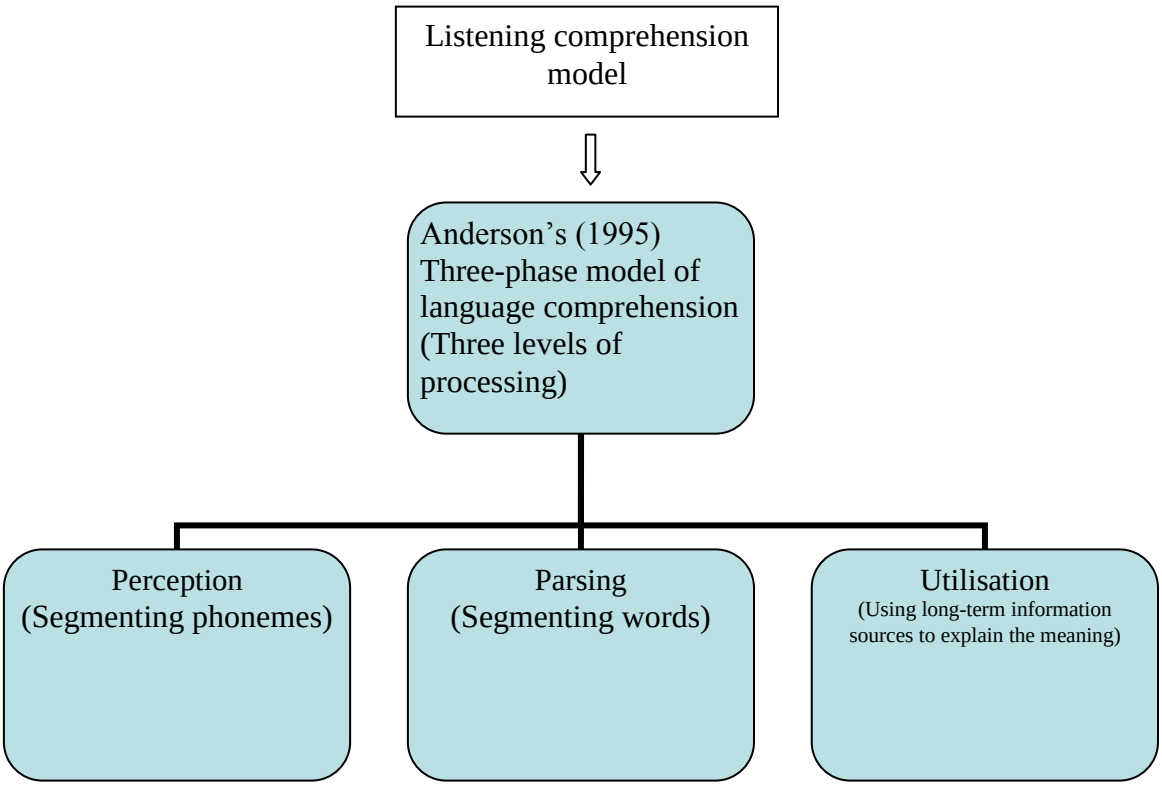


Figure 3 Anderson's three-phase model of language comprehension

For example, listeners receive the input of the sound, apply their knowledge of the language, and then use their understanding of the context to build mental representations of meaning or schema. Schema represents abstract knowledge that provides the basic building blocks of the human information processing system, laying the foundation for the listening construct (Goh, 2000; Hasan, 2000). Schema assists listeners to make inferences and form a big picture of the communication universe. As they hear, learners establish meaning during the comprehension process by combining input with their prior knowledge, as well as by making guesses (Long, 1989; Lund, 1991).

As mentioned earlier, listening comprehension is a complicated mental process. Listeners generally have no opportunities to review the message, which is much different from written language, and therefore, have to overcome the challenges of accents, unknown or limited vocabulary, unfamiliar topics, complicated syntax, fast speech rate, and the opportunity to listen to the message only once (Chang, 2007; Chang & Read, 2006; Long, 1989; Lund, 1991; Shang, 2008). Listening comprehension is not simply a process of decoding messages; it is a continuous, reciprocal and active process between the listener and speaker.

Perceptions

Perceptions are a facet of hearing and understanding of linguistic sounds. They come from listening such as acoustic input and comprehension-understanding errors. It may cause a misperception or mishearing of words, so listeners separate a series of sounds into morphemes. When the situation "slip of the ear" occurs, the mind decodes message. The moment that sounds comes to the brain, but it is forgotten easily. This is commonly considered to be a "slip of the ear" that 'in one year, and out the other." The listening process is when listeners try to interpret what they have heard into meaningful words. Thus, if a part of the speech is not heard, listeners may face gaps in their sounds or words (Buck, 2001; Wilson, 2003).

Prior Knowledge

Prior knowledge is known as background knowledge, topic knowledge, or topic

familiarity, which belongs to one of the main factors that affect listening comprehension (Chang & Read, 2006; Chiang & Dunkel, 1992). The theory related to information processing is schema, meaning "mental frameworks that we use to organize knowledge" (Bruning et al., 2004, p. 48). Knowledge is organized into complicated representations known as schema controlling the encoding, storage, and retrieval of sources (Marshall, 1995). Schema is regarded as "scaffolding" (Rumelhart, 1981) which organizes information and contains slots to hold the contents of memory. The knowledge is accepted, encoded, saved, and retrieved based on the importance of slots. When the outline of values is connected to the representation of a schema, it is instantiated by concepts or events, served as the recollections which are part of our long-term memory. Whenever schema is not activated during learning, new information cannot be absorbed easily. Schema theory focuses on the application of what learners already knew. Thus, schema connects to listening comprehension process.

Listening comprehension is neither a bottom-up nor a top-down process, but an interactive process where listeners use both prior and linguistic knowledge to understand meaning (Rost, 2002; Vandergrift, 2003a). Listening comprehension is a conscious process where the listener constructs meaning by using clues from contextual information and their own existing knowledge (Chiang & Dunkel, 1992; Lynch, 1997; Osada, 2001). While doing so, listeners utilize a number of strategies.

Chang and Read (2006) indicated that background knowledge compensates for a limited vocabulary, regardless of the fact that students might not have enough vocabulary to answer specifically detailed questions. Students instead rely on less vocabulary

knowledge in order to achieve listening comprehension. In addition, the reason why topic preparation was favorable was determined to be that it can activate NNES students' prior knowledge, in order to stimulate their listening skills. Schmidt-Rinehart's research found that topic familiarity was a powerful factor at all levels of proficiency, and emphasized the supportive role of background knowledge and the mental framework between prior knowledge and new information.

Vocabulary Knowledge

Vocabulary is a basic unit that establishes a foundation for larger structures including sentences, paragraphs, and entire narratives. Vocabulary knowledge is one of the factors that impact the outcome of listening performance tests. This knowledge results in vocabulary acquisition, a complex process that it is essential for learners who need to know not only words but their associated meanings, and who need to improve their usage to better understand the whole texts (Read, 2002). All of these cumulate to affect the listening comprehension of EFL learners (Chang, 2007; Chang & Read, 2006; Laufer, Elder, Hill & Congdon, 2004).

Alderson and Banerjee (2002) pointed out that vocabulary knowledge includes size, depth, and grammar. NNES need a certain amount of vocabulary. The size of these learners' vocabulary knowledge was shown in lists such as the 1000 most frequent words used by university students. Depth was defined based on a hierarchy of word knowledge starting with the most difficult words (Nation, 2006). One of the examples used in vocabulary knowledge research is from Laufer, Elder, Hill & Congdon's (2004), who

investigated the process of test validation and found that teachers need both size and depth tests to measure vocabulary knowledge. Size tests provided an efficient placement and guideline for admission into language teaching programs.

It was useful to explain the theoretical rationale for the test and how the size and depth constructs were conceptualized. The test determined the level of NNES learners' vocabulary development and their placement. As a result, this research has contributed to the design, test delivery, and various theories of vocabulary acquisition. From this study, educators can learn how to measure NNES students' vocabulary size, depth, and vocabulary knowledge, in order to better predict our students' performance on listening tests. In addition, Meccarty (2000) and Field (2003) have demonstrated that vocabulary knowledge significantly correlates with listening comprehension. Both studies are related to listening comprehension skills with vocabulary knowledge and provide effective synopses of listening comprehension development.

Listening Strategies

Listening strategies are defined as approaches for enhancing the process of listening comprehension (Goh, 2002; Vandergrift, 2003b, 2007). These strategies are essential for the decoding and internalizing of any information attained through oral communication. However, there has not yet been any one specific listening comprehension theory developed in the past two decades.

The Model of Language Learning Strategy

Among well-known models of language learning strategies, Oxford's (1990) seminal model forms a theoretical framework that contains an inventory of six groups of learning strategies. These strategies apply to listening skills including memory, cognitive, compensation, metacognitive, affective, and social strategies.

1. Memory strategies. Listeners link mental messages and use sounds and images. Linking mental messages enables the listener to group streams of speech together and to set new words into a context. Using sounds and images of a conversation include activities such as using keywords, which is the process of listening to sentences to understand the overall conversation. For example, listeners connect new language information to ideas already in their memory (e.g., peanut butter and jelly). Thus, they are able to group acoustic inputs into meaningful units, over-learn information with structured reviewing until it is natural and automatic, and use mechanical techniques such as writing words on cards in order to memorize them.

2. Cognitive strategies. Cognitive strategies are mental activities (Field, 2003; Rost, 2007) related to brain processing and to thinking about language. L2 learners infer from context, summarize, and translate acoustic incoming messages. L2 learners are more directly related to a learning task and involve themselves in direct manipulation (Oxford, 2003). NNES applying cognitive strategies where the learner repeatedly infers the meaning from the context, translates her L1 words into L2, and summarizes what she hears in academic settings. For example, while listening to lectures, listeners summarize the information in their minds, and directly apply previous knowledge to their new

knowledge of the subject.

3. *Compensation strategies*. Listeners guess unfamiliar words or concepts by using contextual cues. For example, they use linguistic cues, synonyms, and words from their mother tongue to overcome their limited vocabulary or background knowledge.

4. *Metacognitive strategies*. Metacognitive strategies are a lot more complex, with learners thinking about their understanding in the language. Listeners have developed more schema, because they build on more insights in the listening process, and are able to question themselves. They involve themselves in the process of connecting new information to known material, creating practice chances, and of self-evaluation. L2 learners focus on their learning processes, arranging and planning their learning activities, and then evaluating their learning progress. For instance, while listening, listeners review new information and link it with already known material, and pay extra attention to main ideas. After lectures, they self-identify errors in their understanding, try to avoid errors the next time, self-evaluate their progress, and come to better understand the new language in the future. Then they set short-term and long-term goals in order to use English in academic settings (Oxford, 1990; Vandergrift, 1997, 2003a).

5. *Affective strategies*. L2 listeners self-regulate, practice deep breathing to feel relaxed while listening, and encourage themselves when they make progress. After class, they may regularly watch English media programs to help their listening skills, or write in a learning diary to keep track of their learning process. After a good listening performance, they may reward themselves.

6. *Social strategies.* Learners tend to ask questions regarding corrections, cooperate with peer learners, and develop levels of cultural understanding (Berne, 2004). For example, during or after lectures, they may ask speakers to repeat or explain themselves for clarification, if the listeners do not understand the message the first time. After class, they talk with their learning partners or native English speakers.

These six strategies can be divided into two categories. The former three can be termed direct strategies, and the latter three, indirect strategies. In this model, the order of the strategies represents an increasing level of complexity; they are all used for language learning by speakers of other languages.

Based on Oxford's 1990 model of language learning strategies, Vandergrift (1997, 2003b) adopted three strategies specifically for listening comprehension. These strategies are termed cognitive, metacognitive, and socio-affective strategies. His final model provides a detailed view of each of these three general strategies, and describes the specific skills necessary to engage in each particular strategy.

Cognitive listening comprehension strategies include such skills as inference, elaboration, imagery, summarization, translation, transfer, and repetition (Vandergrift, 1997, 2003b). Inferencing uses linguistic knowledge, voice, background sounds between speakers, and context to guess the meaning of what the listeners heard. The elaboration strategy involves personal experience, knowledge gained from the world, academic settings, questions raised by brainstorming, and stories being made up. The differences between translation and transfer are that, in the former, the learner explains ideas in another language by verbatim, and in the latter, the learner uses cognates to understand

the meaning. All of these skills are cognitive processes that rely on the use of contextual and L1 knowledge to decode and comprehend the information encoded in L2.

The metacognitive strategy requires more advanced concepts, which include the four following subskills: planning, monitoring, evaluation, and problem identification. Planning requires advanced strategies, including paying attention when listening, focusing on specific texts, and knowing how to arrange auditory contexts. An NNES listener also has to check to see whether she understands the listening task and can go through the second round to confirm her understanding. She must have the ability to question herself and think about the resolution, in order to help her understanding of the language. These skills require more complex processes involving attention, strategic thinking, and the ability to engage in self-monitoring and self-evaluation. Both cognitive and metacognitive strategies are coherent mental representations of a text in the memory (Vandergrift, 2003b, 2004, 2007).

Table 1 summarizes and describes components of four categories of listening strategies. Each strategy contains five subcategories. Memory strategy comprises new information connection, new words, keywords, making guesses, and study techniques. Cognitive strategy consists of materials preview, note taking, summarization, previous knowledge, and sounds or picture connection. Metacognitive strategy includes overview, main ideas, error self-identification, progress self-evaluation, and goal setting. Socio-affective strategy involves the following four components, such as repetition or explanation, media watching, learning diary, learning partner, and reward myself.

Table 1 Components of the listening strategy

Components	**Memory**
Item 1	New information connection
Item 2	New words
Item 3	Keywords
Item 4	Making guesses
Item 5	Study techniques
Components	**Cognitive**
Item 1	Materials preview
Item 2	Note taking
Item 3	Summarization
Item 4	Previous knowledge
Item 5	Sounds /picture connection
Components	**Metacognitive**
Item 1	Overview
Item 2	Main ideas
Item 3	Error self-identification
Item 4	Progress self-evaluation
Item 5	Goal setting
Components	**Socio-affective**
Item 1	Repetition/ Explanation
Item 2	Media watching
Item 3	Learning diary
Item 4	Learning partner
Item 5	Reward myself

(adapted from Oxford, 1990 & Vandergrift, 2003b)

Bottom-up and Top-down vs. Cognitive and Metacognitive Strategies

Buck (2001) noted that how sounds are received is a type of information transferred to the knowledge applied in both the bottom-up and top-down views. The lower-order elements with lower levels of proficiency are known as a bottom-up processing skill employed when using linguistic knowledge. Bottom-up processes are constructed by drilling with word segmentation skills. Listeners use top-down processes when using prior knowledge to understand the meaning of messages (Anderson & Lynch, 1988; Vandergrift, 2003a).

It was found that listeners use more bottom-up approaches when they understand meaning from the phoneme-level up to discourse-level features; and L2 listeners prefer top-down processes while they use context and background knowledge (e.g. topic, cultural information, and knowledge stored in long-term memory) to establish foundation for comprehension. It is built up by practicing with compensatory skills (Rost, 2002; Vandergrift, 2007).

Furthermore, cognitive processing (favoring bottom-up processes) is a mental activity (Field, 2003; Vandergrift, 2004). The meta-cognitive strategy (favoring top-down processes) refers to techniques of problem solving, question inference, and self-management. Skilled listeners use more meta-cognitive strategies, which consist of planning, monitoring, and evaluating when processing cognitive procedures (Goh, 2000, 2002; Vandergrift, 2003a, 2006, 2007).

Tsui and Fullilove (1998) and Wilson (2003) both called for an increased focus on the comparison between bottom-up and top-down processing skills in listening comprehension. Both processing skills are regarded as the prime determiners in L2 listening performance. For example, Tsui and Fullilove's work was conducted by investigating which processing methods were used by skilled and less-skilled listeners. The study covered a seven-year period with approximately 20,000 candidates, all of whom took the comprehensive English exam with English listening test included. Two variables were composed of the schema and the question type. The vocabulary difficulty level was moderated to make sure that test takers understood the questions and that the test measured their English competence appropriately. The findings of these two studies

showed that bottom-up processing was more effective than top-down processing when distinguishing the listening performance among L2 learners on test items. In addition, bottom-up and top-down approaches were used as the main listening instructions.

Differences Between Skill Levels

Previous studies have explored discrepancies in listening strategies among skilled and unskilled L2 listeners (Berne, 2004; Lynch, 1997; Osada, 2001). First of all, it is important to know how different levels of groups of learners are categorized, and what relationship those distinctions may have to their overall language proficiency. The following studies utilized different approaches to determine students' English listening proficiency levels. Lynch recruited a limited number of L2 listeners based on their placement scores on a listening test conducted after a 3-week course in English for Academic Purposes (EAP). He looked at a particular student's listening tests, listening activities in the classroom, and reflections in order to see how his listening skills developed during the three weeks of the program. Osada divided students into ability groups according to their listening proficiency tests, including quizzes, a mid-term exam, and the listening comprehension test of the TOEIC. Vandergrift (2006) conducted tests using French and English authentic dialogues in order to divide into levels, 8th grade native English speakers learning French. Shang (2008) employed short dialogues in the listening comprehension section of a simulated TOEFL test to classify beginning-level and advanced groups of listeners.

The studies examined above identified the differences between skilled and less-skilled listeners. For instance, Goh (2000, 2002) found that two groups of effective and ineffective listeners shared similarities in terms of the difficulties experienced with listening comprehension. When a skilled listener hears a sentence that contains unfamiliar words, she hears the sentence, the whole paragraph, or even the complete context first. After that, she figures out the setting and the main points in order to guess the meaning. Even if she does not know the meaning of each word in the sentence, she still grasps the overall context of the rest of the sentence, which is considered a top-down skill. Thus, skilled learners use effective combinations of metacognitive and cognitive strategies to achieve listening comprehension.

Nevertheless, knowing individual words first, and then moving to the syntactic and the semantic levels, represents a bottom-up skill. The phenomenon takes place, for example, if a person hears the word "jeans." He/She may look the word up in the dictionary to discover the definition and possible synonyms that refer to pants and clothing. Ineffective listeners have more problems using their low-level processing skills when listening for verbatim input. Thus, less skillful listeners pay more attention to lexical segmentation and word recognition (Field, 2003; Goh, 2002; Osada, 2001).

Above all, listening comprehension is an active and cognitive process that requires exposure, practice, and the application of specific strategies (Field, 2003; Rost, 2007); therefore, the more skilled listener will be more likely to utilize more complex and self-evaluative strategies, incorporate contextual cues with greater ease, and engage in metacognitive processes more naturally. The less skilled learner will be more likely to

utilize memory strategies and likely will be more affected by social and affective factors such as anxiety.

Empirical Studies on Listening Strategies among Skilled vs. Less-skilled Learners

The following empirical studies pointed out that listening strategies affect listening comprehension, and further relate the differences in strategies used between effective and less effective listeners. EFL/ESL learners use listening strategies when engaging in listening comprehension (Chang, 2007; Chang & Read, 2006; Shang, 2008). Vandergrift (2003a) and Shang agree that there is a positive relationship between listening strategies and listening comprehension.

Previous studies have provided evidence supporting the fact that adult, high-ability listeners use various strategies that are different from those used by low-ability listeners (Goh, 1998, 2000, 2002; Hasan, 2000; Vandergrift, 2003a). NNES who utilize complex listening strategies can engage in more effective listening processes. In addition, efficient listening strategies have been shown to help NNES's become better listeners. Moreover, Chang & Read (2006) and Chang (2007) pointed out which processing strategies skilled and less-skilled college-level listeners use, and investigated how different methods of support related to the use of listening strategies affect the listening performances of NNESs. They found that the most effective method of listening support was the listener being provided with information about a topic prior to listening.

Surprisingly, vocabulary instruction was the least beneficial tactic for EFL students. However, topic preparation achieved the highest score, followed by repeated input and

question previews. They received the results by using the method of recruiting 160 business majors from a college in Taipei. This research aimed at identifying the processing methods used by skilled and less-skilled listeners. The studies were useful for English teachers in designing pre-listening activities, vocabulary, and pre-listening discussions of related topics.

What differentiated between skilled and less-skilled learners was the increased flexibility and appropriate use of cognitive and metacognitive strategies of the proficient learners, while less skilled learners conspicuously lacked meta-cognitive strategies. More skilled listeners employed a cycle of both strategies in order to reach coherent meaning (Vandergrift, 2003b). Other research by Shang (2008) and Vandergrift (2006) found that effective listeners were able to successfully integrate a mixture of different listening approaches. Beginning-level listeners, on the other hand, relied more on memory strategies and self-reported a limited language knowledge and vocabulary, expressing difficulties when attempting to understand a message.

The literature introduced below concluded that the most frequently used listening strategies for skilled and less-skilled non-native English speakers are: Cognitive and meta-cognitive strategies are the most frequently used, as was found by conducting research on secondary school and college-level students (Goh, 2000, 2002; Vandergrift, 2002, 2003b). These studies supported the notion that cognitive and metacognitive strategies interact with each other in order to achieve comprehension (See Table 2 with the comparison between more and less proficient listeners).

Table 2 Differences between more- and less-proficient listeners

More-proficient listeners (Group 1)	**Less-proficient listeners (Group 2)**
Use strategies more often	Process input word by word
Use a wide range of strategies	Rely heavily on translation/key words as translation
Use strategies interactively	Are negatively affected by linguistic and attention constraints
Are concern with the overall rhetorical organization of text	Are concerned with definitions/ pronunciation of words
Are better able to: Attend to larger chunks of input Monitor/redirect attention Grasp overall meaning of input Relate to what they hear to previous experiences Guess meaning of words	Make fewer inferences/elaborations
Use existing linguistic knowledge	Do not verify their assumptions
	Do not relate what they hear to previous experiences

Adapted from Berne (2004)

Listening Problems

As mentioned earlier, listening comprehension is a complicated mental process. Listeners have little opportunity to review the message they hear or even read the words. Receiving sound input is a very different language experience than working with written language, where listeners can read the contents of the message. Instead, EFL/ESL learners have to overcome more obstacles when listening to the new language. Thus, the factors affecting second/foreign language listening comprehension have been discussed by several researchers (Goh, 2000; Graham, 2006; Lynch, 1997; Vandergrift, 2004, 2005, 2006, 2007).

Goh (2000) reported that the five most common listening comprehension problems are: learners "(1) quickly forget what is heard, (2) do not recognize words they know, (3) understand words but not their intended message, (4) neglect the next part of the message when thinking about meaning, and (5) unable to form a mental representation from the words heard" (p. 60). These factors are considered to be the features that make the listening process difficult for NNES. In addition, some main independent variables influence the challenges faced, such as fast speech rates, unfamiliar topics, unknown or limited vocabulary words, the opportunity to listen to the message only once, and inefficient listening strategies (Chang, 2007; Chang & Read, 2006; Lund, 1991; Shang, 2008).

Assessment of Listening Comprehension

Language assessment requires the examination of a student's listening, speaking, reading and writing skills. Listening and reading belong to receptive modes of communication, while speaking and writing are expressive skills. A receptive mode of communication refers to the gaining of input when listening to a conversation and reading a text. Productive skills indicate how listeners answer what they have heard, and whether they have the ability to write down what they think, skills that take more time to acquire as compared to listening and reading skills. With respect to listening assessment, testing circumstances, mode of input, affective factors, formative and summative assessments are all included (Vandergrift, 2007). The assessment of listening has received little attention from the research community (Mecartty, 2000; Vandergrift, 2004).

The listening comprehension section is a vital component in most common international language tests, including the TOEIC (Test of English for International Communication), the TOEFL (Test of English as a Foreign Language), and the IELTS (International English Language Testing System). The TOEFL is an academic test of many factors affecting the results of listening comprehension, such as tone, intonation, pronunciation, speed of delivery, word recognition, and background knowledge.

Various instruments have been used to assess EFL/ESL learners' listening comprehension including the TOEFL and TOEIC. Both tests were developed by the Educational Testing Service (ETS, 2007). TOEFL is required for international students who plan to study in English-speaking countries; and TOEIC assesses communicative competence of English for use in an academic setting (Chiang & Dunkel, 1992). The listening section in TOEFL is one of the instruments used to test students' academic English proficiency in listening comprehension because it is widely used in the world. The listening section in TOEIC measures non-native English speakers' comprehension and communication abilities in everyday activities.

Conclusion

Given these findings on the importance of the use of appropriate and effective listening strategies to attain listing comprehension and successful academic performance, the formal instruction of listening strategies for NNES is critical, and should be approached in a formal fashion especially in academic environments where the development of CALP is of essence.

When compared to children, it is more challenging for adult NNES to achieve effective levels of English proficiency. Listeners have to deal with accents, pronunciations, unknown vocabulary, and unfamiliar contents. Moreover, research agrees that listening is a crucial component of the four language domains and is a building block that should be specifically considered with adult learners.

CHAPTER III

RESEARCH METHODOLOGY

This study examined the listening strategies and listening comprehension in non-native English speakers (NNES) at both skilled and less-skilled levels of mastery. This chapter starts with the design of the study, then moves to how participants were selected, what instruments were utilized, what data collection procedures were conducted, and how the study design was implemented.

Participants

A power analysis was conducted to determine the sample size of this study, with alpha level at 0.05, effect size of .3, and power of .8, which yielded a minimal sample size of 100 (Lipsey, 1990).

Therefore, a convenience sampling procedure was utilized to include 166 NNES (91 females and 75 males) from three is it three public universities in the southwest of the United States. These participants were first or second year undergraduates and graduate students. Their majors were from different fields of study such as science, engineering, agriculture, economics, and other social humanities fields. In order to control for the participants' ethnicity and their first language (L1), participants were chosen from students who are from South Korea, Taiwan, and the People's Republic of China. The participants were native speakers of Chinese and Korean and share the common fact that English is not cognate to their L1 Mandarin or Korean (Goh, 2000). In addition, the students were selected to be possible participants because they were

bilingual students educated in English as a foreign language during their secondary school education in their own countries.

The following criteria were used to select participants:

1. Native language is either Chinese or Korean
2. Came to study in the US during or after the spring of 2007
3. Took the TOEFL after January, 2006
4. Attending regular university classes or intensive English language programs offered by the English Language Institute at the university.

The participants' demographic information is summarized in Table 3.

Table 3 Demographic information of participants

NNES groups	Skilled	Less-Skilled
N=166	114 (68.7%)	52 (31.3%)
TOEFL score	≧570 PBT	< 570 PBT
	114 (68.7%)	52 (31.3%)
Listening score of the TOEFL	≧56-57 PBT	< 56-57PBT
	114 (68.7%)	52 (31.3%)
Years of Formal English Instruction		
0-2 years	19 (16.7%)	7 (13.5%)
3-5 years	9 (7.9%)	8 (15.4%)
More than 5 years	86 (75.4%)	37 (71.2%)
Time of Arrival in the U.S.		
2007	38 (33.3%)	18 (34.6%)
2008	47 (41.2%)	21 (40.4%)
2009	28 (24.6%)	14 (26.9%)

Table 3 Continued

Degree level participants are working on	Skilled	Less-Skilled
Undergraduate	4 (3.5%)	2 (3.8%)
Master's	55 (48.2%)	18 (15.8%)
Doctoral	37 (32.5%)	21 (40.4%)
ELI (Others)	18 (15.8%)	11 (21.2%)
Country of birth		
Taiwan	79 (69.3%)	38 (73.1%)
China	24 (21.1%)	5 (9.6%)
Korea	11 (9.6%)	9 (17.3%)
Gender		
Female	58 (50.9%)	19 (36.5%)
Male	56 (49.1%)	33 (63.5%)

Recruitment targeted two levels of proficiency: skilled and less-skilled learners. Skilled and less-skilled learners were assessed by retrieving their self-reported TOEFL score and the sub-score in TOEFL's listening section. The reason to use a paper-based TOEFL score of 550 as a cut-off point is that it is the required minimum score for US university undergraduate and graduate program admission (Ginther, 2002). However, most departments set higher thresholds of entry, requiring a score of 570 when there are many international applicants. The TOEFL score is only valid for two years, so participants were limited to first and second year students studying in the United States.

In the current study, one hundred and fourteen participants (n=114) were categorized as skilled learners with a total score higher or equal to 570, or a listening score higher or equal to 56-57 on the paper-based TOEFL. Fifty-two students (n=52) were classified as less-skilled learners with scores lower than 570 or 56-57 on the paper-based TOEFL, including students from the English Language Institute (ELI)

program.

Instrumentation

The instrument is a questionnaire to examine NNES' language background and self-reported listening strategies when hearing any lectures in the classroom setting. Questions were adapted from Oxford's (1990) 50-item Likert-scale Strategy Inventory for Language Learning (SILL) and Kao's (2006) 52-item Likert-scale Strategy Inventory for EFL Listening Comprehension. The adaption made the questions more readable to NNES. In addition, new questions in terms of concepts of listening comprehension were also added, resulting in the final listening strategy survey with 37 items classified into two parts, including the demographic information and twenty items (Questions 5-8) dealing with listening strategies. Demographic information relates to factors such as nationality, gender, years of formal English instruction, when participants took the TOEFL, and when they came to the United States. The questionnaire was administered during the summer of 2009. The format encompasses yes/no, multiple choices, and an optional short response for providing suggestions regarding listening strategy inventories.

TOEFL Review & Psychometric Information

The components of listening test items consist of 34 multiple choice items measuring academic listening comprehension such as conversations and lectures to test NNES if they understand facts, main ideas, expressions, and what the instructors tells them to do

for assignments (Chapelle, Enright & Jamieson, 2008).

The Test of English as a Foreign Language (TOEFL) assesses the potential success of non-native English speakers using Standard American English at a university level (ETS, 2007). Non-native applicants have to show a sufficient score if they want to study at English-speaking colleges and universities. Thus, it is a prerequisite for admission into colleges and universities. A TOEFL score is only valid for two years; so colleges and universities usually recognize the most recent TOEFL score. The Education Testing Service (ETS) developed the TOEFL test, which is regularly used to evaluate students from numerous countries.

Currently, there are three ways to take the TOEFL exam: the paper-based test (PBT), the computer-based test (CBT), and the internet-based test (iBT). The TOEFL test measures how well international students listen, read, speak, and write in English within the context of a college or university classroom. The test content is all academic in nature. It is important to confirm the quality of the test and the reliability of the test score in order to provide an overall evaluation of the test.

The Internet-Based Test (iBT) is the most recent version in terms of format, with a speaking section added in 2005. It is considered a valid test because ETS has spent many years developing a significant body of research, all in the service of developing a quality test. ETS invited numerous scientists and researchers to help create test items, according to their expertise (Chapelle, Enright & Jamieson, 2008). It is considered to be an example of a strong test that may be used to appraise the English proficiency of those who are not native speakers of English. This test and the resulting scores

influence many non-native students who plan to study abroad. Nevertheless, it still needs improvement and would benefit from continued productive feedback from non-native English speakers in a continued effort to constantly improve upon the test.

With regard to reliability, the TOEFL is significant because it provides a measure of how consistently a test estimates the test taker's competence. A high level of reliability means that that test givers can trust that the scores will show little or no error, at least due to the assessment procedure. Reliability explains how various scores can be alike on two or more tests, and that they can be predicted by statistical processes. The more reliable the scores are, the more confidence test givers will have in using the scores to make crucial decisions.

Score reliability is an index that can be used to evaluate how consistent test scores are (ETS, 2007). ETS presented estimated reliabilities for each section and the total scaled scores according to data from computer-based test simulations. The reliability estimates were .87 for Listening, .81 for Structure-Writing, .88 for Reading, and .94 for the Total scores; the reliability of the estimation method was not clearly stated. However, the paper-based TOEFL scores have reliability estimates (alphas) of .90 (Listening), .86 (Structure and Written Expression), .89 (Reading), and .95 for the total scaled scores (ETS). Table 4 shows the average section and total score reliability estimates according to the first year's data collected from September 2005 to December 2006.

Table 4 Reliability for TOEFL iBT

Score	Scale	Reliability estimate
Reading	0-30	0.86
Listening	0-30	0.87
Speaking	0-30	0.90
Writing	0-30	0.78
Total	0-120	0.95

(ETS, 2007)

Besides reliability, a test must offer a measure of validity to show how the scores were intended to measure English proficiency. Validity is ensured by analyzing the test from different angles, such as the test criteria, goals, constructs, or content (ETS, 2007). Validity refers to the appropriateness of the explanation of the outcomes of an assessment process for a group of people. Tests will have different degrees of validity, which can be categorized into high, moderate, and low validity (Chapelle, Enright & Jamieson, 2008).

In Figure 4, there are two types of validity important for collecting test criterion evidence: predictive and concurrent studies. In a predictive study, there is a time interval between when the test is administered and the criterion is measured. In a concurrent study, the test is administered and the criterion that is measured at the same time. For example, the SAT predicts how well high school students will perform during their first year of college. Therefore, SAT scores can be a predictor with high school students' freshman GPA as the criterion. Researchers use a correlation coefficient to measure the relationship between SAT scores and a student's GPA. The correlation coefficient can be regarded as a validity coefficient.

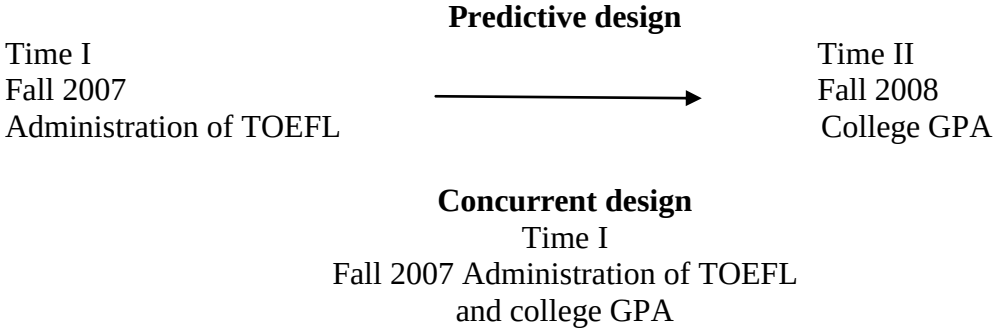


Figure 4 Predictive and concurrent studies

TOEFL belongs to criterion-related validity. Criterion-related validity represents the similarity between the outcome of the test and the results gained from an outside standard. Most classroom-based assessments designed by teachers are suitable for the idea of criterion-referenced assessment. It possesses two categories which are concurrent, as well as predictive validity. Concurrent validity is where both measurements are judged at the same time, such as when UCLA [the English as a Second Language Placement Exam (ESLPE)] as well as TOEFL are compared and administered at the same period of time (Farhady, 1997). On the other hand, predictive validity stands for a language aptitude test or admission test that can estimate a person's future performance. A further example is that a school may monitor GPA as a measure of a person's success in order to decide if he or she can get accepted by a school. We can conclude that this is done to assess a test-taker's likelihood of future accomplishment. Moreover, Hatch and Farhady demonstrated that test scores are to be used to see current performance and to guess future performance rather than the test itself. It is also decided by the grades on a new test and on an established test.

Study Design

There were three stages in the study design, including instrument design phase, pilot study design, and survey distribution phase. While creating the instrument, the researcher took content validity, face validity, and construct validity into account (Patten, 2004). In terms of the theoretical framework, the research adapted Oxford (1990) and Vandergrift (2003b)'s work. From the viewpoint of the content validity, The researcher judged the appropriateness of the contents, such as checking examinees' educational levels to determine if the questions were too difficult to understand, and if some terms were ambiguous in their meaning. Next, according to face validity, the researcher made judgments on the superficial appearance, for instance, determining if questions fit the purpose of the study. The third one is construct validity, to hypothesize a relationship between the listening score and listening strategies and then test the hypothesis.

Table 5 demonstrates the instrument design phase consisting of four listening strategies with five subcomponents respectively. The researcher listed original questions and then described what changes made to refine each survey item.

Table 5 Instrument design phase

Instrument design	**Original questions**	**Refine survey items**
Item 1	Associating/elaborating	I connect new language information to ideas already in my memory (ex: bread & butter).
Item 2	Setting news words into a context	I put new words into a context to understand the meaning.
Item 3	Using keywords	I listen for keywords that carry the meaning of the conversation.
Item 4	Guessing	I make guesses about the topic based on what has already been said.
Item 5	Using mechanical techniques	I use study techniques (ex: write note words on cards)
Item 6	Using resources for receiving messages	Before listening to lectures, I preview class materials if possible.
Item 7	Taking notes	While listening to lectures, I take notes.
Item 8	Summarizing	While listening to lectures, I summarize the information in my mind.
Item 9	Reasoning deductively	While listening to lectures, I apply previous knowledge to new knowledge of the subject.
Item 10	Practicing with sounds and writing systems	I connect sounds or actual pictures to guess the meaning of unknown words.
Item 11	Overview	While listening, I overview the new information and link it with already known material.
Item 12	Main ideas	While listening, I pay attention to main ideas.
Item 13	Self-identify	After lectures, I self-identify errors in understanding and then try to avoid errors next time.
Item 14	Self-evaluating	After lectures, I self-evaluate my progress and understand better in future lectures.
Item 15	Setting goals	I set short-term and long-term goals in order to use English in the classroom.
Item 16	Ask for explanation	During or after lectures, I ask speakers to repeat or explain if I don't understand the first time.
Item 17	Practice after class	After class, I regularly watch English media to help my listening skills.
Item 18	Keep a language learning diary	After class, I write a language learning diary to keep track of my learning process.
Item 19	Discuss with peers	After class, I talk with learning partners or native English speakers.
Item 20	Reward myself	After having a good listening performance, I reward myself.

After considering the above three types of validity, the instrument was piloted with a small group of EFL students in May of 2009. Twenty-eight participants took the trial survey and provided feedback in order to improve this questionnaire. The participants reported unclear questions, unfamiliar terminology, or wording that was too difficult for them. The survey was adapted such that ambiguous questions identified in the pilot study were either removed or revised. After revising the survey, it ended up with the final draft and started the survey distribution phase.

Reliability

The reliability of the pilot study for Likert-scale questions in May of 2009 was checked. Memory strategy had a Cronbach's Alpha value of .637. Cognitive strategy had an Alpha value of .472. The Alpha coefficient for a metacognitive strategy was .605. Socio-affective strategy evidenced a value of .730. A .7 Alpha coefficient was determined to be better, based on the sample size. Green, Salkind and Akey (2000) suggested a reliability coefficient of .50 with groups over 100 participants. The internal consistency of 20 items had a Cronbach Alpha's value of .775. In the present study, with the group numbering over 100, the researcher ensured that each value was above .50, according to the standard viewpoint.

Moreover, the reliability of the main study in July and August of 2009 was evaluated. Overall, internal consistency of the main project improves over the pilot, making this current study more reliable after conducting the pilot study, validating the corrections collected from the participants' and experts' opinions and suggestions. Table 6

summarizes the reliability information of the pilot and main study respectively.

Table 6 Reliability between the pilot and main study

	Pilot study	Main study
Overall 20 items	.775	.871
Memory	.637	.709
Cognitive	.472	.682
Metacognitive	.605	.747
Socio-affective	.721	.730

Data Collection Procedures

The researcher used Qualtrics survey software to conduct the survey-based research. Participation was voluntary. From the questionnaire, the author gave the participants details regarding the purpose of the study and informed those participants that they could withdraw at any time.

The approach was made to students who registered as a member of the Taiwanese Student Association (TSA), the Chinese Students and Scholars Association (CCSA), or the Korean Student Association (KSA) at three public universities in the southwest United States. With these organizations' permission, the questionnaire was posted on their forums between July 20th and September 4th of 2009, for seven weeks. During this period of time, the researcher sent four reminders in the first four weeks, and then sent follow-up emails to encourage more participants (see Table 7).

Table 7 Data collection schedule

Post date	**Survey taken date**	**Number of participants**
7-20-09	7/20/09~ 7/24/09	39 responses
7-25-09 (1st reminder)	7/25/09~7/31/09	52 responses
8-1-09 (2nd reminder)	8/1/09~8/7/09	47 responses
8-8-09 (3rd reminder)	8/8/09~8/14/09	46 responses
8-15-09 (4th reminder)	8/15/09~8/21/09	33 responses
8-22-09 email follow up	8/22/09~8/28/09	22 responses
8-29-09 email follow up	8/29/09~9/4/09	12 responses
		Total: 251/ Valid survey: 166

The researcher looked for Chinese-speaking and Korean-speaking students who were in the first and second year of their university study. Participants had to have taken the TOEFL test. Selected participants completed online, closed-ended surveys. Participants could leave their email address in order to receive incentives.

There were 37 questions asked, reporting participants' preferences of listening strategies. A five-point scale of never, seldom, sometimes, often, and always acted as a close-ended response which highlighted those factors that might help or hinder the student's listening comprehension in English. Responses that included frequency and percentages were calculated.

Data Analyses

The data were analyzed using SPSS (v. 16.0). Descriptive statistics were summarized on all variables. Based on the scores, make sure that they were consistent and converted different versions of the TOEFL scores back to paper-based scores. I

created a numeric rating of the use of different listening strategies (memory strategy= X1; cognitive strategy= X2; meta-cognitive strategy= X3; social-affective strategy= X4). Every statement was based on a five-point scale (never is worth 1 point, seldom is worth 2 points, sometimes is worth 3 points, usually is worth 4 points, and always is worth 5 points).

Data collected from the questionnaires were analyzed in order to answer the research questions. A descriptive statistical analysis was applied in order to summarize the students' responses to the questionnaires and about their backgrounds. To answer research question one, the means and standard deviations were computed (Kao, 2006; Lee, 2001). Spearman's rho rank correlation analysis was conducted to discover if there was a statistically significant relationship between listening strategy and listening comprehension.

Research question two investigated if there was a statistical difference between skilled and less-skilled non-native English speakers in the use of four categories of listening strategies. The dependent variables were the NNES students' listening strategies, and the independent variables were the two skill level groups. By running the *t*-test to examine if the mean value of the dependent variable for one group significantly differed from that of the second group (i.e., skilled and less-skilled learners). To answer research question three, a Chi-square test was reported to explore what factors influenced the use of listening strategies. This will be discussed in the results section.

CHAPTER IV

RESULTS

Chapter IV discusses the results of the quantitative data analyses performed for the current study. First, hypotheses in this study were tested by investigating the results of Spearman's rho rank correlation, *t* test, and ANOVA. Next, data from the survey provided non-native English speakers' (NNES) perceptions regarding how their learning experiences differed when using different listening strategies to facilitate their listening comprehension, especially with regard to lectures. In addition, the characteristics of skilled and less-skilled listeners were compared.

Research Question One

Table 8 Research question one with alternative hypothesis and data needs

Research Question	Alternative Hypothesis	Needed Data
Is there a statistically significant relationship between the self-reported use of listening strategies and self-reported listening comprehension scores on the TOEFL?	There is a statistically significant relationship between the self-reported use of listening strategies and self-reported listening comprehension scores on the TOEFL.	• Listening strategy use will be assessed by close-ended questionnaire. • Listening comprehension is based on the self-reported subscore of the listening section of TOEFL.

H_0: There is no statistically significant relationship between the self-reported use of listening strategies and self-reported listening comprehension scores on the TOEFL.

The first research question in Table 8 explored the relationship between listening strategies and listening comprehension. To examine the relationship between the four listening strategies (memory, cognitive, metacognitive, and socio-affective) and the TOEFL listening score, the Spearman's rho rank correlation analysis was computed using SPSS with alpha set at .05. The output indicated that the TOEFL listening score versus the memory strategy (M= 3.57, SD= .65) is positively significant with a *p*-value .007; the cognitive strategy (M= 3.51, SD= 0.62) with a *p* value .02. Both *p* values are significant; therefore it rejects the null hypothesis. Thus, there is a statistically significant relationship between the reported use of different listening strategies and the listening score (listening comprehension). The correlations of the socio-affective strategy with the other measures tend to be lower. When NNES students reported the use of more memory strategy, their listening scores tended to be higher and they appear to facilitate listening comprehension. In summary, when L2 learners employ memory strategy, they have better listening scores. The results of the Spearman's rho rank correlation analysis are shown in Table 9.

Table 9 Spearman's rho rank correlation

			Memory	Cognitive	Meta-Cognitive	Socio-affective
Spearman's rho						
	2 groups	Correlation Coefficient	.210(**)	.181(*)	.100	-.013
		Sig. (2-tailed)	.007	.020	.199	.870
		N	166	166	166	166

* Correlation is significant at the 0.01 level (2-tailed).

Moreover, a corrected significance level is used to minimize the chances of making

a Type I error. One possible method is the Bonferroni approach, where .05 is divided by the number of correlations computed. A correlation coefficient would not be significant unless its *p*-value is less than the corrected significance level. As seen in Table 10, the correlation coefficient between listening scores and memory strategy was relatively significant at $p < .01$ level. However, only one strategy was shown to be significantly different. This result shows that the more participants used the memory strategy, the higher their listening competence.

Table 10 Correlations between memory strategy and 2 skill level groups

Variables	*r*	*p*
Memory Strategy & 2 Skill Level Groups	.21	.007

Research Question Two

Table 11 Research question two with alternative hypothesis and data needs

Research Question	Alternative Hypothesis	Needed Data
Is there a difference between skilled and less-skilled non-native English speakers in the self-reported use of four categories of listening strategies (memory, cognitive, meta-cognitive, and socio-affective)?	There is a difference between skilled and less-skilled non-native English speakers in the self-reported use of four categories of listening strategies (memory, cognitive, meta-cognitive, and socio-affective).	• Listening strategy will be assessed by close-ended questionnaire. • Listening comprehension is based on the self-reported subscore of the listening section of TOEFL.

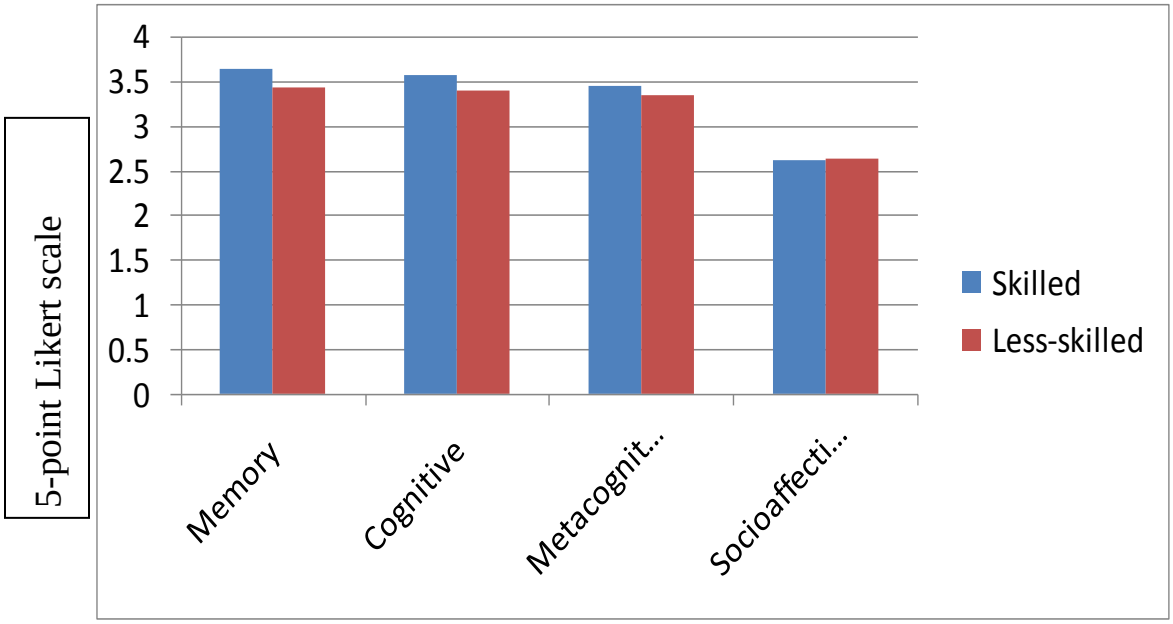
H_0: There is no difference between skilled and less-skilled non-native English speakers in the self-reported use of four categories of listening strategies (memory,

cognitive, meta-cognitive, and socio-affective).

Table 11 explicitly lists research question two and alternative hypothesis to explain what data is necessary to provide evidence. Table 12 illustrates variables in the data file. There is a definition in each variable of skill level and listening strategy.

Table 12 Variables in data file

Variables	Definition
Skill level	Level is the grouping variable. The level variable divided into two conditions. If level = 1, then the student was in the low-skill condition. If level = 2, then the student was in the high-skill condition. They were also anticipated to report their use of listening strategies.
Listening strategy	Strategy is the dependent variable. It refers to the number of times students reported using listening strategies during the lecture.



**1=Never, 2=Seldom, 3=Sometime, 4=Usually, 5=Always

Figure 5 Mean score of each strategy

In Figure 5, the 5-point Likert scale presents the mean score of memory, cognitive, metacognitive, and socio-affective strategies between skilled and less-skilled listeners. In addition, significance tests determine the probability that the null hypothesis is true (less than 5 in 100), *p* stands for the probability. The chances that something is true are less than 5 in 100; it is likely that it is not true. Thus, we would reject the null hypothesis (Pattern, 2004). From research question two, with respect to mean differences, I examined whether the utilization of four listening strategies (memory, cognitive, metacognitive, and socio-affective) were used differently by high-skilled and low-skilled listeners, by computing the *t* test. The outcome variable is the four listening strategies, and the group for two levels of skills is the independent variable. From Table 12, it can be seen that the use of the memory strategy is significant with the *p*-value equal to .048 at .05 significant level. The result of cognitive strategy is marginally significant with a *p* value of .067.

Further, these results explain that there is a difference in the use of listening strategies between skilled and less-skilled NNES. The mean of each strategy shows that skilled listeners (M = 3.64, SD = .69) use more memory strategy than less-skilled listeners (M= 3.42, SD= .53). The circumstance is the same for skilled learners (M= 3.57, SD=.64), who use the cognitive strategy more than less-skilled learners (M=3.39, SD=.56). However, no significant relationship was found between metacognitive and socio-affective strategies and two skill level groups at $P > .05$. The result of the *t* test is presented in Table 13.

Table 13 The results of all four strategies

	N	Mean	Std.	Sig. (2-tailed)
Memory strategy	Skilled learners (n=114)	3.64	.69	.048
	Less-skilled learners (n=52)	3.42	.53	
Cognitive strategy	Skilled learners (n=114)	3.57	.64	.080
	Less-skilled learners (n=52)	3.39	.56	
Meta-Cognitive strategy	Skilled learners (n=114)	3.45	.69	.32
	Less-skilled learners (n=52)	3.35	.55	
Socio-affective strategy	Skilled learners (n=114)	2.62	.72	.86
	Less-skilled learners (n=52)	2.64	.63	

In Table 14, the researcher checked the significance level from the result of the *t* test. In this study, neither Levene's tests for equality of variances were significant. It is not significant, so choosing the p-value in the same row as "equal variance assumed." The highlighted value represents that there is a difference between skilled and less-skilled non-native English speakers in the self-reported use of memory strategy, but no difference in the cognitive strategy in terms of 95% confidence interval.

Table 14 Independent sample T-test for memory and cognitive strategies

		Levene's Test For Equality Of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. error Difference	95% Confidence Interval of the difference	
									Lower	Upper
Memory	Equal variance assumed	1.814	.180	-.1992	164	.048	-.21552	.10817	-.42910	-.00194
	Equal variance not assumed			-2.205	127.662	.029	-.21552	.09773	-.40890	-.02214
Cognitive	Equal variance assumed	.182	.670	-1.761	164	.080	-.18171	.10320	-.38548	.02205
	Equal variance not assumed			-1.848	111.518	.067	-.18171	.09832	-.37653	.01310

Based on the *t* test, there is sufficient evidence that shows significance between two groups in the use of memory strategies. Then the researcher investigated the components of these four strategies by using the one-way ANOVA test to know how effective they affect listening comprehension and determine the strategy differences according to the mean of two groups used in the descriptive statistics.

1. Memory strategy: The data indicate that skilled listeners usually connect new language information to ideas already in their memory more than the less-skilled listeners (Mean: 3.53 > 3.19, the *p*-value of .033 at 95% confidence level). The second category of the memory strategy points out that effective listeners usually put new words into context to understand the meaning compared to ineffective listeners who use this skill less (Mean: 3.56 > 3.29, p= .099 at the 90% confidence level). The fourth component strategy set implies that skilled listeners usually make more guesses than

less-skilled listeners about the topic based upon what has already been said (Mean: 4.04 > 3.75, p=.05). In summary, skilled learners employ more different memory strategy components than less-skilled learners.

2. Cognitive strategy: Table 15 shows that skilled listeners usually take notes when listening to lectures (Mean = 3.95 compared to 3.54) and directly apply previous knowledge to new knowledge of the subject while listening to lectures (Mean = 3.68 versus 3.40) in their cognitive strategies. The difference is that skilled listeners have a higher mean value, implying that they use more strategy components than their less skilled counterparts. Note taking component is significant with the *p*-value of .013 and previous knowledge has .053 *p*-value at 90% confidence level. Thus it rejects the null hypothesis and the data support the alternative hypothesis. This means that the components of the cognitive strategy contribute to listening comprehension.

3. Metacognitive strategy: Though the metacognitive strategy does not have significant differences from the TOEFL listening score, the researcher only tested those components that were significant in the metacognitive strategy, and excluded insignificant items. The ANOVA test produced significant evidence regarding the difference between the TOEFL listening score from each component. Table 14 shows that skilled learners use the skill of paying attention to main ideas in metacognitive strategy, while listening more often than less-skilled learners. The main idea strategy has the *p* value of 0.005.

4. Socio-affective strategy: Skilled listeners have the pattern of asking for clarification more than less proficient listeners (Mean: 2.88 > 2.58, p= .05). However,

skilled listeners have lower mean than ineffective listeners, who resort to writing a language learning diary (Mean: 1.90 < 2.21, *p*= .053, see the summary in Table 15).

Table 15 Summary of ANOVA table between skilled and less-skilled groups

		Mean		
Memory strategy	New information connection	Group 1= 3.53 Group 2= 3.19	*F* (1, 164)= 4.65	*P* = .033
	New words	Group 1= 3.56 Group 2= 3.29	*F* (1, 164)= 2.75	*P* = .099
	Making guesses	Group 1= 4.04 Group 2= 3.75	*F* (1, 164)= 3.91	*P* = .05
Cognitive Strategy	Note taking	Group 1= 3.95 Group 2= 3.54	*F* (1, 164)= 6.25	*P* = .013
	Previous knowledge	Group 1= 3.68 Group 2= 3.40	*F* (1, 164)= 3.80	*P* = .053
Metacognitive Strategy	Attention to main ideas	Group 1= 4.18 Group 2= 3.81	*F* (1, 164)= 8.05	*P* = .005
Socio-affective strategy	Repetition/ explanation	Group 1= 2.88 Group 2= 2.58	*F* (1, 164)= 3.64	*P* = .058
	Learning diary	Group 1= 1.90 Group 2= 2.21	*F* (1, 164)= 3.79	*P* = .053

**Group 1=skilled listeners, group 2= less-skilled listeners

Research Question Three

What factors influence the use of self-reported listening strategies?

The third research question investigated the factors that influence the use of listening strategies. To examine the factors, the chi-square test was performed. Most of the participants came to the United States in 2008 (42%), with the majority of being students with a master's degree (44%). There is a difference between the two semesters in Figure 6. Of the students who came the first semester, 104 felt that they only understood about half of the lectures they heard. After the first semester, the number of

students fell to 65 who reported that they understood more than half of a lecture. Among the 166 students polled, only 47 agreed that they understood almost everything in the lectures they heard in their first semester. This number increased to 94 who reported that they understood much more after the first semester, or in their current semester.

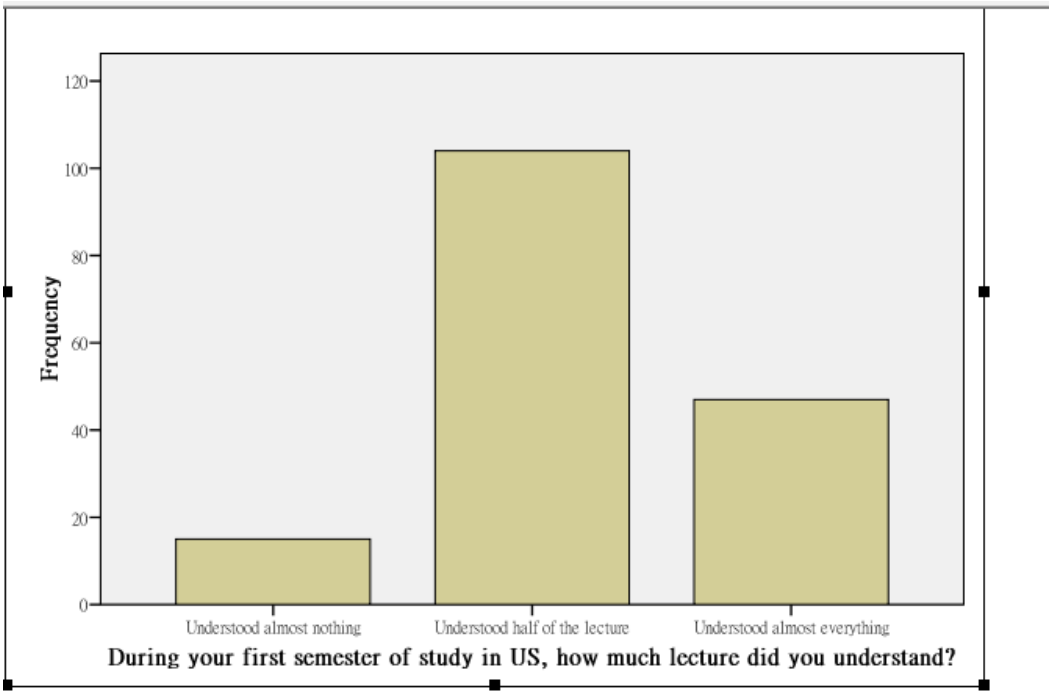


Figure 6 First and current semester progress comparison between 2 skill level groups (Frequency is number of students)

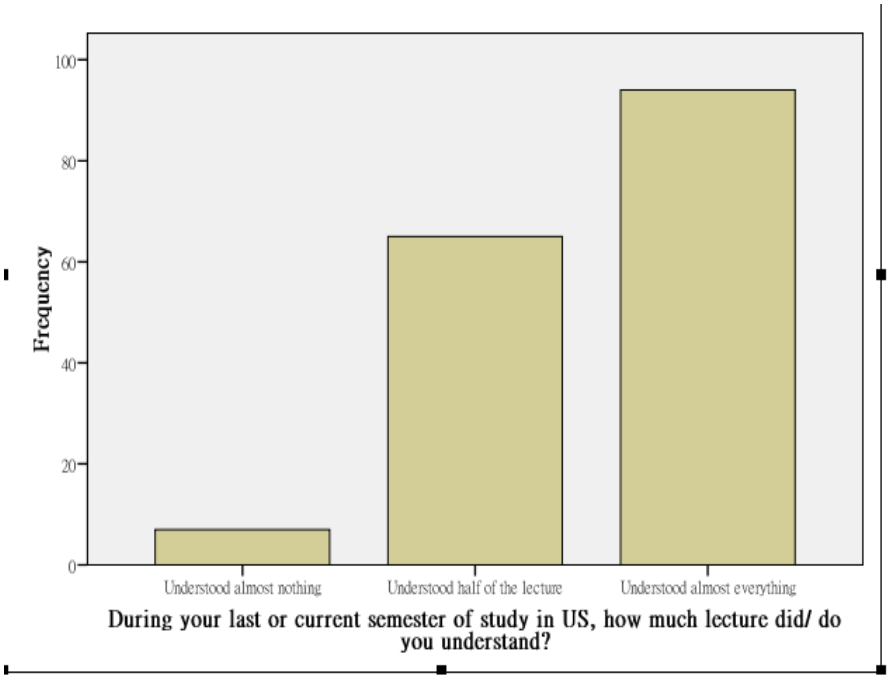


Figure 6 Continued

Table 16 shows the first and current semester progress comparison between two skill level groups. Both two skill level groups progress and understand more after the first semester.

Table 16 First semester versus current (after first) semester progress comparison between 2 skill level groups

	Group	*N*	*Mean*	*SD*	*Understand more*
First semester	Skilled	114	2.32	0.569	
	Less-skilled	52	1.92	0.518	
After first semester	Skilled	114	2.61	0.557	Yes
	Less-skilled	52	2.33	0.585	Yes

In terms of frequency, 62 participants took the TOEFL in 2008, which is 37.3% of the total students. One hundred and three students took the Internet-Based TOEFL (iBT), which is 62% of the participants. In addition, 123 students had more than five years of formal English instruction. Among the 123 students, 86 were considered skilled listeners and 37 were less-skilled listeners, which are listed in Table 17.

Table 17 Distribution to compare students' years of English education between skilled and less-skilled learners

	How many years of formal English instruction (school program) have you had throughout your life?			Total
	0-2 years	3-5 years	More than 5 years	0-2 years
Skilled	19 (16.7%)	9 (7.9%)	86 (75.4%)	114
Less-skilled	7 (13.5%)	8 (15.4%)	37 (71.2%)	52
Total	26	17	123	166

CHAPTER V

DISCUSSION AND CONCLUSIONS

In this chapter, the researcher discusses the findings according to the results highlighted in the previous section and addresses their implications. Pedagogical implications for teachers and the limitations of this study are included. In addition, this section presents this study's contribution to the current literature, and the last section lists suggestions for future research.

Discussion of the Findings

The purpose of this study was to answer research questions and secondarily to inform English teachers of the learning experiences and listening strategies for their non-native English speakers (NNES), especially with regards to Chinese and Korean speakers. The study's data suggest implications for teaching and offers understanding for teaching listening skills to second language (L2) learners. In this project, three main research questions were investigated as follows:

Research Question One

Is there a statistically significant relationship between the self-reported use of listening strategies and self-reported listening comprehension scores on the TOEFL?

From the results, the author found there is a statistically significant relationship between listening strategies and listening comprehension. This finding is supported by

Graham (2006) and Hasan (2000), and they demonstrate that some NNES are poorly equipped with various strategies that could be used to overcome problems with listening comprehension.

The theoretical model most often used to evaluate skilled versus unskilled learners is Anderson's (1995) cognitive framework for second language listeners. Anderson's theory consists of three-phase model of language comprehension: perception (segmenting phonemes), parsing (segmenting words), and utilization (using long-term information sources to explain the meaning). Berne (2004) later distinguished the differences between more and less proficient listeners. However, my study has shown different perspectives from the previous studies. The reason for the different perspective may be that the researcher used different ethnic groups than those employed in previous studies, Chinese and Korean speakers, who respond differently to discrepant strategies.

Research Question Two

Is there a difference between skilled and less-skilled non-native English speakers in the self-reported use of four categories of listening strategies (memory, cognitive, meta-cognitive, and socio-affective)?

According to the responses gathered from the questionnaire, there are differences in the use of listening strategies between skilled and less-skilled NNES. Memory strategy is important to listening comprehension gathered from the two skill level groups. Furthermore, the researcher examined the differences between the groups using each listening strategy through ANOVA test, and concluded that effective and ineffective

groups employ strategies differently in each subcategory. Such findings show that both groups specifically utilize memory strategy. This study's results are consistent with Shang (2008).

The outcome found for this research question is that the memory strategy is used by effective and ineffective group learners. However, according to Goh (2000) and Vandergrift (2003b), both groups prefer cognitive and metacognitive listening strategies beyond their memory skill. Surprisingly, in the present study, cognitive and metacognitive strategies were not regularly used. This could be because the sample in my study are English as a Foreign Language (EFL) learners who were not taught to use this particular skill in their listening classes. In addition, it takes time to learn how to reflect on NNES's own learning, to plan their learning paths, and then to evaluate their progress. In memory strategy, the subcomponents of skills, such as making connections with a familiar topic, putting new words into context, and associating information based on memory, are used more frequently (Kao, 2006; Shang, 2008). The preferences were the same for the two skill level groups, but skilled listeners performed these techniques more often than less-skilled learners on average.

Next, in cognitive strategies, effective listeners take notes and directly apply their previous knowledge to a new subject while listening to lectures. Less-skilled learners use the same subskills in the current study, and the means were lower for less-skilled groups compared to skilled group. In addition, in metacognitive strategies, only NNES' attention to main ideas subskill is significant. This outcome is supported by Vandergrift's (2002) study which emphasized the raising of students' metacognitive

awareness, because NNES's lack this particular strategy. He suggested that teachers should help adult L2 learners develop more metacognitive knowledge in order for them to achieve success in listening comprehension. The least preferred strategy is socio-affective, a strategy that both groups do not use often.

Research Question Three

What factors influence the use of self-reported listening strategies?

The factors that influence the use of self-reported listening strategies are EFL/ESL environment, learning background, and years of formal English instruction. In the current study, it appears that different levels of L2 learners use all four listening strategies, but they employ memory strategy more often. The result may be attributed to their dissimilar English learning environments where each student activates prior knowledge based on what he or she had been taught in the past in their home country. The skill activated was used to practice their English language acquisition in their new learning environment abroad. The implication of the finding is that Chinese and Korean speakers learning in Asian environments lack the practice skills needed to learn more advanced strategies. EFL/ESL teachers require teacher education training to help students go through the first step of English learning in listening comprehension.

Another important factor is Chinese and Korean speakers' English learning background that they prepare for the examination and learn how to gain higher scores on proficiency exams within a limited timeframe. Thus, user strategies are not necessarily related to and dependent upon English learning time of English language instruction.

This would be the case with different nature of the sample compared to the previous studies when the results show the opposite.

Moreover, we need to discuss the reason why there is no connection between years of formal English instruction and the TOEFL listening score. In this sample, the author did not find evidence to support Cummins' (1980, 2001) theoretical framework CALP, which shows that exposure of more than five years will impact listening comprehension and further a student's academic language proficiency. Although, theoretically, years of formal instruction would seem to be relevant but do not exactly predict successful use of efficient strategies discussed here. In addition, academic listening is much harder than conversational listening. There are many factors involved because there is no guarantee that students who study more than five years, their listening score will increase.

Implications for Practice

As a result of this study, teachers will have more information regarding students' learning background and will be better informed to teach more metacognitive strategies. Students have a tendency to apply the memory strategy, and EFL/ESL students tend to memorize what they have learned to the detriment of their critical thinking skills. They do not regularly reflect on what they have learned. Instead, they put their emphasis on the learning results rather than the overall process.

This research data gives a hands-on resource for NNES, allowing them to see how to overcome academic listening problems, and further their multi-strategized listening skills in order to achieve academic language proficiency. The data provides guidelines

for students who learn English as their foreign/second language (EFL/ESL), showing them how to strengthen their English ability especially in academic listening. EFL/ESL students are unique in that they have received training in deductive techniques in academic settings (Daller & Grotjahn, 1999; Flowerdew, 2005; O'Malley & Chamot, 1990). In addition, this research into the utilization of listening strategies benefits EFL/ESL teachers, allowing teachers to understand more fully regarding non-native English speakers' varied learning backgrounds, equipping teachers to provide their students with more comprehensive help. This sample presents the learning background information to EFL/ESL teachers, faculty members, and other researchers.

Limitations of the Study

There are some limitations to the study as follows. (a) The sample size is small; the sampling method is purposive, which most likely affected the results. (b) The participants are all studying in the US, a situation that results in a more immersed learning setting than other students might have. (c) The self-reported TOEFL listening score and the overall total TOEFL score are regarded as the limitations to this current study. (d) Less-skilled learners who study in the US more than one semester increase their English level dramatically such that their listening strategies will be similar to that of skilled learners. Because based on previous studies, listening strategies do connect to listening comprehension among the different proficiency groups. (e) This study is limited to three universities in the Southwest of the US and to Chinese and Korean students. This fact prevents the researcher from generalizing to other Asian International

students.

Suggestions for Future Research

For future research, students should be asked to report their actual scores, so the outcome variables can be set up as continuous variables instead of categorical variables because continuous variables will give broader choices of method analysis. Next, promoting acquisitions of listening strategies and further help EFL/ESL learners achieve cognitive academic language proficiency (CALP) is important. Moreover, researchers can investigate the factor of vocabulary learning in influencing EFL/ESL learners' listening comprehension. Much future research is necessary to understand the effects of listening strategies at different skill levels with different tasks. The outcomes are generalized here only with regard to Chinese and Korean EFL learners. The researcher hopes that this study's results may assist EFL/ESL teachers in further learning about listening processes with learners of other ethnicities. Further research might also consider studying listening skills by dividing participants into more than two groups according to skill proficiency in order to balance the sampling of participants amongst skill level groups. By using more than two groups will yield different results.

Conclusions

This study should encourage EFL/ESL students to practice cognitively and metacognitively by using efficient tasks. Various listening strategies are employed in terms of the learners' English language proficiency levels. Although listening comprehension is the least studied of the four skills that are necessary for successful

language acquisition, it is a crucial component since listening is the first attempt of a non-native English speaker (NNES) to engage in the communicative process. To develop language proficiency and experience academic success, the NNES has to utilize effective listening comprehension strategies not often formally taught.

Learning a foreign/second language as an adult brings cognitive challenges and contextual issues different from those experienced by a child. Variables such as learning environment and years of formal English instruction are significant in the process of developing listening skills. Once listening strategies are developed, they will assist the adult NNES to attain proficiency in the other three language skills: speaking, reading, and writing. Having attained the skills to apply effective listening comprehension to adult learners' academic learning, they will be able to process information in academic settings more effectively and reach academic success.

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APPENDIX A

CONSENT FORM

The Utilization of Listening Strategies in the Development of Listening Comprehension among Skilled and Less-skilled Non-native English Speakers at the College Level

Introduction
You have been asked to participate in a research study on the utilization of listening strategies in the development of listening comprehension among skilled and less-skilled non-native English speakers at the college level. You were selected to be a possible participant because you are a bilingual student and English is your foreign language. A total of 200 people have been asked to participate in the study. The purpose of this study is to explore the different listening strategies employed by skilled and less-skilled non-native English speakers at the college level.

What will I be asked to do?
If you agree to participate in this study, you will be asked to complete an online survey and possible follow-up interview questions. The duration of the entire study will take about 20 minutes.

What are the risks involved in this study?
The risks associated in this study are minimal, are not greater than risks ordinarily encountered in daily life.

What are the possible benefits of this study?
You will learn efficient listening strategies and reach better English proficiency.

Do I have to participate?
No. Your participation is voluntary. You may decide not to participate or to withdraw at any time without your current or future relations with Texas A&M University being affected.

Will I be compensated?
If you are willing to participate in the study, you will have the drawing chance to receive $10 gift card in compensation for your participation in the study.

Who will know about my participation in this research study?
This study is confidential and the records of this study will be kept private. No identifiers linking you to this study will be included in any sort of report that might be published. Research records will be stored securely and, only Yi-Chun Liu, who will have access to these data, will have access to the records.

Is there anything else I should consider?
No

Whom do I contact with questions about the research?
If you have questions regarding this study, you may contact Yi-Chun Liu by phone at 979-739-6568 or e-mail ycliu@tamu.edu.

Whom do I contact about my rights as a research participant?
This research study has been reviewed by the Human Subjects' Protection Program and/or the Institutional Review Board at Texas A&M University. For research-related problems or questions regarding your rights as a research participant, you can contact these offices at (979)458-4067 or irb@tamu.edu.

Signature
Please be sure you have read the above information, asked questions and received answers to your satisfaction. You will be given a copy of the consent form for your records. By signing this document, you consent to participate in this study.

_____ I agree to be audio recorded.
_____ I do not want to be audio recorded.

Signature of Participant: _____Date: _____

Printed Name: _____

Signature of Person Obtaining Consent: _____
Date:_____

Printed Name:
_____

APPENDIX B

PILOT STUDY

1. When did you take your last TOEFL?
    1. 2006 2. 2007 3. 2008 4. 2009

2. TOEFL total score?
    1. < 570 PBT ___ or 230 CBT or 88-89 iBT
    2. >= 570 PBT ___or 230 CBT or 88-89 iBT

3. TOEFL listening score?
    1. < 56-57 PBT (22 CBT or 22 iBT)
    2. >= 56-57 PBT (22 CBT or 22 iBT)

4. The scenario is to improve academic listening comprehension. What are your most frequently used listening strategies? Please choose the response that best indicates your level of agreement with the statements. Scale: 1= Never, 2= Seldom, 3= Sometimes, 4=Usually, 5=Always

4.1. I associate new language information to ideas already in memory (ex: bread and butter).
4.2. Placing new words into a context to understand the meaning
4.3. Listen for keywords that carry the meaning
4.4. Make guesses about the topic based on what has already been said
4.5. I use mechanical techniques. Ex: write words on cards.

5. The scenario is to improve academic listening comprehension. What are your most frequently used listening strategies? Please choose the response that best indicates your level of agreement with the statements. Scale: 1= Never, 2= Seldom, 3= Sometimes, 4=Usually, 5=Always

5.1. When listening to lectures, I preview questions if possible.
5.2. While listening to lectures, I take notes.
5.3. While listening lectures, I summarize the original passage to a shorter version.
5.4. I directly apply previous knowledge to facilitating new knowledge of English.
5.5. I use sounds or actual pictures to guess the meaning of unknown words or the passage.

Q6. The scenario is when listening to lectures or after lectures, how likely are you going to perform the following tasks? They are related to English listening strategies.

6.1. When listening, I overview and link with already known material.
6.2. When listening, I pay attention to specific parts and ignore irrelevant distracters.
6.3. After lectures, I self-identify errors in understanding and then decrease errors next time.
6.4. After lectures, I self-evaluate my progress and can understand more percentages of the lectures.
6.5. I set short-term and long-term goals in order to use the language.

Q7. The scenario is after listening to lectures, how likely are you going to perform the following tasks? They are related to English academic listening strategies.
7.1. During or after lectures, I ask speakers to repeat or explain if I don't understand the first time.
7.2. After class, I regularly watch movies to help my listening skills.
7.3. After class, I write a learning diary to keep track of my learning process.
7.4.After class, I have regular learning partners or talk with native English speakers.
7. 5. When having a good listening performance, I reward myself.

8. How many years of formal English class instruction do you have?
    1. Less than 5 years
    2. More than 5 years

9. How much of the content do you think you can understand for the listening section of the TOEFL?
    1. Almost nothing
    2. Less than 30%
    3. About 50%
    4. More than 70%
    5. Almost all

10. What percentage of a typical listening comprehension lecture in class did you understand in this first semester in the United States?
    1. Less than 50%
    2. More than 50%
    3. Almost all of it

11. Level of education
    1. English language institute program
    2. Undergraduate
    3. Graduate

12. Where are you from?
    1. Taiwan
    2. People's Republic of China
    3. Korea
    4. Others (please specify)

13. Gender? (Demographic-descriptive)
    1. Male
    2. Female

Open-ended questions:
14. What is the main reason to strengthen your listening ability?
15. Why do you want to improve your listening ability? How are you going to improve your English listening?

APPENDIX C

LISTENING STRATEGY QUESTIONNAIRE (MAIN STUDY)

My name is Yi-Chun Liu who is a doctoral student majoring in Teaching English as a Second/Foreign Language in the Department of Teaching, Learning, and Culture at Texas A&M University. This survey is part of my dissertation research.

To participate in this study, here are the following criteria:
1. Be a non-native English speaker whose native language is Chinese or Korean
2. Have taken the TOEFL after January, 2006
3. Have began your study in the US during or after spring of 2007

You have been asked to participate in a research study on *the use of listening strategies among skilled and less-skilled non-native English speakers at the college level*. You are selected to be a possible participant because you are a bilingual student and English is your foreign language. A total of 200 people have been asked to participate in this study.

The purpose of this survey is to explore the use of listening strategies specially those associated with any academic lectures in the classroom settings among non-native English speakers in the US.

If you agree to participate in this study, you will be asked to complete an online survey. The survey contains 30 questions and will take approximately 7-15 minutes to complete. Completing this survey will be of great help in further research in the area of English language learning. Thank you for agreeing to fill out this survey. Your responses will remain confidential and will not be reported individually in any report or document generated from this survey.

1. When did you take the TOEFL?
   1 2006 2 2007 3 2008 4 2009
2. What type of TOEFL did you take?
   1. Paper-Based TOEFL 2. Computer-Based TOEFL 3. Internet-Based TOEFL
3. *If it was PBT, what was your TOEFL total score?
   3. < 570 PBT
   4. ≧570 PBT

*If it was CBT, what was your TOEFL total score?
   1. <230 CBT
   2. ≧230 CBT

*If it was iBT, what was your TOEFL total score?
   1. < 88-89 iBT

2. ≧88-89 iBT

4. What was your TOEFL listening score?

If it was PBT,

1. < 56-57 PBT
2. ≧56-57 PBT

If it was CBT,

1. < 22 CBT
2. ≧22 CBT

If it was iBT,

1. < 22 iBT
2. ≧ 22 iBT

5. This research seeks to know if you use listening strategy when you hear any lectures in the classroom setting. What are your most frequently used listening strategies? Please choose the response from questions 5-8 that best indicates your level of agreement with the statements. Use the following response format scale: Never (1), Seldom (2), Sometimes (3), Usually (4), Always (5)

5.1. I connect new language information to ideas already in my memory (ex: bread and butter).
5.2. I put new words into a context to understand the meaning.
5.3. I listen for keywords that carry the meaning of the conversation.
5.4. I make guesses about the topic based on what has already been said.
5.5. I use study techniques. Ex: write note words on cards.

6. What are your most frequently used listening strategies? Please choose the response that best indicates your level of agreement with the statements. Scale: Never (1), Seldom (2), Sometimes (3), Usually (4), Always (5)
6.1. Before listening to lectures, I preview class materials if possible.
6.2. While listening to lectures, I take notes.
6.3. While listening to lectures, I summarize the information in my mind.
6.4. While listening to lectures, I directly apply previous knowledge to new knowledge of the subject.
6.5. I connect sounds or actual pictures to guess the meaning of unknown words.

7. While listening to lectures or after lectures, how likely do you perform the following tasks?

7.1. While listening, I overview the new information and link it with already known material.
7.2. While listening, I pay attention to main ideas.
7.3. After lectures, I self-identify errors in understanding and then try to avoid errors next time.

7.4. After lectures, I self-evaluate my progress and can understand better in future lectures.
7.5. I set short-term and long-term goals in order to use English in the classroom.

8. After listening to lectures, how likely do you perform the following tasks?

8.1. During or after lectures, I ask speakers to repeat or explain if I don't understand the first time.
8.2. After class, I regularly watch English media to help my listening skills.
8.3. After class, I write a learning diary to keep track of my learning process.
8.4. After class, I talk with learning partners or native English speakers.
8. 5. After having a good listening performance, I reward myself.

9. How many years of formal English instruction (school program) have you had throughout your life?
1. 0-2 years 2. 3-5 years 3. More than 5 years

10. What is the level of difficulty in the listening section of the TOEFL examination?
1. Understood almost nothing
2. Understood half of the listening section
3. Understood almost everything
11. During your first semester of study in US, how much lecture did you understand?
1. Understood almost nothing
2. Understood half of the lecture
3. Understood almost everything
12. During your last/current semester of study in US, how much lecture did you understand?
1. Understood almost nothing
2. Understood half of the lecture
3. Understood almost everything

13. What year did/do you come to the US?
1. 2007 2. 2008 3. 2009
14. Are you currently enrolled in an English Language Institute?
Yes (If yes, skip to Q15) No

15. What degree level are you currently working on?
1. Undergraduate degree 2. Master's degree
3. Doctoral degree 4. Other

16. Do you feel that it is important for you to strengthen your listening comprehension abilities by using listening strategies? Yes NO
If yes, what is the main reason to strengthen your listening comprehension ability?

1. Listen to the radio

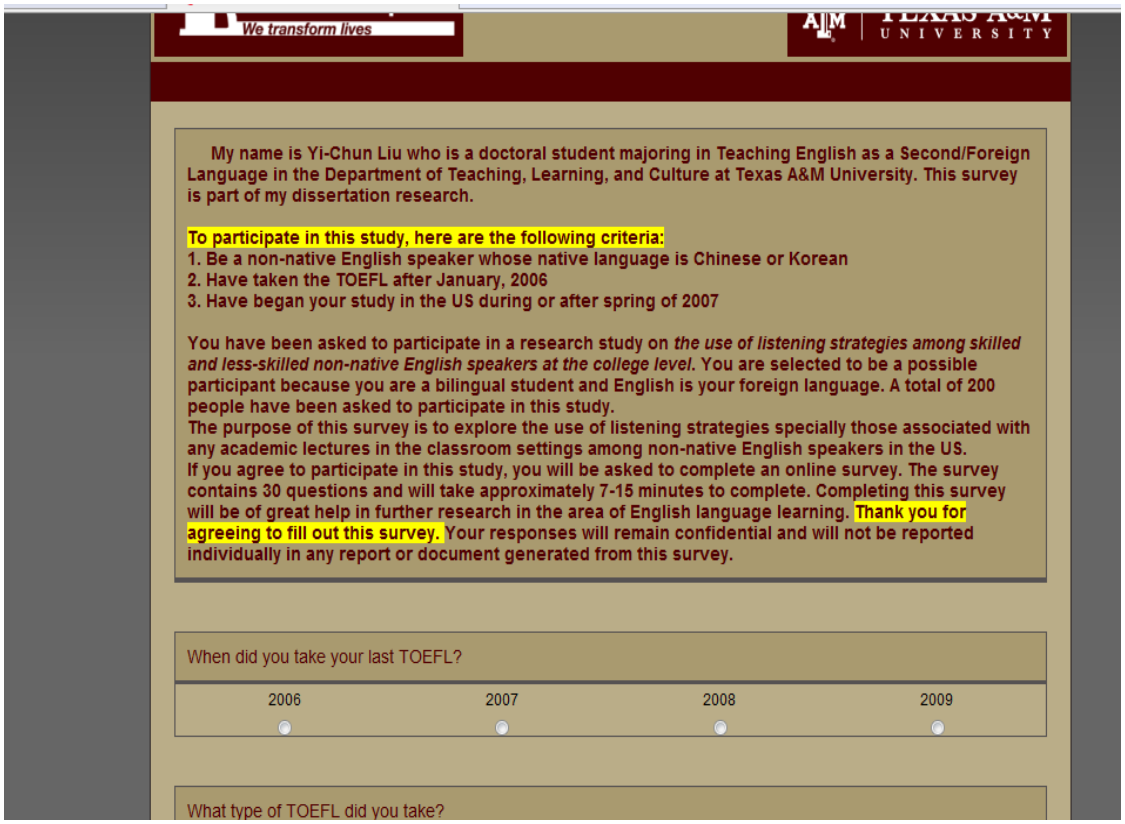
2. Listen English songs
3. Watch English media
4. Learn as many vocabulary as I can
5. Use effective listening strategies
6. Others (please specify)

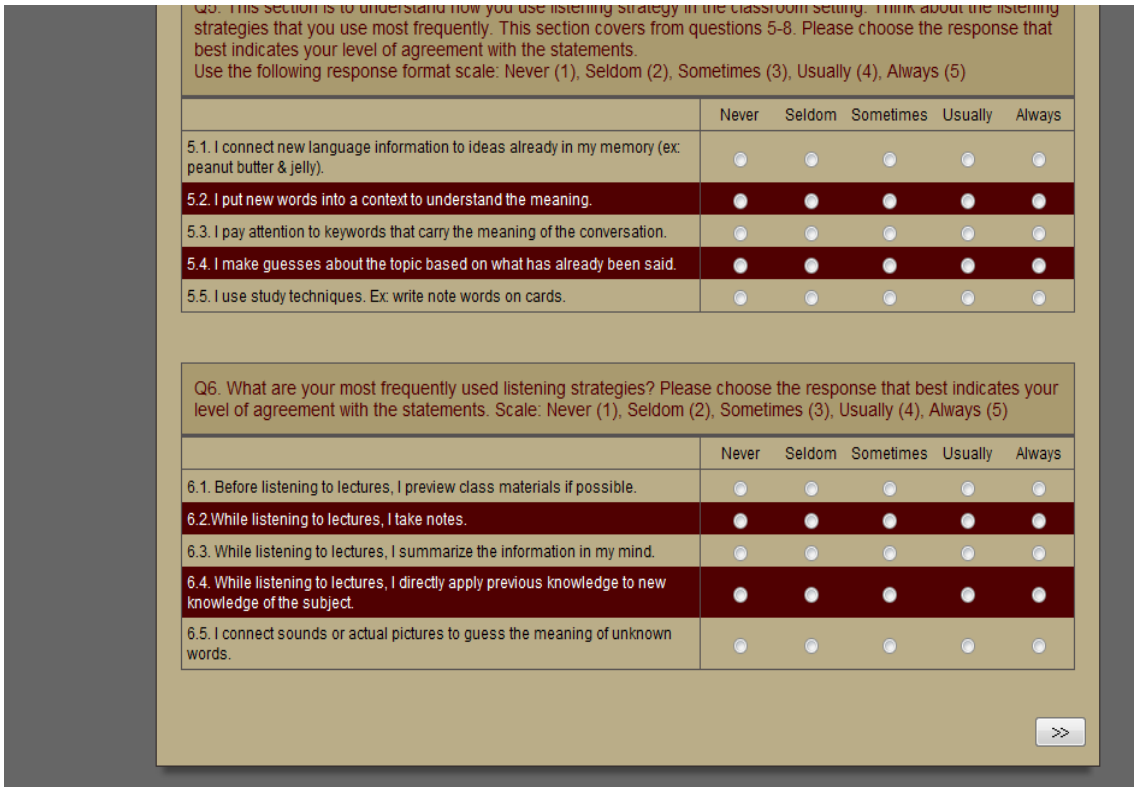
17. Where are you from? (Demographic)
    1. Taiwan 2. People's Republic of China 3. Korea

18. What is your gender? (Demographic)
    1. Female 2. Male

APPENDIX D

WEB-BASED QUESTIONNAIRE (MAIN STUDY)





Q5. This section is to understand how you use listening strategy in the classroom setting. Think about the listening strategies that you use most frequently. This section covers from questions 5-8. Please choose the response that best indicates your level of agreement with the statements.
Use the following response format scale: Never (1), Seldom (2), Sometimes (3), Usually (4), Always (5)

	Never	Seldom	Sometimes	Usually	Always
5.1. I connect new language information to ideas already in my memory (ex: peanut butter & jelly).	○	○	○	○	○
5.2. I put new words into a context to understand the meaning.	●	●	●	●	●
5.3. I pay attention to keywords that carry the meaning of the conversation.	○	○	○	○	○
5.4. I make guesses about the topic based on what has already been said.	●	●	●	●	●
5.5. I use study techniques. Ex: write note words on cards.	○	○	○	○	○

Q6. What are your most frequently used listening strategies? Please choose the response that best indicates your level of agreement with the statements. Scale: Never (1), Seldom (2), Sometimes (3), Usually (4), Always (5)

	Never	Seldom	Sometimes	Usually	Always
6.1. Before listening to lectures, I preview class materials if possible.	○	○	○	○	○
6.2.While listening to lectures, I take notes.	●	●	●	●	●
6.3. While listening to lectures, I summarize the information in my mind.	○	○	○	○	○
6.4. While listening to lectures, I directly apply previous knowledge to new knowledge of the subject.	●	●	●	●	●
6.5. I connect sounds or actual pictures to guess the meaning of unknown words.	○	○	○	○	○

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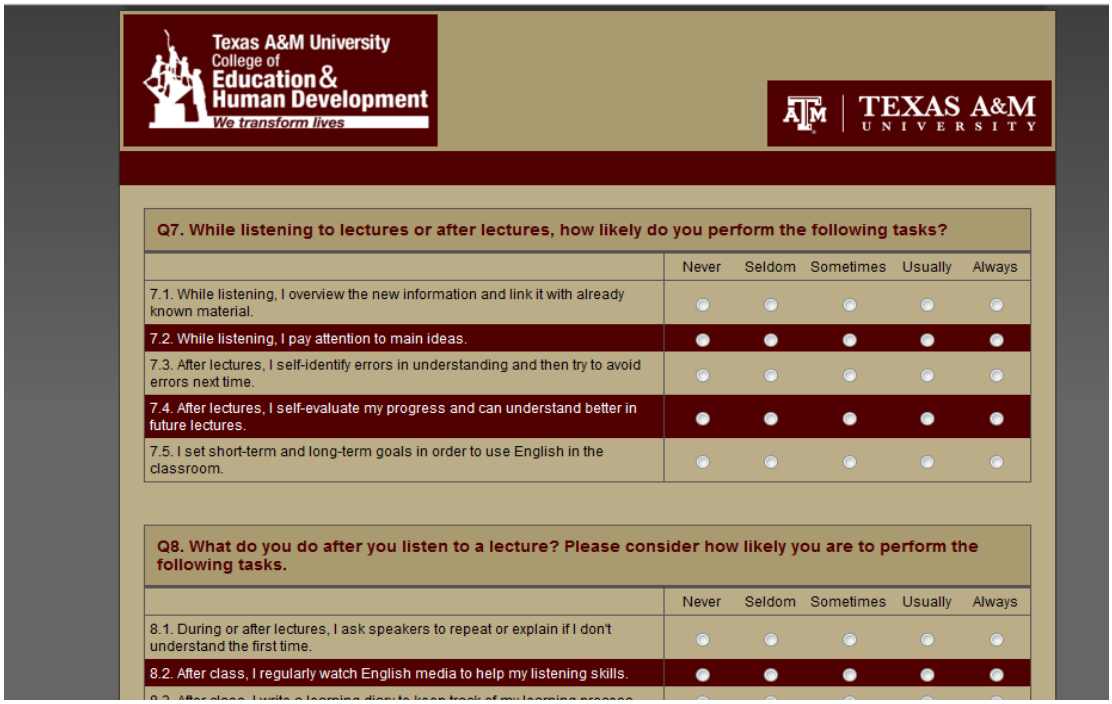

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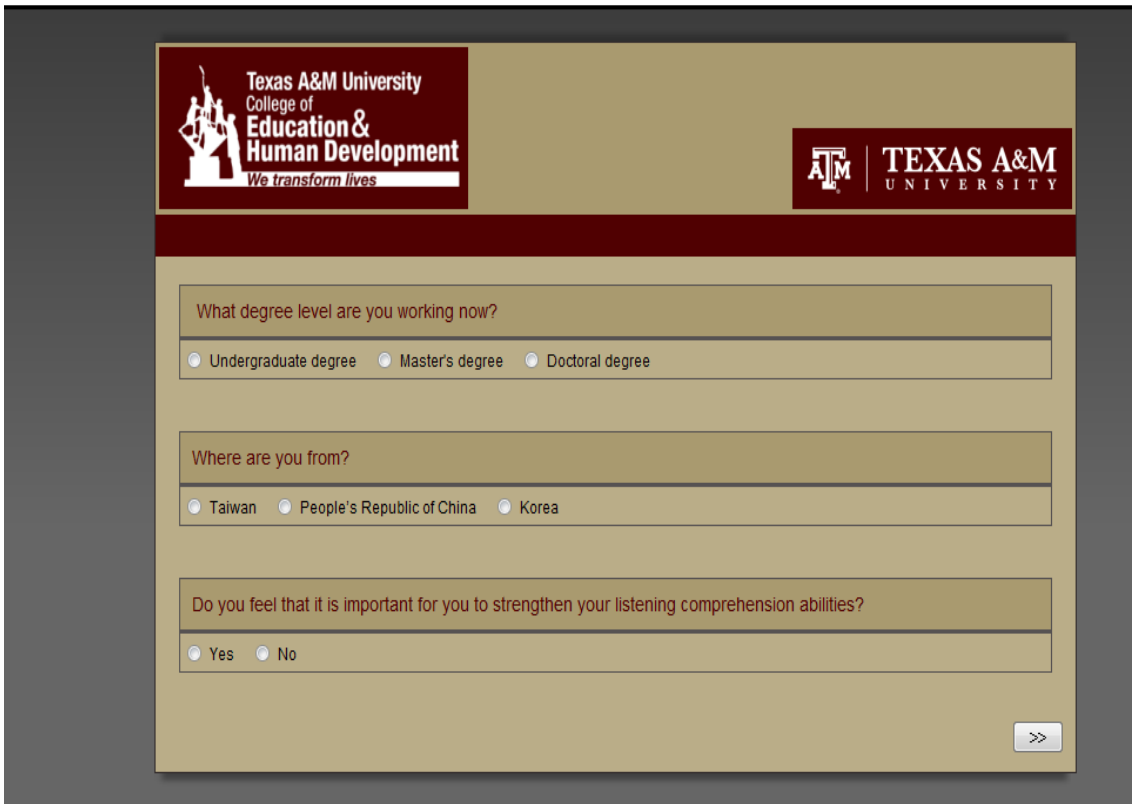
Q7. While listening to lectures or after lectures, how likely do you perform the following tasks?

	Never	Seldom	Sometimes	Usually	Always
7.1. While listening, I overview the new information and link it with already known material.	○	○	○	○	○
7.2. While listening, I pay attention to main ideas.	●	●	●	●	●
7.3. After lectures, I self-identify errors in understanding and then try to avoid errors next time.	○	○	○	○	○
7.4. After lectures, I self-evaluate my progress and can understand better in future lectures.	●	●	●	●	●
7.5. I set short-term and long-term goals in order to use English in the classroom.	○	○	○	○	○

Q8. What do you do after you listen to a lecture? Please consider how likely you are to perform the following tasks.

	Never	Seldom	Sometimes	Usually	Always
8.1. During or after lectures, I ask speakers to repeat or explain if I don't understand the first time.	○	○	○	○	○
8.2. After class, I regularly watch English media to help my listening skills.	●	●	●	●	●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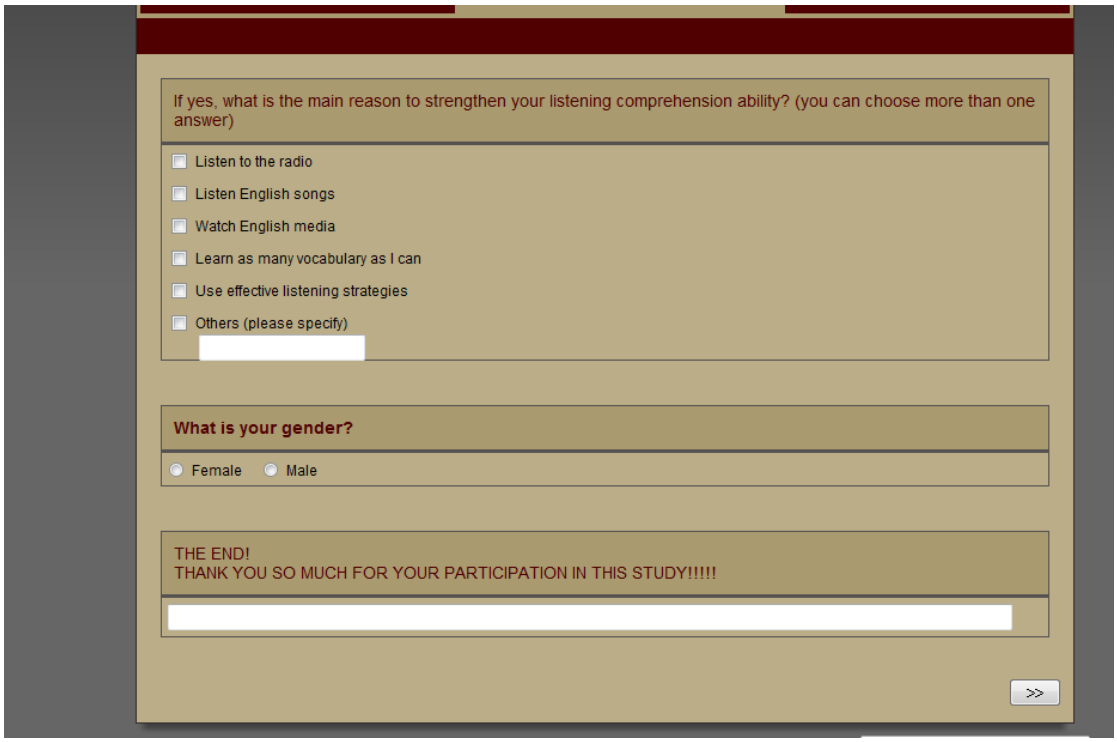
UNIVERSITY
What degree level are you working now?
Undergraduate degree
Master's degree
Doctoral degree
Where are you from?
Taiwan
People's Republic of China
Korea
Do you feel that it is important for you to strengthen your listening comprehension abilities?
Yes
No
>>


If yes, what is the main reason to strengthen your listening comprehension ability? (you can choose more than one answer)
Listen to the radio
Listen English songs
Watch English media
Learn as many vocabulary as I can
Use effective listening strategies
Others (please specify)
What is your gender?
Female
Male
THE END!
THANK YOU SO MUCH FOR YOUR PARTICIPATION IN THIS STUDY!!!!!
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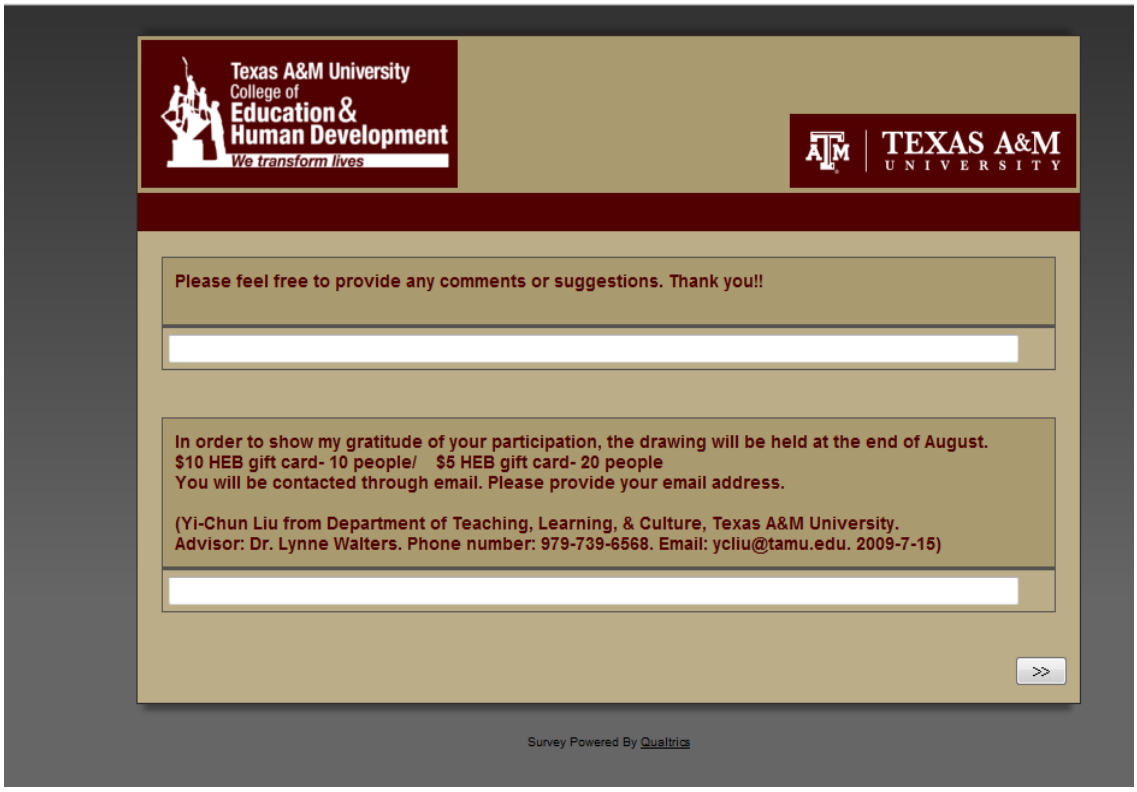
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Please feel free to provide any comments or suggestions. Thank you!!
In order to show my gratitude of your participation, the drawing will be held at the end of August.
$10 HEB gift card- 10 people/ $5 HEB gift card- 20 people
You will be contacted through email. Please provide your email address.
(Yi-Chun Liu from Department of Teaching, Learning, & Culture, Texas A&M University.
Advisor: Dr. Lynne Walters. Phone number: 979-739-6568. Email: ycliu@tamu.edu. 2009-7-15)
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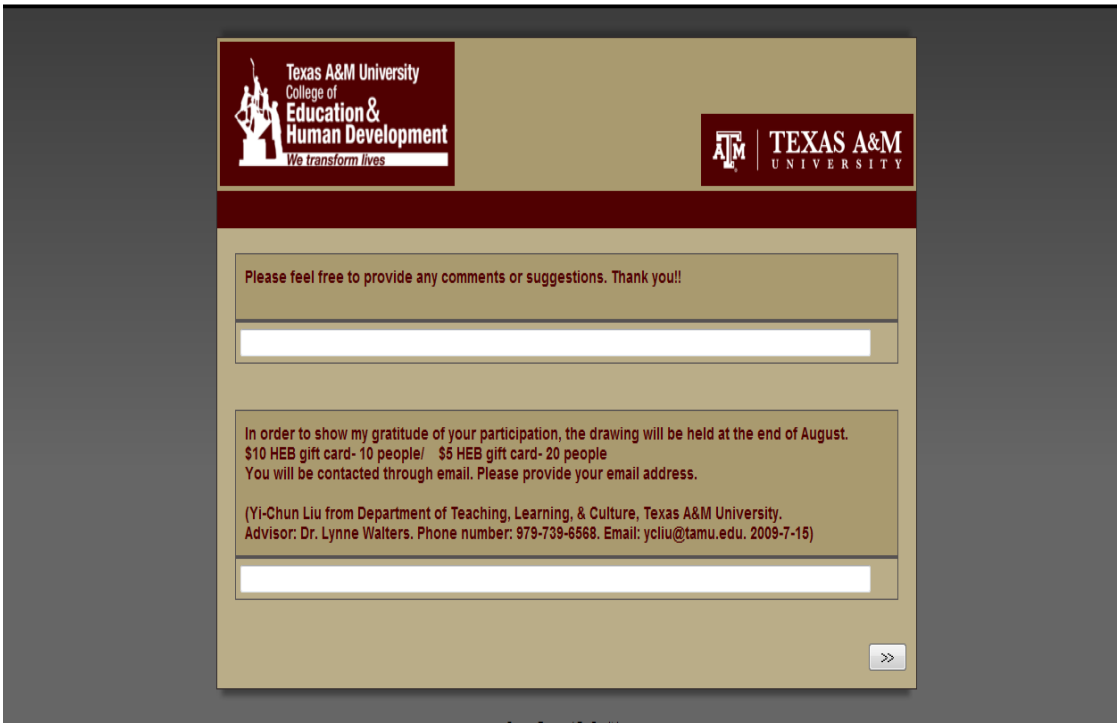
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You will be contacted through email. Please provide your email address.
(Yi-Chun Liu from Department of Teaching, Learning, & Culture, Texas A&M University.
Advisor: Dr. Lynne Walters. Phone number: 979-739-6568. Email: ycliu@tamu.edu. 2009-7-15)
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VITA

Yi-Chun Liu received her Bachelor of Arts degree in English Language and Literature from Chinese Culture University. After working as a research assistant, she went to the Graduate School of Teaching English as a Second Language (TESL) at the University of North Carolina Charlotte and received her Master of Education degree in 2003. Her research interests entail language assessment and second language acquisition. Moreover, she is passionate and enthusiastic in teacher education to impact more students in English learning.

Ms. Liu may be reached at Department of Teaching, Learning, & Culture, c/o Dr. Lynne Walters, Texas A&M University, College Station, TX 77843-4232. Her email is ycliu715@gmail.com.