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The Impact of Teaching Explicit Listening Strategies to Adult Intermediate- and Advanced-Level ESL University Students

Jeanette Clement

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THE IMPACT OF TEACHING EXPLICIT LISTENING STRATEGIES TO ADULT
INTERMEDIATE- AND ADVANCED-LEVEL ESL UNIVERSITY STUDENTS

by

Jeanette Clement, B.A., M.S.Ed.

Submitted in partial fulfillment of

the requirements for the degree

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THE IMPACT OF TEACHING EXPLICIT LISTENING STRATEGIES TO ADULT
INTERMEDIATE- AND ADVANCED-LEVEL ESL UNIVERSITY STUDENTS

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Abstract

This study investigated beliefs about strategy use for the improvement of second language listening comprehension. The study compared participants' self-reports of their strategy use prior to and after four electronically-delivered interventions consisting of explicit instruction and illustration of strategies that can assist in listening comprehension. Participants were 64 international students at intermediate to advanced level of language proficiency (as determined by the Michigan Listening Comprehension Exam (Upshur, Koba, Spaan, & Stowe, 1972) studying English as a Second Language (ESL) at two universities in the Eastern United States. Data were collected using three instruments, the Strategies Inventory for Language Learning (SILL) (Oxford, 1990), researcher-designed post-intervention surveys, and a researcher-designed post-study survey. Investigated were four covariates: school attended, level of instruction, native language, and proficiency level. Data were analyzed using descriptive analyses, analyses of variance (ANOVA), and analysis of covariance (ANCOVA). A statistically significant difference was found for total scores from Pre- to Post SILL for participants' level of instruction. No differences were revealed for school attended, native language, or proficiency levels. ANCOVA revealed a difference in level of instruction for Part B of the SILL, representing cognitive strategies. Participants indicated high levels of approval of the web-based interventions and indicated a belief that this type of training would help them in future listening tasks.

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DEDICATION

This dissertation is dedicated to my many international students who have worked so hard to improve their ability to comprehend spoken English and take lecture notes.

CHAPTER I

INTRODUCTION TO THE RESEARCH

Problem

Listening comprehension historically has received only minimal treatment in the teaching of English as a Second Language (ESL), but it is, in fact, one of the most important skills a second language (L2) learner must master to succeed in academic studies (Jung, 2003, Thompson & Rubin, 1996). For learners to become proficient in listening comprehension, they must “receive comprehensible input” (Vandergrift, 1997, p. 495) as well as have ample opportunity to practice using, or producing, the language. In second language acquisition, listening comprehension used to be considered a passive activity; thus, it did not merit researchers’ attention (Jung, 2003; Thompson & Rubin, 1996; Vandergrift, 2004). It had been assumed that a learner’s ability to comprehend spoken language would develop entirely on its own in an inductive way, through repetition and imitation. As recently as the 1970s there were no textbooks devoted to teaching the skill of listening in a second language. It was assumed that the ability to comprehend spoken language would automatically improve because learners with exposure to the oral discourse would learn through practice.

For ESL learners, however, academic listening, in which learners have to process a great deal of discourse, often with the knowledge that what they hear may be the basis of further investigation and probable testing (Carrier, 2003; Vandergrift, 1997), can be particularly challenging. They may have had to complete some reading before a lecture, but the lecture may well cover material not in the textbook. In addition, the lecturer may

present the material in several overlapping modes, for example, with handouts and/or visual aids. Power Point slides, videotaped material, cable television, and other forms of electronic media are commonly used to support academic material. It is assumed that adding visual support will provide accommodation for various learning styles; however, for L2 students still learning to function using a second language, the need to both listen and process visuals can overtax their mental processes, leading to a situation in which they cannot process additional input.

In addition, affective factors can compound processing difficulties. L2 students may have developed fear of tasks with a heavy cognitive load such as comprehending and taking notes from academic lectures. Arnold's (2000) study addressed the negative impact of high anxiety levels in students approaching listening exams; note-taking for such exams can be a great anxiety producer. Distractions are inevitable during classroom lectures; it has been shown that the L2 listener may lose entire chunks of a message during periods of "noise," which adds to the sense of frustration or inability to perform.

Listening texts are a relatively recent addition to the ESL curricula; the focus of earlier second or foreign language learning texts which included a focus on listening comprehension was primarily on testing students' ability to listen to oral discourse and then answer comprehension questions based upon the information (Carrier, 2003; Field, 1998). Today, however, a growing body of research indicates that the focus has shifted to actively and intentionally teaching strategies for "learning how to process, comprehend, and respond to spoken language with greater facility, competence, and confidence" (M. Rost, personal communication, February 15, 2007). "Given the importance of listening in L2 learning, students should benefit from the development of effective listening strategies

that can help them comprehend more input” (Vandergrift, 1997, p. 495). The purpose of this study was to determine how strategies training may benefit L2 learners in their development of comprehension of academic aural discourse.

Background

Learning strategies are the conscious thoughts and actions that learners take in order to achieve a learning goal. Strategic learners have metacognitive knowledge about their own thinking and learning approaches, a good understanding of what a task entails, and the ability to orchestrate the strategies that best meet both the task demands and their own learning strengths. (Chamot, 2004, p. 14)

The following sections discuss various theories and research that have been a part of the growing body of ESL listening research as well as procedures for assessing and categorizing strategy use.

Early Theories and Research

The earliest research studies examining learning strategies took place in the mid-1970s. Examined specifically were the characteristics so-called “good language learners” exhibited (Rubin, 1975, Stern, 1975) “to understand better the poor learner’s difficulties—not to ridicule them” (Stern, 1975, p. 304). In these early studies, several characteristics were identified. For example, willingness to guess was found to be important, as were a strong need to communicate and lack of inhibition, among others. It was suggested that by studying the types of strategies effective learners used, it would be

possible to help *all* language learners to become more successful (Chamot, 2004, 2005; Chamot et. al., 1996). This is the very important underlying claim upon which strategy training is based. Early studies were descriptive in nature, attempting to examine the types of strategies learners report using. From the early study of “good learner” characteristics, the interest grew to include study of the differences between the successful, effective learner and the unsuccessful one. Much of this descriptive research has depended upon student self-report because most learning strategies are not readily observable; they are mental processes of which even the learner may not be fully aware.

During the mid- to late 1970s and into the 1990s, many primarily descriptive studies were conducted (Anderson, 2005; Cohen, 1996, 2003; Ehrman & Oxford, 1990; Harley, 2000; O’Malley & Chamot, 1990). In these, the focus was on those features displayed by good learners, creating a complete taxonomy of strategies used in second language learning, comparing various groups to determine what types of strategies were commonly used in each (Macaro, 2001). For a few years, interest in the area of learning strategies waned (Chamot, 2005). Although researchers disagree on the precise definition of a learning strategy (Macaro, 2006), in recent years, there has been a renewed interest in the study of strategies, with the focus on strategies instruction and intervention.

Many of the earliest studies involved learners of foreign languages. An important distinction between learning a language as a foreign language and learning one as a second language involves psychological factors such as motivation and need, as well as social factors such as access and rights of use. In learning a foreign language, one’s motivation and need may not be as great as when one needs to learn a second language and use it in academic study and everyday life. Despite this difference, however, foreign

language learning research has provided valuable insights for second language learning as well. Some of the foreign language research showed that students who viewed video support as they listened tended to use more metacognitive as well as cognitive strategies (Thompson & Rubin, 1996). In a similar study (Ross & Rost, 1991), foreign language research first determined which types of strategies high-proficiency learners used and then modeled those same strategies to lower proficiency learners, who were then able to utilize the strategies and show comprehension gains as a result.

Early studies did not always show that L2 learners were successful in transferring their newly learned strategies to tasks outside of the classroom—or even to tasks in other classes. However, if learners are presented and taught metacognitive strategies and receive explicit instruction about what the strategy is, how it works, and how it can be used in other contexts, learners are more apt to transfer that strategy to their academic work (Carrier, 2003).

In a study of ESL high school learners, targeted listening strategy instruction resulted in both an improvement in listening ability and comprehension and successful transfer of learning to their academic classes. This study concluded that it is imperative for L2 learners to have ability to listen and extract meaning from their academic content. “While many students are confident of their listening ability in the comfort of their ESL classroom and in social settings, they are less confident when it comes to comprehending oral information in their academic content classrooms” (Carrier, 2003). Additionally, Carrier also discussed the need for strategies instruction in listening, note-taking, and video listening in academic settings.

Along with the interest in the Communicative Approach (Oxford, Lavine & Crookall, 1989) to teaching languages, an approach that focuses on learners' ability to comprehend and use authentic language regardless of the presence of error, has come the interest in researching and teaching strategies. In particular, a shift from looking at entire groups of learners to looking at individual learners has occurred. Learners call upon different styles of learning and individually approach learning with a variety of attitudes; thus, the need to center both research and teaching of strategies on the individual has become more imperative. Today, then, strategies research is frequently descriptive in nature and focused on the individual rather than on whole groups. Nevertheless, frequently, strategies teaching has neglected to focus on the individual (Macaro, 2001).

More recently, strategies research has focused on intervention, targeting specific decisions and actions that learners can take while processing discourse in order to affect comprehension. Raising awareness of strategies and strategy use is a typical approach (Macaro, 2001). Relatively few studies of this kind have been conducted to date, possibly due to problems encountered in this type of research (Chamot, 2005). For example, because these studies are typically conducted in a classroom setting, it is difficult to randomize the selection of participants and treatments. Chamot provides guidelines for setting up a quality study:

Participants should be pre- and posttested on valid and reliable instruments that identify not only knowledge about and use of the innovation (e.g., learning strategies), but also measure other factors deemed important in learning, such as achievement/proficiency, motivation, attitude, and/or

self-efficacy. It is rarely possible to adequately control for all of these

possible variables in any natural classroom setting. (Chamot, 2005, p. 116)

For example, it may be impossible to determine the exact demographic makeup of any given class. One cultural group may dominate, or the group may contain representatives from a wide variety of cultures. In addition, randomizing the sample could mean that some students would receive important instruction while others would not. It is also impossible to control for, or even determine with absolute certainty, what strategies training participants may have experienced prior to an intervention. Though the body of knowledge in intervention is growing, to provide more insight into this important area, more research is needed (Chamot, 2005; Macaro, 2006).

Methods for Assessing Listening Strategies: Benefits and Drawbacks

Various techniques have been developed to measure strategy use. Techniques fall into two broad categories: those that permit the researcher to observe the strategy and those that provide participants the opportunity to self-report their use of strategies. Measuring listening strategies presents a challenge because of the inability to “see” what happens during mental processing. The only way researchers can really see the strategy being used is to observe how the learner operationalizes the strategy or, in other words, the action the learner performs upon activation of the strategy. Each of the following reporting techniques has been used in research studies. It must be noted, however, that despite the benefits of each technique, drawbacks are evident and must be carefully weighed. In this section, several of the techniques for gathering data on strategy use are presented.

Because of the behavioral aspect of observing a listener while s/he actively performs a task, observation has limited value in assessing listening strategies. Researchers may use videotaping to prompt the learner to verbalize what s/he was thinking, a technique which has been used in a few studies [See McGruddy's study (1998) below]. After completing the task, the learner can be asked to watch the video, simultaneously reflecting and commenting on what was happening at a given moment (Chamot, 2004). Researchers may avoid the possibility of distortion or exaggeration by having students report as soon as possible after the actual task has taken place.

Those techniques that exploit questioning and answering may offer greater access to data about strategy use. Retrospective reporting, through use of questionnaires or interviews, gives learners the opportunity to think back over a task completed and then report on the mental processes they believe they were using during the task. Though this method can provide valuable insights, the very act of trying to remember what was happening can be taxing to the learner. In addition, the learner may be using the first language (L1) in mental processing of the strategy and then having to report in the L2, which can be problematic in obtaining precise descriptions of the mental process being experienced.

Retrospective reports, in either very directed or in more open-ended questionnaires and interviews, can allow learners to express understanding of their use of strategies by responding to items with Likert-type responses or to respond to oral interviewer questions. Limitations include an inability to reproduce the strategies learners have used or reporting use of strategies that, in fact, they haven't used. Another hazard may arise if a questionnaire is written in the L2; learners may lack adequate proficiency

to comprehend some questions or Likert-scaled statements and thus give inaccurate responses (Chamot, 2004). Finally, standardization across most of the known questionnaires or interviews is lacking, so it is impossible to generalize findings with this type of reporting.

To analyze the actual thinking processes a learner uses during a learning task, the learner can be encouraged to pause either during the task or immediately upon task completion to express to the investigator the thoughts or strategies used during completion of the task. Using such a think-aloud protocol is considered to be a metacognitive strategy which can raise learners' awareness of what occurs during processing and what strategies are available to them to boost their attention and their approach to listening (Anderson & Vandergrift, 1996). "Using think-aloud protocols can also be considered a strategy training technique; its use can develop the metacognitive strategy of self-monitoring, an awareness of how one is dealing with incoming language" (M. Rost, personal communication, February 15, 2007). For the learner, then, using a think-aloud protocol can raise awareness of the benefits of using strategies appropriate for certain types of listening tasks. For the researcher, using this technique can provide insight into how the brain functions during listening activities.

Drawbacks to the think-aloud protocol include the possibility of conflict for the student because it is extremely difficult for anyone to simultaneously listen and speak. The more time between the listening task and the student's reflection, the greater the possibility of the student's forgetting what mental processes were actually taking place. A preferred method may be to allow the learner to stop the flow of the aural text long enough for self-report to take place. In addition, some of the processes involved in

listening may be automatized and thus go unreported. Third, learners may experience difficulty in trying to explain the process occurring, particularly in a learner of lower proficiency level, because of a lack of L2 proficiency and fluency. Researchers would do well to provide training in think-aloud protocol prior to using it during actual experiments (McGruddy, 1998). Despite the drawbacks, think-aloud protocol is frequently used in conjunction with strategy inventory investigation (Chamot, 2004).

In addition to oral question-and-answer techniques, students can be given an opportunity to write about their listening experiences and strategy use (Chen, 2005; Cohen & Scott, 1996). The instructor can pose directed questions, or students can be allowed to record their thoughts in an open-ended fashion. Listening journals might take the form of a personal diary or a dialog journal, with responses to learner entries by the instructor or another student. Since listeners cannot simultaneously participate in a listening task and write about it, the retrospective aspect of this type of reporting must be noted (Smidt & Hegelheimer, 2004). Using this type of reporting can provide learners time to reflect upon which strategies have or have not worked for them and can provide for researchers a wealth of qualitative data (Chamot, 2004; Oxford, et al., 1996) even though this type of data can be very challenging for researchers to classify.

In addition to all of these methods for assessing learning strategies, more recently various types of computer technologies have become valuable for tracking strategy use (Bailey, 1996, Smidt & Hegelheimer, 2004). In one study (Smidt & Hegelheimer, 2004), Camtasia®, software designed to create a screen-capture video, was used to capture students' mouse movements as well as their spoken comments as they were performing a listening task. While this technique was appealing in its newness or novelty, interpreting

the results was extremely time-intensive, and the technique did not always elucidate strategy use. In addition, because during this type of reporting “the learner’s verbal utterance may compete with the activity’s audio output” (p. 540), the result may be totally “unintelligible data” (p. 540). In this study, difficulty in “noise interference” arose for both study participants and researchers.

Using some sequence of the various assessment tools provides instructors a means to evaluate the strategies their students are accustomed to using before strategies instruction is offered, as well as a way to evaluate after explicit strategies instruction. Though it is important to carefully structure items in questionnaires or interviews, teachers can certainly devise their own tailor-made starting point questionnaires. It is suggested that they pilot such instruments prior to actually using them in formal research, however, to avoid ambiguity or use of language that students may not comprehend (Chamot, 2004). They might also consider using a validated questionnaire such as Oxford’s Strategies Inventory for Language Learning (SILL) (Oxford, 1990), which, in its standard form, would provide a “global picture of their students’ learning strategies in general” (Chamot, 2004, p. 16). Though using single assessment tools to discover student strategies use is of value, combining or cycling through two or more of the protocols will be of greater benefit to instructors, researchers, and students alike.

Early research into what constitutes an effective learner led to a more in-depth investigation of how to capitalize on the strengths of good learners and teach the same strategies good learners use to less effective learners. The following section discusses four research studies investigating the benefits of explicitly teaching listening strategies. Two of the studies focus on foreign language learners, and two focus on learners of

English as a Second Language. Each of these studies contributed to the design of the research undertaken in this dissertation.

Teaching Learning Strategies

While earlier studies were primarily descriptive ones, focus has now shifted to researching methods for teaching effective strategy use. Information gathered from descriptive studies is now being exploited to “measure relationships between strategy use and language proficiency, metacognition, motivation, and self-efficacy” (Chamot, 2005, p. 115). While many researchers believe learning and listening strategies should be actively taught to L2 learners, others believe that the research is, in fact, inconclusive as to whether instruction in strategies really produces any positive effect for learners (Chamot, 1995; Rubin, 1994). It should be noted that this type of research is very difficult to conduct and results are sometimes difficult to interpret. Researchers agree that ongoing research is needed so that L2 curriculum writers, instructors, and, certainly, L2 learners can benefit from study results (Macaro, 2006).

Chamot (2005) pointed to the need for “rigorous intervention studies [that] would provide information about the effects of learning strategy instruction on achievement and language proficiency” (p. 126). She went on to declare:

It is important that learning strategies research continue, ... for only through a better understanding of the learning and teaching process can more language learners achieve the level of success that currently characterizes only a small proportion of all students studying a foreign or second language around the world. Strategy instruction can contribute to development of learner mastery and

autonomy and increased teacher expertise, but additional research in specific language learning contexts is essential to realizing its potential to enhance second language acquisition and instruction. (p. 126)

Though as yet, relatively little research has been conducted in the teaching of listening strategies, many of the findings have shown that instruction in listening strategies can help students to improve their comprehension.

A research study conducted in the People's Republic of China (Goh, 2002b) reported on the importance of teaching listening strategies to students approaching their undergraduate studies or their working careers. Until very recently, listening and speaking skills received little attention, but with the current political and economic conditions in China, this situation has changed, with a shift to actively teaching English speaking and listening along with reading and writing so that Chinese students can realize global opportunities for study and employment. To add to the rather slight body of research in the area of teaching listening strategies in China, a questionnaire-based study was conducted with Chinese learners of English, with primary focus on identifying listening comprehension strategies. In addition, this study attempted to identify general learning strategies. Of interest also was whether there was any difference in strategy use by gender. The researcher made a distinction between *strategy* and *tactic*, identifying a strategy as a broad category of any technique learners might use to help them perform a learning task and tactics as “individual techniques through which a general strategy is put into action” (p. 48).

One hundred forty one students studying in an English listening class at a university in Singapore completed a listening strategies questionnaire, the Techniques for Learning to Listen (TELL) (Goh, 2002b). After having been piloted, the questionnaire underwent revision and the version these students used had 52 items, each representing a tactic. The questionnaire was written and administered in English. Four main categories of strategies were covered, three aimed at comprehension: metacognitive (19 items), cognitive (18 items), and social/affective (5 items); and one aimed at learning (10 items). The answer scale was a Likert-type five-point scale.

Results of the study showed that all three categories of comprehension strategies were used at a moderate level, and learning strategies (which also fell into the categories of metacognitive, cognitive and social/affective) were used at relatively moderate to high levels. It was found that within each category of comprehension strategies, selected strategies tended to be used more than others. For example, within the entire range of comprehension strategies, “directed attention, inferencing, contextualization, elaboration and self-encouragement” (p. 54) tended to be used the most frequently. In addition to the analysis of strategy use, tactics to operationalize the strategies were analyzed qualitatively. No statistically significant differences were discovered for gender.

Though the study was primarily a descriptive one, the author noted that the TELL could be used as a strategies-teaching tool. In this study, no intervention was administered; the TELL was administered in such a way that participants’ responses were a type of retrospective report of perceived strategy use.

When learners are developing their listening comprehension ability, they can encounter obstacles that inhibit their use of newly learned strategies. In a study of such

obstacles (Chen, 2005), junior college students in Taiwan who were learning English as a Foreign Language participated in a session of strategy training, during which they were introduced to and practiced several listening strategies. Strategies such as “grasping the main idea, ... using contextual clues, ... self-monitoring, ... and imaging” ... “were presented in a direct, explicit, and informed way” (p. 7). The participants used retrospective reporting methods (journaling and oral interviews) to give the researcher feedback on strategy use.

Chen found that students reported various barriers in a total of seven different categories: affective, habitual, information processing, English proficiency, strategic, belief, and material barriers. Within each category, as many as six different types of barriers were described. Questions instructors should pose if they want to diagnose student difficulties in acquiring strategies included:

Does [the] learner’s listening habits and belief about listening comprehension contradict the strategy use?

Does the learner have an affective barrier against strategy learning?

Have the listening materials and the learner’s English proficiency been taken into account?

With which phase of information processing does the learner have difficulties—perceptions, parsing, or utilization?

Is the strategy appropriately selected in order to facilitate the specific goals in [a] particular phase of information processing?

In which stage of development does the learner experience difficulties with a certain strategy? (p. 16-17)

If instructors can discover the answers to some or all of the above questions, then it is possible they will be able to assist learners in overcoming such barriers, thus helping learners to become more autonomous.

While research into listening strategy instruction in the FL context is important, of even greater importance may be research into instruction for ESL learners. For high school and college or university students studying in an L2 environment, the need to be able to comprehend academic content is crucial if they are to succeed as students. They must be able to process huge amounts of information, often in subject areas for which they lack background knowledge, and they must be able to not only listen and comprehend but also to manipulate and reproduce what they have heard.

A small study (Carrier, 2003) was conducted with seven high school students at intermediate ESL proficiency level in the U.S. Pre-tests were administered to test participants' level in discriminating English sounds and in processing information presented to them via video. Intervention training, which consisted of training in listening for discrete sounds, processing information delivered via video, and taking notes, a series of 15 lessons, was conducted over the course of six weeks. In each lesson, the strategies were defined and benefits of using the strategy explained. The instructor modeled the strategy using a think-aloud protocol during classroom instruction. Finally, participants practiced new strategies in similar tasks and applied them in academic settings (Carrier, 2003).

The strategy instruction used in this intervention study was chosen from a variety of ESL listening texts, and every effort was made to address both bottom-up and top-

down mental processes. Bottom-up strategies included such lessons as understanding the sound system of English, for example, listening for stressed words as a way of identifying their importance to the discourse or teaching students to listen for the difference between words like *can* and *can't*, often difficult for the non-native speaker of English to distinguish. Top-down strategies included such activities as using context clues to guess meaning of new words, prediction, and making inferences based upon prior knowledge and context. As this study used video-based aural texts, students also focused on using visual cues to help them comprehend the text.

After the listening strategies instruction, post-tests, which followed the same pattern as the pre-tests, were administered. Statistically significant improvement was shown for these students in both bottom-up—or discrete—processing strategies and top-down—or overall listening comprehension and note-taking—processing strategies. Carrier pointed also to the importance of effective note-taking and reconstruction ability for ESL students.

Implications of this study included the necessity for improved ESL listening texts that will include explicit instruction in listening and note-taking strategies. Specific instructor guidelines were offered to help teachers address the specialized needs of their students. For example, it is important to “name [the strategies], define them, or provide opportunities for students to practice or analyze them.” In addition, it was suggested that instructors should model strategy use for their students and then have students practice using the same strategies but in a different type of task.

A second intervention study was conducted with ESL university students at advanced-level proficiency (McGruddy, 1998). Over the course of a term, students in the

experiment group were instructed for a total of five 100-minute sessions per week in use of three listening strategies: predicting, inferring, and selective attention. Two control groups did not receive explicit strategies training but met for listening class for the same amount of time. Several types of listening were addressed during the study, all tasks typical for academic listening. For example, short, videotaped excerpts from authentic academic lectures and interviews, news programs, and situation comedies were used to teach, practice, and test the specific listening strategies investigated by the study. Many of the instructional materials were designed by the researcher while others were extracted from published ESL listening texts.

Study participants were first leveled for proficiency through use of a researcher-made video test in addition to the nationally normed and validated Michigan Listening Comprehension Test (Upshur et al., 1972). Questionnaires were administered to all participants to gauge their beliefs about their own strategy use. Pre-treatment questionnaires were completed at the beginning of the term; then a second and third were completed at the end of the experiment, in an effort to determine students' self-perception of their learning. In weeks seven and fifteen of the study, participants were videotaped while they were engaged in a listening task, and then they were asked to offer retrospective comments on strategies they had been using during the listening task. At various points during their instructional time, students also engaged in discussion about the strategies they had been practicing and the usefulness of those strategies.

Specifically, the researcher strove to determine whether explicit instruction in the three listening strategies had a positive effect on student learning, determined through comparison of pre- and post- aural proficiency tests and her self-designed listening

comprehension video test. Her research design was based upon a combination of Schema Theory and Relevance Theory (Anderson, 1977; Carrell, 1984; Hieke, 1968; Nassaji, 2002; Rost, 1990).

Quantitative and qualitative analyses were conducted to determine test results. Results showed a statistically significant improvement in the strategy of selective attention for the treatment group; the strategies of predicting and inferring did not reach statistical significance, but participants did show improvement. The researcher posited that for strategies training to be effective, more instructional time may need to be devoted to explicitly teaching strategies for listening: “Given the cognitive demands placed on the L2 listener in a listening strategy training course, longer length of training may be needed” (McGruddy, 1998, p. 211). Lack of practice outside the academic classroom setting may also be a factor in the outcomes of the study. As the researcher noted, ESL students often spend their time outside of class with others of their own language background. Thus, gains in listening comprehension may occur very gradually.

Significance of the Study

The current study addressed the need for further research in benefits to L2 learners of exposure to and systematic teaching of listening strategies. For L2 learners, the ability to use strategies effectively in their academic listening is crucial (Carrier, 2003). Learners need to be able to actively and selectively choose the strategies most applicable for a given listening situation and evaluate strategy effectiveness in their everyday learning tasks. Moreover, if learners are to successfully interact with aural discourse and be able to “negotiate meaningfully with input in authentic contexts”

(McGruddy, 1998), researchers and instructors need to know how to proceed in actively and systematically teaching listening strategies in the L2 classroom so as “to prepare their students for high academic achievement” (Carrier, 2003). As Carrier indicated in her study, students can benefit from instruction in strategies for academic listening in a variety of settings and incorporating many types of media.

This study adds to the growing body of research of how adult ESL students pursuing academic study may benefit from explicit, systematic teaching of listening strategies. Through defining a particular type of electronically delivered intervention, the study contributes a method to introduce and model L2 listening strategies. Results of the study provide insight into participants’ self-perceptions of their use of listening strategies both before and after systematic classroom instruction.

Research Questions

The following research questions formed the basis of the study:

Research Question One: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when university attended is controlled statistically?

Research Question Two: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when level of instruction is controlled statistically?

Research Question Three: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when native language is controlled statistically?

Research Question Four: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when listening proficiency level is controlled statistically?

Limitations of the Study

One limitation of this study relates to the selection of participants. It was anticipated that the body of participants was likely to be of predominantly one language and cultural background. Additionally, it was expected that the participants would be overwhelmingly of one gender (males). While this could provide insights into the strategy use of that particular language group, it might preclude broader multicultural generalizations of the study.

In addition, it was impossible to randomize the selection of participants because of the structure of the research. The study needed to be conducted as a component of regularly scheduled ESL coursework. Limited randomization was provided in the anonymity of participant responses on the research instrument questionnaires as well as with proficiency leveling. It should be noted that though students may have been placed in an advanced class according to ESL program placement procedures, there could be within the same class level participants at both of the proficiency levels designated for this study. Proficiency levels for the study were designated as a result of pre-study proficiency listening test scores.

Participants' prior exposure to listening strategies instruction or to the manner in which such instruction may have taken place is another area that was impossible to determine. Indeed, students may consciously or unconsciously use strategies transferred

from their learning and listening experiences in their first language. In addition, instructors may offer strategies instruction without intentionally planning to do so.

Students' life style prior to enrolling in ESL classes as well as the listening activities they pursue outside of class time was another area that could have impacted results of the study. If students have friends who are native speakers of English, spend much time watching American movies or listening to news broadcasts, or in other ways have a lot of exposure to English outside of class time, they may have adopted a variety of listening strategies that their classmates who do not engage in such activities have not.

Another limitation of the study concerns the use of Oxford's (1990) Strategies Inventory for Language Learning (SILL) as a pre-/post measurement of participants' strategy use (as will be described further in Chapter 3). In particular, limitations on the Strategies Inventory for Language Learning are noted below. The SILL uses a Likert-type response scale as follows:

Never or almost never true of me

Generally not true of me

Somewhat true of me

Generally true of me

Always or almost always true of me (Oxford, 1990, p. 283).

While in many cases this type of response category provides relatively accurate data, in some questions, quantifying a response can be problematic for learners, as in the following example: "I look for people I can talk to in English" (p. 296). Macaro (2001) pointed out that quantifying the amount of time one spends actively searching out someone with whom to speak the L2 begs the question of relevance. Another way in

which using an inventory questionnaire with a Likert-type scale can be problematic involves cultural education practices. If students spend most of their time with only one instructor, as is the case in some countries, they might have difficulty with a question that asks them how often they seek help from a speaker of the target language (their one and only instructor). Students who routinely interact with many teachers or other speakers of English would have a very different answer on such a question; statistics from such a question, then, may not present a realistic overall picture of students' seeking out L2 speakers. (Macaro, 2001). Macaro (2006) reports that the items of the SILL may not be "transferable across sociocultural domains and that their results and conclusions might, therefore be invalid" (pp. 321-322). Nevertheless, the SILL has undergone psychometric validation studies and is considered a valid statistical tool (Oxford & Burry-Stock, 1995).

Delimitations of the Study

A delimitation of the study concerns effects on the data when students were absent from class on a day when data were collected. Because scheduling at the University of Pittsburgh was so tightly orchestrated, allowing for makeup sessions was impossible. Therefore, gaps in the data exist.

In addition, a few students who had consented to join the study either transferred into other content classes, opting out of taking a listening class, or dropped out of the class altogether. These students were counted initially in the number of participants, but further data were incomplete or non-existent. This is not an unusual situation in ESL Programs.

Definition and Explanation of Terms

The following terms are used throughout this study and are defined as related to use in this research.

Authentic – Any type of material using the very natural conventions of spoken discourse: the rhythms, rate of delivery, use of fillers such as “um” or “ah” or “like,” incomplete or less than grammatical sentences.

Content schemata – “knowledge relative to the content domain of [a] text” (David & Norazit, 2000). If a learner has some L1 background knowledge of a birthday party, for example, the learner will be prepared to listen to an account in L2 of a birthday celebration.

English as a Second Language (ESL) – English is learned so that the learner can comprehend and speak the language in an English speaking culture to conduct routine activities and business.

English as a Foreign Language (EFL) – English is learned as a language that will not be used on a day-to-day basis. The learner probably will not have the need to use English within an English speaking culture.

FL - foreign language. In this study, only students learning English as a Second Language (ESL) will act as participants.

Formal schemata – “higher order structures containing knowledge of rhetorical organization structures, including knowledge of the general properties of text types and differences in content domain of the text” (David & Norazit, 2000). A learner may be comfortable, for example, in listening to a conversation with friends but quite

uncomfortable in listening to an academic lecture because the organization of the lecture is something s/he may not have encountered before.

Lexicon – vocabulary items of a language.

Listening – “an active process in which listeners select and interpret information that comes from auditory and visual clues in order to define what is going on and what the speakers are trying to express” (Thompson & Rubin, 1996, p. 331). For this study, the focus is on listening for academic purposes. That might include listening during academic lectures, seminars, group work, or any other aural discourse that is likely to occur in an academic classroom setting.

L2 - a second (or third/fourth, etc.) language. Participants in this study may have more than one language learning experience in their background. For purposes of the study, L2 means any language other than their mother tongue.

Metacognition - “Metacognition refers to the learner’s knowledge of whatever strategies s/he might use for specific tasks and under what conditions those strategies will be most effective” (Pintrich, 2002).

Morphology – The study of the parts of a word. A morpheme represents the smallest unit of meaning within a word. For example, the word *disable* is made up of two morphemes: dis- (meaning not) and –able.

Phoneme – the smallest unit of sound that carries meaning. For example, in English, “p” and “b” are phonemes. The word *big* is quite different in meaning from the word *pig*.

Schema theory – in learning theory, the activation of pre-existing background knowledge, or conceptual frameworks. For example, if an L2 student hears a passage about shopping,

s/he may be able to relate some of what s/he has stored in memory about the act of shopping. Activating schemata facilitates comprehension.

Strategy training - “teaching explicitly how, when, and why to apply language learning and language use strategies to enhance students’ efforts to reach language program goals” (Carrell, 1996; Cohen, 1998; Ellis & Sinclair, 1989, as cited in Chen, 2005, p. 5).

Strategic competence – “the ability to manage communication not only during an interaction, but also before and after the interaction, in order to achieve an intended interactional goal” (Nakatani, 2005. p. 77).

Suprasegmentals - patterns of stress and intonation in spoken language.

Syntax – The syntax of a sentence is the way words are arranged to make a grammatical sentence or the rules that govern the way the words work together grammatically.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

This chapter presents a brief historical timeline of the teaching of listening comprehension in an English as a Second Language or English as a Foreign Language setting. Of note is that listening research and teaching has a relatively short history as compared to that of reading, writing, grammar, and speaking. Certainly, the process of learning how to listen in a second language shares features with learning to listen in one's mother tongue; however, some features are different. The literature provides insight into these similarities and differences. The theoretical underpinnings of the listening process are presented with emphasis on Schema Theory (Buck, 2001; Carrell, 1984; Nassaji, 2002), the theory used as a basis for this study. Within this section, top-down and bottom-up processing as they function in the L2 listening process are explained, as is the interaction between the two processes. Finally, learning strategies, in particular, those used in the L2 listening process are presented. In most of the research accomplished to date, strategies have been classified in a descriptive manner. Researchers agree to the dearth of studies showing what types of intervention—or instruction—of listening strategies will help L2 students to improve their listening comprehension. It is to this end that the current study was undertaken.

A Brief History of Teaching of Listening Comprehension for Second Language (L2) Learners

Though one of the most important but also most difficult skills a second language (L2) learner must master to succeed in academic studies, L2 listening comprehension has not received the research attention it deserves (Jung, 2003, Thompson & Rubin, 1996). Though the focus in teaching today is on presenting listening as an "active receptive skill which needs special attention in language study" (Morley, 2001, p. 72.), listening was traditionally considered to be a passive skill, unlike speaking or grammar (Vandergrift, 2004). Even as recently as the 1970s there were no textbooks devoted to teaching the skill of listening in a second language.

One hundred and fifty years ago, it was thought that speaking and writing in a second language were productive, or active skills, while listening and reading were receptive, and thus passive. In some of the earliest recorded language classes, listening was not taught at all. In one of the earliest of the language teaching approaches, Grammar Translation (Felder & Enriquez, 1995; Flowerdew, & Miller, 2005), teaching was conducted in the learner's native tongue, and only the grammar, sentence structure and vocabulary of the foreign language, generally Greek or Latin, were taught so that learners could translate texts.

The first of the language teaching methods that touched upon the importance of listening comprehension is known as the Direct Approach (Felder & Enriquez, 1995), in which learners were immersed in the target language, with the L2 being the language of instruction (Flowerdew & Miller, 2005). Taught inductively, learners mastered the

grammar by creating rules based on their ever-growing experience with the language. Correctness in all aspects of the language was emphasized. In the Direct Approach, by necessity, listening comprehension played a major role. However, the development of listening comprehension was not actively taught; it was assumed that learners would pick up this skill in an inductive way, through repetition and use. Certainly, with its focus on inductive learning, no listening strategies were actively taught in the Direct Approach.

Although listening comprehension was a component of the Grammar Approach also, students were constantly tested on their listening ability only as it related to their ability to simultaneously read and listen to a recorded piece of discourse and make sense of the grammatical and lexical rules of the language. One major drawback of this method was that the classroom activities did not relate in any meaningful way to everyday listening activities outside of the classroom (Flowerdew & Miller, 2005). Students using this method were called upon to fill in missing words, a task they could easily perform without having any idea of the actual meaning of the discourse.

The Audiolingual Approach (Larsen-Freeman, 2000), which became popular in the 1960s and 1970s, required the listener to recognize and practice utterances and then create similar utterances patterned after the ones they had heard in a dialogue. It was during this time and with this approach to teaching languages that the audio-cassette language labs became widely used (Ross, 2003). The language lab focus was based on drill and practice, requiring much repetition and error correction with the goal of instilling in students correct patterns of discourse. Developing listening comprehension strategies, again, was not the focus of this approach; rather listening skill was taught only as it pertained to the manipulation of newly learned grammatical and lexical structures.

An unfortunate result was that in their learning process, students interacted much more with machines than with other humans. Then focus shifted toward student interaction in authentic language situations so that students could have exposure to comprehensible input as well as practice using the target language in real life situations. While cassette language laboratories are still in use today, many of these have been replaced or supplemented with computer laboratories and digital language laboratories. Emphasis on authentic tasks and projects, particularly those using the Internet, has become highly regarded (Ross, 2004). Today, we see an emphasis on exploiting computer-assisted language learning (CALL) through use of CD-Rom programs, Internet-based listening [See, for example, Dave's ESL Café: <http://www.eslcafe.com/> and Randall's ESL Cyber Listening Lab: <http://www.esl-lab.com>, two very popular sites], and very recently, synchronous audio chat using webcams and podcasting [See Charles Kelly's site: <http://www.manythings.org/>].

While the electronic medium is seen as somewhat artificial, it is said to give students authentic practice in extended discourse. Students who use electronic media are exposed to oral discourse and required to use their listening skills to manipulate and master the target language. In addition, they are exposed to culture in a way that is not always possible in the traditional classroom. For example, with the wealth of information on the Internet, students can discover interesting and meaningful facts about the culture whose language they are studying. They can, in addition, partner with native speakers of the L2 in a pal chat, listen to radio broadcasts or television programs, or download podcasts of relevant cultural issues, discussions or music. Never in history has it been so easy to gain contact with others of different cultures and language backgrounds without

ever having to leave the physical classroom. Through videoconferencing, students can even participate in projects by partnering with other students across the globe (Martin, 2000).

In the 1980s and 1990s, the Communicative Approach (Oxford et al., 1989)--one in which error was tolerated, provided the learners' intended message could be conveyed and understood--became popular. The Communicative Approach, in which the focus is on use of authentic language, places the learner in a real exchange of meaning; the learner must process input and produce output such that each participant can understand the other. Once again, we see that listening strategies are assumed but not actively taught. Within this method, two schools developed--those who embrace the Cognitive Approach (Ellis, 1999) and those who embrace the Sociocognitive Approach (Warschauer & Meskill, 2000).

The Cognitive Approach, the first of the two schools, focuses on the view that all language learning is a "unique psycholinguistic process" (Warschauer & Meskill, 2000, p. 3). Learners are said to have a built-in cognitive ability to interact with and communicate in language that is both meaningful and comprehensible to them and construct their own meaning. Making errors is seen as a positive learning process through which learners construct the rules of the target language based upon input/output. Technologies that support this learning theory/style include "text-reconstruction software, concordancing software, telecommunications, and multimedia simulation software" (p. 4). The computer facilitates both teaching and learning for this particular language school. Teachers can easily manipulate authentic text to create meaningful exercises (cloze-type), and students can use all sorts of software and Internet access to discover

"computer microworlds that, at their best, simulate an immersion or a 'linguistic bath' environment" (p. 5). They can experience the target language by conducting searches, interacting with and manipulating their findings. In many cases, students need not actually interact with other humans at all.

The other school within the Communicative Approach embraces Sociocognitive Approaches. This school of thought believes that learners benefit greatly from interaction with people. Students need to interact with other humans in authentic language situations so that they can have comprehensible input as well as exposure and practice in the types of speech acts in real life outside the classroom. Authentic tasks and projects, particularly those utilizing the Internet, are highly regarded in this approach. Teaching methods that exploit computer-assisted discussion have become accepted. We see synchronous and asynchronous chat becoming a major component of language learning. While this medium is seen as somewhat artificial, it is still said to give students authentic practice in extended discourse and to provide an extra layer of language practice for students, one that is democratic. Students who are hesitant to use oral language in the classroom have greater opportunity to use language without fear of making mistakes and thus losing face. The result can be class discussions that are both highly democratic and collaborative. Students who use electronic media are exposed to and required to use their skills in listening, speaking, reading, and writing to manipulate and master the target language. In addition, they are exposed to culture in a way that is not always possible in the traditional classroom.

Next in the progression of accepted language teaching approaches is one known as the Task-Based Approach (Brown, 1987; Bruton, 2005). This approach requires the

learner to listen and, based on the input, complete some sort of task, perhaps note-taking or filling in a chart or form. The tasks tend to be oriented to real-world needs of the learner but are frequently based upon discourse (lectures or passages) that is at least partially contrived. While not exactly authentic, these types of activities provide practice in completing the types of tasks students might be called upon to use in real life, such as noting information or completing forms.

In current language learning approaches, we have the Learner-Strategy Approach (Flowerdew & Miller, 2005; Mendelsohn, 1994). This approach accounts for learners' needs to initiate and recognize their own listening strategies – what works for each individual learner. The Learner-Strategy approach examines listening comprehension from the perspective of individual learners and their independent learning with activities created to help learners discover what particular strategy works for them, including foci on schema activation, authentic tasks, presentation of many types of activities in many different contexts, and total interaction with the task. It is in this approach that metacognitive realization becomes a focus. Metacognition refers to the learner's knowledge of whatever strategies s/he might use for specific tasks and under what conditions those strategies will be most effective (Pintrich, 2002). Pintrich pointed out that metacognition refers to knowledge of strategies; having the knowledge doesn't necessarily mean that the learner actually uses the strategies. It is important, however, for learners to identify which of their own listening strategies produce success, and it is helpful for them to share their strategies. Not only does the sharing help them to activate schemata and to recognize how the strategy works for them, their sharing may also serve to activate other learners' schemata and be instructive for fellow learners. Both learners

and fellow students become more autonomous and develop more control over their own learning, the goal of this particular approach. The more aware learners are of the learning process, more specifically, their own learning process, “the greater the chance they can influence conscious learning” (Nakatani, 2005, p. 77) and enhance their own strategic competence.

Through this progression of teaching approaches, researchers’ interest in listening comprehension has grown, with the development of research, new theories, and development of second language curriculum (Osada, 2002). The 1990s showed a far greater interest in this skill than had previously been realized. Today, it is a widely accepted belief (Flowerdew & Miller, 2005; Jung, 2003; Savignon, 2001; Wilson, 2003) that all skills, certainly including listening comprehension, require active negotiation with the language. Savignon (2001) likened the collaborative process involved in oral/aural communication to the game of football. The different strategies players use and the different moves they make as they avoid, block, or tackle the opposing teams’ players are similar to the strategies language learners use to negotiate meaning with their interlocutors in the new language. Not only do learners need to know the sound system, grammar, and syntax of the new language, but they also need to understand the pragmatic, or discourse meanings of the language.

A final learning approach that is worth mentioning here is the Integrated Approach (Flowerdew & Miller, 2005). Teachers of today recognize readily the need to actively teach strategies for developing accuracy in listening comprehension. The goal is to make students able to listen for and identify main ideas as well as details, to develop their critical listening and thinking skills, and to enable them to manipulate the language

and show that they comprehend and can use what they have heard. An expected outcome is for students to be able to use heard information and present it in an intelligent and intelligible way. In the Integrated Approach, we see complementary strategies at play as students use aspects of the various approaches to language teaching and learning to comprehend, manipulate, and produce language in authentic, meaningful language tasks.

It should be noted that the approaches mentioned here are but a brief selection of known approaches to teaching a second or foreign language. In the past one hundred years, many different and sometimes conflicting language teaching methods have come into vogue. Many of these are still in use today. The teaching of listening comprehension has evolved in response to perceived needs of learners, from the need to simply manipulate (translate) text, to the more recent recognition of the need to actively attend to, comprehend, manipulate, and produce comprehensible output relevant to learners' immediate real-life needs. Even when L2 learners have a good grasp on the English language, they will likely have difficulty comprehending oral discourse, particularly the discourse of an academic lecture. Learners may also have difficulty identifying the main points and seeing how main points and supporting points relate (Flowerdew & Miller, 2005).

A Comparison of First Language (L1) Listening and Second Language (L2) Listening

The process of learning to listen in English as the L1 language has some similarities but also many differences from the process of learning to listen in L2. Babies can hear even before birth, and the hearing and listening process is refined as they mature cognitively. Babies can understand spoken language well before they are able to respond

orally. Toddlers acquire vocabulary and comprehension of spoken language rapidly. By age six, children's vocabulary could include approximately 14,000 words even though the children might use many fewer words productively in spoken discourse (Flowerdew & Miller, 2005). As children mature, they undergo a natural process of refining their listening skills while increasing their vocabulary and their sophistication in comprehension and listening skills. They learn early to distinguish the sounds of their native language and gradually learn the syntactic and grammatical structure. Children, as well as adults, spend much more time in the average day listening rather than reading or writing or even speaking. Despite this fact, children are not actively taught how to listen in their native language.

Native speakers/listeners draw upon their existing networks, or schemata, to aid them in comprehending incoming information. Despite this natural facility with listening, native speakers also benefit from listening instruction so they can learn to focus on important details or chunks of information or to process information with a high cognitive load such as an academic lecture.

While native speakers learn to listen passively and with little effort, perfecting their skills early in life, this is not the case for L2 learners. For L2 learners, the process is much more active, particularly for adult learners. While the native speaker may easily compensate for distraction, known as "noise," in the process, the L2 listener has to work very hard to make sense of aural input. Even small distractions, such as background conversations, can produce loss of crucial pieces of input, making comprehension very difficult or impossible (Shannon & Weaver, 1949). Further, cultural differences can

impede comprehension. What makes perfect sense from a native speaker's own cultural perspective may seem totally foreign and incomprehensible to an L2 listener.

Research (Rost, 1990) shows that young children, native speakers of English, are more attuned to the prosody of the language, the intonation patterns and stress patterns of the sentence, rather than to syntax and sentence structure like adolescent and adult native speakers with experience in processing written texts. Prosody seems to be of greater importance to beginning L2 listeners, regardless of age (Harley, 2000). L2 learners need to be made aware of the prosody of English (Rost, 1990) and to be taught the strategy of paying attention to pausing and the stress and intonation patterns of spoken English.

Once L2 listeners have achieved a high level of listening proficiency, processing which is more similar to that of the native speaker can be realized. Input can be more easily filtered through working memory, appropriate schemata activated, and information attached to already existing neural networks. Without appropriate schemata and cultural knowledge, however, mis-comprehension remains a possibility despite a high level of language proficiency. "Comprehension is the outcome of the interaction between linguistic and background knowledge" (Dubin & Bycina, 1991; Morley, 1991 as cited in Park, 2004, p. 2).

Metacognition and its Importance to Listening Comprehension

Addressing the needs of learners to recognize and use language learning strategies metacognitively has been an impetus for a shift in teaching methods. Anderson (2002) proposed five components of metacognition: "(1) preparing and planning for learning, (2) selecting and using learning strategies, (3) monitoring strategy use, (4) orchestrating

various strategies, and (5) evaluating strategy use and learning” (p. 1). Pintrich (2002) identified just three types of metacognition: knowledge about strategies, which includes several of Anderson’s components, cognitive tasks, and self. When learners have strategic knowledge, they know which strategies they can best use in certain learning situations, such as memorizing material or preparing for a multiple choice test versus planning for an essay exam. Strategic knowledge falls into three general categories with many strategies in each. If learners need to memorize material, they could use rehearsal, repeating facts or information over and over until the information is committed to memory. While rehearsal would not be a good strategy choice for learning complex concepts, elaboration would be helpful. In elaboration, learners might employ the use of a mnemonic to remember a more complex concept, or they might activate a strategy to help them summarize or paraphrase a passage. For tasks such as outlining a passage or taking notes during a lecture, organizational strategies would be most useful. Learners also know of various strategies they can use for help in setting goals, asking questions for clarification of material, checking for mistakes, and other tasks to help them with their learning. In all of the categories, learners’ metacognitive knowledge helps them identify what strategies to use, but this knowledge doesn’t mean learners actually put the strategy into use.

Pintrich (2002) explained that in the second type of metacognition, learners tap into the knowledge they’ve accumulated about certain cognitive tasks. Learners may be aware of what strategies they can use, but they must also be knowledgeable about when to use various strategies as well as why to choose specific ones. Learners may need to be aware of which cognitive strategies an instructor prefers they use or which strategies are

most acceptable within a certain cultural setting. Anderson (2002) pointed out that “[u]nderstanding and controlling cognitive processes may be one of the most essential skills that classroom teachers can help second language learners develop” (p. 1). Students should be instructed in both cognitive and metacognitive strategies.

Self-knowledge is the third type of metacognition (Pintrich, 2002). It is important for learners to be aware of their individual strengths and weaknesses in performing learning tasks. If, for example, learners know they do not generally perform well on essay exams, they might choose from a store of strategies to compensate for this particular weakness. If other learners realize they typically have problems with or avoid a certain task, they could pull from this self-knowledge and find a way to get motivated to perform well despite the known weakness.

Of great importance is learners’ ability to put into practice the strategies they are aware of--their metacognition of their own available strategies. When new learning situations present themselves, learners can pull from their metacognitive knowledge and choose a strategy that will help them succeed in the task at hand. Anderson (2002) indicated that the various types of metacognitive strategies interact together and that more than one may be activated at the same time. In addition, being able to transfer strategies from a known learning situation into a new one is crucial for success in acquisition of an L2. “Strong metacognitive skills empower second language learners” (Anderson, 2002, p. 2).

The Learning Process and Various models

Top-down processing

The term top-down processing came originally from computer science and carried the meaning of “knowledge driven” (Field, 1999). This term is used in description of the cognitive processes of foreign language listening and foreign language reading. In top-down processing, the learner draws upon background knowledge and expectations of what will follow next in the discourse and then infers what the intentions of the speaker may have been. Inferencing is an important part of the process, and it is important to note that the reader or listener, through the process of inferring meaning, may or may not correctly interpret the meaning of the written or spoken text (Rost, 2005). If, for example, the learner has a schema--a representation within the mind of a generic concept or some prior understanding of the subject at hand--the learner depends upon this prior knowledge to make reasonable guesses about the meaning of the new term or structure. “Through top-down processing, readers and listeners utilize real-world knowledge and refer to various types of schemata that help them predict what will follow in the discourse” (Jung, 2003, p. 563). Schemata are constantly being created and updated, providing the reader or listener with new outlooks and new bases for interpreting texts (Rost, 2005). The listener can use this knowledge to make sense of the incoming message and to draw reasonable inferences on the meaning. Provided there are some concepts and reactions to concepts shared by interlocutors, some measure of understanding is likely to also be shared, though this is not always the case. When a cultural or intellectual disconnect occurs, it is

possible to accommodate or incorporate a new schema to better understand and experience new ideas (Rost, 2005).

There are two types of schemata, content schemata or formal schemata (Rost, 2005). Content schemata concern the actual content of the discourse, the intended message. Formal schemata concern the way discourse is organized. Both are important to the overall comprehension of the discourse.

Implications for teachers of English as a Second Language include finding ways to activate prior knowledge, or schemata, prior to a listening activity. This might be accomplished by providing questions to discuss the topic at hand: what do the students already know about the topic? What information can they bring to bear on the topic to assist their classmates in understanding? What predictions can they make concerning the topic they are likely to hear about? What organization do they expect the talk to utilize? Giving students schemata with which to associate the new information provides a way for them to access the new ideas and to incorporate the new ideas with knowledge they have already stored. Activating existing background knowledge allows for smoother, more ready comprehension of new material. For those students whose language proficiency is very low, even providing pictures will help to activate appropriate schemata.

Bottom-up Processing

In bottom-up processing, known from computer science as a “data-driven” process (Field, 1999), the learner analyzes the various morphosyntactic elements of the discourse, from the phonemes of the language to the syllables, words, phrases and sentences that make up the discourse. These activities require processing of all of the

linguistic structures of the target language. In bottom-up processing, the learner uses sound input to guess what a word might be, based on matching initial sounds to his known lexicon. As more sounds occur, the listener can eliminate more and more possibilities until he arrives at the single, most accurate match to the input sounds. This matching may occur before all of the sounds have been heard because of the elimination process. For example, the newly encountered word might be *founder*. The learner first hears the beginning sound of the word, /f/, and this activates memory of several possible words that are already familiar: *find*, *fact*, *fan*, *found*, among many others. As the next sounds of the word are received, the learner begins the elimination process, passing over *find*, *fact*, and *fan*. *Found* becomes a possibility, until the ending sounds, /-er/, of the unfamiliar word comes into play. The learner knows that *found* is the past tense of *find*, but *founder*, at this point, makes no sense. Field (1999) stated that this entire process may take no more than .25 second, or about as long as a typical English syllable, and that the processes of analyzing and processing first phonemes, then syllables, words, phrases and finally, sentences may all occur simultaneously, or in parallel, rather than in a step-by-step process.

If learners encounter input for which they have no prior knowledge, they may have to rely on top-down processing to supplement or to compensate for the lack of experience or knowledge of the language (Wilson, 2003, p. 336). When learners have to rely more on top-down rather than bottom-up processing, more guesswork is involved. It is much more efficient, ultimately, if learners can rely more on processing the input by "hearing what was actually said" (p. 336). Relying on the context surrounding the word

founder will help the learner to realize how that word fits within the current discourse, even if the learner doesn't have a precise meaning for the term.

One way of teaching bottom-up processing for listening comprehension is through dictation exercises. Such exercises are designed to force the learner to focus on the exact phonemes, and then word(s), that are heard. However, this particular method does not give much attention to meaning; it focuses primarily on form.

Top-down and Bottom-up Work Together and Compensate for the Lacks of Each

Vandergrift (2003) discussed the need for well-designed listening activities that actually provide the learning in listening strategies that texts claim but don't always deliver. He proposed that "students ... be taught how to listen without the pressure of 'getting it right' so that they learn to use effective listening strategies that are also applicable outside the classroom" (2003, p. 426). It is widely understood that listeners use top-down processing when they activate their own background knowledge, and they rely on bottom-up to help them decode the sounds and grammatical patterns of English. Citing Rost (2002), Vandergrift wrote that 'listening comprehension is not either top-down or bottom-up processing, but an interactive, interpretive process where listeners use both prior knowledge and linguistic knowledge in understanding messages. ...The degree to which listeners use the one process or the other will depend on their knowledge of the language, familiarity with the topic, or the purpose for listening'' (p. 427).

Recall that in listening comprehension, the text does not stay intact for more than a second or two. For listening comprehension to take place there must be some interaction between the learner's background knowledge (top-down processing) and his

linguistic knowledge (bottom-up processing). Noted author Jack Richards (2001) put forth a model incorporating transactional/interactional and top-down/bottom-up processing modes. Using this, we can classify both the functions of the listening act--whether it's intended for transactions or social interactions--and the process involved--whether it's top-down, bottom-up or a combination.

The Interactive Process model (Park, 2004) shows how it takes both top-down processing coupled with bottom-up processing for comprehension to take place. Bottom-up requires linguistic knowledge and top-down occurs when background knowledge comes into play. If one or the other is missing, there can be compensation, though comprehension best takes place through the interaction of both. Top-down processing is particularly useful for lower-level learners to fill in the gaps in their bottom-up understanding of an oral text, for example when they lack proficiency in vocabulary or syntax of the L2 (Field, 1999).

Visuals help lower-proficiency students to comprehend oral discourse. Text difficulty prompts more linguistic rigor. The more difficult the text, the more use listeners make of contextual cues. There "is evidence that linguistic knowledge exerts a crucial effect on L2 listening comprehension and that when L2 listeners encounter perceptual problems, they resort to background knowledge" (Park, 2004, p. 449). One piece of research (Field 1988) revealed that for lower intermediate learners exposed to authentic oral discourse, common English words that they might have been expected to know were not recognized by more than 75% of the learners. Students shifted from their inadequate bottom up skills to rely, rather, on top-down processing, forming inferences, and relying upon the surrounding context of the unrecognized words. Learners used their top-down

processing skills to form intelligent guesses and frequently were able to determine the meaning of the words.

The approach of second language learners to assessment in listening comprehension adds some insight as to the complementarity of top-down and bottom-up processing. In assessment, question types include both local and global questions. Local questions "require the test taker to focus on factual information including locating details and paraphrasing mainly based on linguistic knowledge" and global ones "require the test taker to focus on inferential information such as synthesizing information and drawing conclusions largely based on background knowledge" (Park, 2004, p. 450). For listening comprehension, "listeners scored higher for local questions than for global questions across topics text types, and proficiency levels. This finding seems to imply that linguistic knowledge is more important than background knowledge in the comprehension of an oral text" (Shohamy & Inbar quoted in Park, 2004, p. 450). However, Park's (2000) findings showed pretty much the opposite: that background knowledge seemed more useful and that learners may use schema knowledge as a compensation strategy when they don't understand the linguistic structures.

Results of the study exposed two significant findings: "Compared with linguistic knowledge, background knowledge contributed to L2 listening comprehension significantly" (Park, 2004, p. 455). Also, "interaction between linguistic and background knowledge was significant in L2 listening comprehension.... The significant interaction between linguistic and background knowledge provides evidence that the effect of linguistic knowledge on listening comprehension depends on the level of background knowledge" (p. 455-5).

Top-down and bottom-up processing act in a reciprocal fashion in a simultaneously complementary way. The more basic the learner, the more likely it is that s/he will rely most heavily upon bottom-up processing. In the early stages of language learning, it takes great concentration to decode the sounds of the language. The learner will need to expend great conscious effort, giving concentrated attention to the incoming stream of language, so much effort, in fact, that the learner may not have capability remaining to focus top-down processing. As the learner practices and rehearses this skill and becomes more proficient with the new language, comprehension of isolated sounds will become more automatic, giving the student more opportunity to activate top-down processing. At higher levels of proficiency, the two processes interact in a compensatory fashion so that what the learner misses from the bottom can be compensated for from the top as schemata become activated, and predictions are put forth and confirmed. Even in one's native language, a person doesn't actually hear every part of a message; both bottom-up and top-down processing work simultaneously to fill in the gaps as the incoming message progresses. The listener's purpose will also help to dictate which process dominates (Vandergrift, 2004). Awareness of the two processes and how the listener uses them can help the student learn how to "use both processes to [his/her] advantage, depending on [the] purpose for listening." (p. 4).

An awareness of each of these processes and their relative contribution to comprehension in different contexts and at different levels of language proficiency is fundamental to a theoretically grounded pedagogy of L2 listening comprehension. Presently, there appears to be a general consensus in the literature that listening

instruction has favored the development of top-down processes at the expense of developing bottom-up processes. (p. 5)

Recent research studies have examined strategies second language learners tend to use. Predictably, learners with a lower level of proficiency tend to rely more on bottom-up processing as compared to greater reliance on top-down processing strategies by learners with higher proficiency levels (Berne, 2004). Less proficient learners display the following tendencies. They

- process input word by word
- rely heavily on translation/key words as strategies
- are negatively affected by linguistic and attentional constraints
- are concerned with definitions/pronunciation of words
- make fewer inferences/elaborations
- do not verify their assumptions
- do not relate what they hear to previous experiences
- Learners with higher proficiency levels, on the other hand, display these tendencies; they
- use strategies more often
- use a wide range of strategies
- use strategies interactively
- are concerned with the overall rhetorical organization of text
- are better able to:
 - attend to larger chunks of input
 - monitor/redirect attention

grasp overall meaning of input

relate what they hear to previous experiences

guess meanings of words

- use existing linguistic knowledge to aid comprehension

Many other research studies point to more strategy use by listeners with higher proficiency level and less use with lower proficiency level. For beginning listeners, working memory can be overloaded, overwhelming them. They may not have the schema or be quick enough to activate it to make use of that metacognitive strategy. However, once listeners have become more proficient in their listening skills, they are more able to plan ahead and call upon strategies that they have found to be useful (Ehrman, Leaver, & Oxford, 2003; Vandergrift, 2003; Vandergrift, 2004). “Less able learners often use strategies in a random, unconnected, and uncontrolled manner” (Abraham & Vann, 1987; Chamot & O’Malley, 1996, as cited in Ehrman, Leaver, & Oxford, 2003, p. 316). “More effective learners show carefully orchestrated, targeted strategies” (p. 316).

Not all research provides clear answers in this area, however. For example, Tsui and Fullilove (1998) found that students’ ability to connect to background information played a great role in whether they were more or less apt to rely on bottom-up processing, regardless of proficiency level. If the students were unable to activate an appropriate schema, it was found that students with higher proficiency performed better, but if students were able to tap into their own background knowledge and match it to the aural text, there was no difference in the way students of any proficiency level approached the listening task. Conclusions from the study suggested “that bottom-up processing is more important than top-down processing in discriminating between the listening performance

of L2 learners on tests” (1998, p. 433). It is believed that once learners become proficient enough in the second language to be able to process input quickly and automatically, they will begin to rely more heavily upon top-down processing (Vandergrift, 2004).

Typical instructional approaches to listening comprehension incorporate both top-down and bottom-up processing. Teaching approaches and techniques are discussed in a later section.

Individual and Cultural Learning Styles

Learning styles also affect learners’ processing of language. Every individual has a preferred learning style--the way s/he approaches a cognitive learning task (Davis et al., 1994). Howard Gardner has proposed at least nine different “intelligences”: Linguistic, Musical, Logical-mathematical, Spatial, Bodily-Kinesthetic, Interpersonal, Intrapersonal, Naturalist, and Emotional (Gardner & Hatch, 1989). Two primary distinctions can be made to classify learners in a general sense: those who are Field-Independent or holistic learners and those who are Field-Dependent or serialist learners. Field-Independent learners like to approach a learning task looking first at the big picture in a general way. They then relate new knowledge to something they already know. Field-Dependent learners prefer to approach a learning task by following step-by-step instruction (Brown & Kysilka, 2002; Flowerdew & Miller, 2005).

Another distinction (Brown & Kysilka, 2002) is between those learners who believe there is one correct way to perform a task (Convergers) and those who approach learning as an open-ended endeavor (Divergers). Concrete learners rely on examples

upon which to base their learning, while Abstract learners are more apt to learn by generalizing and looking at the big picture as an aid to learning. Those learners who reflect upon their learning (Reflective) are at one end of a spectrum while Active learners prefer to experiment and find solutions to problems. Finally, there are Solitary learners and Social learners, classified by their preference for group or individual learning.

Though at first glance it may seem that learners are placed into rigid categories, in reality, learners' personalities, level of interest and motivation, even their state of alertness, wellness, or hunger might influence which learning style they choose to use in any given learning situation. Individual cultures tend toward certain learning styles as well, and the cultural background of a learner can influence the learning strategies that person might choose for various tasks (Oxford, 1996) as well as conflicts that may arise. For example, Table 1 lists some cultural learning and communication styles that can lead to conflict in listening activities. Note that many of these are also classified within the individual learning styles. Conflict can arise, then, from both perspectives: the individual's learning style(s) as well as the learning and communication styles of the culture the individual represents. "Attitudes toward authority, beliefs about how difficult (or easy) it is to learn a language, ideas about the importance of 'the text' and about memorizing it, and concepts about whether personal expression and creativity are allowed—all these are cultural issues that affect the use of language learning strategies" (Oxford, 1996, p. xii).

Table 1

Cultural and Learning Styles Leading to L2 Learner Conflict

Perceptual Styles	Context	Cultural Learning Styles	Cultural Communication Styles	Multiple Intelligences (Gardner & Hatch, 1989)
Field dependent: prefers learning from the surrounding context	High context: relies on surrounding context	Collectivist: prefers working within a group setting	Indirect style: depends on subtleties indicated by context cues	- Linguistic - Musical - Logical-mathematical - Spatial - Bodily-kinesthetic,
Field independent: focuses on isolated facts and tasks	Low context: prefers explicit direction	Individualistic: prefers working individually	Direct style: emphasizes openness, honesty, forthrightness	- Interpersonal - Intrapersonal - Naturalist - Emotional

Note. Information summarized from Brown and Kysilka (2002); Flowerdew and Miller (2005); Gardner and Hatch (1989); Oxford, 1996

In the typical ESL classroom outside of the L1 culture, a class will be composed of students from many cultures. In addition, instructors have their own cultural and individual learning styles, which they themselves may or may not be aware of. Frequently, clashes in learning styles--particular cultural learning styles--will arise without the teacher's conscious recognition of the source of a misunderstanding. Perhaps learners prefer to work alone, but the teacher insists upon their participation in group projects. Instruction may be offered inductively whereas the learner performs best and is most accustomed to being provided a list of rules upon which to base his learning. In a listening situation, a field-dependent person may be totally lost when s/he cannot understand every single word of a lecture, thus being unable to get the gist of the lecture or to take adequate notes. Instructors must carefully consider important decisions about what listening strategies to teach or, indeed, whether to teach them at all (Flowerdew & Miller, 2005). One beneficial classroom activity might be to administer a learning styles inventory to raise students' awareness of their individual and cultural learning preferences. Also of great importance is international students' access to the predominant cultural learning styles or patterns of the host culture. This is particularly important for students who are pursuing academic degrees in an English-speaking institution. Once they move out of the sheltered learning situation, they will be expected to perform on the same level as their English-speaking classmates.

Definition of Learning Strategies

Definitions for "learning strategies" abound, with much disagreement of precisely what learning strategies are or, indeed, if they really exist. In the *Concise Encyclopedia of*

Educational Linguistics (1999), Oxford offers this definition: Learning strategies for second or foreign language learners are “specific actions, behaviors, steps, or techniques that students use to improve their own progress in developing skills in a second or foreign language. These strategies can facilitate the internalization, storage, retrieval, or use of the new language” (p. 518).

Many researchers have attempted more simplified definitions such as the following: “Strategies are the conscious actions that learners take to improve their language learning” (Anderson, 2005, p. 757). One of the main difficulties with these and other definitions is that they seem not to account for the difference between typical learning and strategic learning (Dörnyei, 2005). Dörnyei explained his belief that by adding “goal-oriented, intentionally evoked, and effortful behavior” (p. 164) to definitions such as the above, we can begin to distinguish between the two concepts.

While some strategies can be readily observed, most represent mental processes. L2 learners make choices in what strategies they think best to use in particular situations. Anderson (2005) likened a learner’s repertoire of strategies to that of an orchestra, with various instruments all working together to make beautiful music. Better, or more successful, learners tend to use a larger repertoire of strategies than do learners with lower proficiency levels.

Dörnyei (2005) argued that, in addition, strategies encompass the concept of “appropriateness” for an individual learner or to a particular task. Even so, he acknowledged the difficulty in determining how one might determine whether and when an activity would be considered appropriate. In addition, “learning strategies... can only

be defined relative to a particular agent, because a specific learning technique may be strategic for one and non-strategic for another..." (p. 165).

Yet another researcher has stated that "...strategies do not make learning more efficient; they are the raw material without which L2 learning cannot take place" (Macaro, 2006). Debate continues as to a precise definition, and it is hoped that ongoing research will help to elucidate the many facets of the concept of learning strategies.

Classifying, Measuring, and Assessing Learning Strategies

Categories of Learning Strategies and Strategies Inventories

There is no definitive list of learning strategies although hundreds of strategies used by language learners may exist (Oxford, 1996, p. x); several strategies inventories have been proposed in response to various research projects. Macaro, 2006, pointed out that one of the biggest areas of difficulty in the study of learning strategies centers on a lack of clarity in both definition and classification of learning strategies. Vandergrift, (2003) proposed three types of strategies, metacognitive, cognitive, and socio-affective. Findings from a study of 41 university learners of French as a Second Language showed that students often respond in a positive way when they have the opportunity to listen multiple times to an aural text, and they found it motivational to learn without the threat of testing. The students reported they found prediction to be a useful strategy; it "helped [them] to overcome the natural compulsion to mentally translate, and to focus instead on content words and to recognize that listening is an interpretive process whereby they use what they already know to understand what they hear" (p. 435) (schema activation, a metacognitive strategy). They also felt that collaboration with fellow students had a

positive effect on their learning because through working with other students, they could test assumptions and get validation from a fellow learner. A deficit of this study was that it pointed to the value of awareness-raising, but it did not address students' achievement in their listening tasks.

Another very popular and frequently used strategy inventory was developed by Oxford and proposed six different categories of learning strategies. Oxford used factor analysis to group strategies into the following: Cognitive, metacognitive, memory-related, compensatory, affective, and social strategies. The 1990 version of the Strategies Inventory for Language Learning (SILL) has been used in many major research studies as well as dissertations and is currently undergoing revision (Oxford, personal correspondence, November 14, 2005). Originally, the SILL was developed for the Defense Language Institute in California as a way to measure the language learning strategies those students used (Oxford & Burry-Stock, 1995). The current SILL provides an 80-item version for native speakers of English who are learning a foreign language and a 50-item version for ESL/EFL students. Students respond to a series of statements about possible strategy use by choosing one of the Likert-scale numbers, 1 – 5, with 1 representing “never or almost never true of me” and 5 representing “always or almost always true of me” (p. 4). The SILL has been translated into many different languages. Following are the six strategy groups with their corresponding subscales for the ESL/EFL 1990 version of the SILL:

- (1) Memory strategies, such as grouping, imagery, rhyming, and structured reviewing (nine items).

- (2) Cognitive strategies, such as reasoning, analyzing, summarizing (all reflective of deep processing), as well as general practicing (14 items).
- (3) Compensation strategies (to compensate for limited knowledge), such as guessing meanings from the context in reading and listening and using synonyms and gestures to convey meaning when the precise expression is not known (six items).
- (4) Metacognitive strategies, such as paying attention, consciously searching for practice opportunities, planning for language tasks, self-evaluating one's progress, and monitoring error (nine items).
- (5) Affective (emotional, motivation-related) strategies, such as anxiety reduction, self-encouragement, and self-reward (six items).
- (6) Social strategies, such as asking questions, cooperating with active speakers of the language, and becoming culturally aware (six items). (Oxford & Burry-Stock, 1995, p. 5)

Macaro (2001) classified strategies on a multi-level continuum with, at one end, cognitive strategies and at the other, metacognitive/social/affective. Following the same pattern, he placed along with cognitive, subconscious, direct, automatized, difficult to articulate, non-evaluative, primary, and natural. Along with metacognitive/social/affective, he included conscious, indirect, controlled, easier to articulate, evaluative, support, and taught (p. 24). Those falling at the cognitive side are closely related to the task at hand while those falling more at the metacognitive/social/affective side are more related to the learner's self-preparation to complete the task. Learners may be able to better articulate what happens in these latter

strategy types than they can in the more cognitive ones. We are reminded that this classification falls on a continuum, so many strategies fall somewhere in-between the two extremes in each grouping. Examples (direct, subconscious) might include the following:

Linking words or ideas to visual images as you see them or hear them” (more cognitive)

Memorizing a list of vocabulary items by using some sort of system” (mid-range of continuum)

Asking the teacher for clarification or to repeat something they didn’t quite catch” (more metacognitive/social/affective) (p. 25).

To further explain the ‘learned-taught’ continuum, we could think about the automaticity of L1 strategies. These have been learned and internalized over the course of many language-learning years. Such automatic, or learned, strategies may easily transfer to learning an L2. On the other hand, some learners may need to “deconstruct... what they already do in L1 before they can apply it to L2 learning” (p 26). In his more recent work, Macaro (2006) preferred to classify learning strategies as either cognitive or metacognitive, claiming that metacognitive subsumes the socio-affective domains.

In an attempt to bring many of the categorizations of strategies together, Dörnyei (2006) proposed a typology with four types of strategies:

- 1) Cognitive strategies, involving the manipulation or transformation of the learning materials/input (e.g., repetition, summarizing, using images).
- 2) Metacognitive strategies, involving higher-order strategies aimed at analyzing, monitoring, evaluating, planning, and organizing ones’ own learning process.

- 3) Social strategies, involving interpersonal behaviors aimed at increasing the amount of L2 communication and practice the learner undertakes (e.g., initiating interaction with native speakers, cooperating with peers).
- 4) Affective strategies, involving taking control of the emotional (affective) conditions and experiences that shape one's subjective involvement in learning. (p. 169).

In the current study, the term “strategy” is used; however, in the literature, other, interchangeable though not necessarily semantically equivalent, terms are presented, such as “operation, routine process, procedure, action, tactic, technique, plan, and step” (Macaro, 2006, p. 324). Macaro presented his belief that strategies always include a goal. That goal may have origin with the learner, as in the learner's self-imposed desire to master a certain concept, for example, or it may have a teacher-imposed goal, as in the necessity to pass a test. In his explanation of how learning takes place in relation to strategy use, Macaro chose to identify and investigate strategy clusters, which can include activation of several interrelated or sequential strategies. This concept of strategy clusters was followed in interventions presented in this study.

Methods for Assessing Listening Strategies: Benefits and Drawbacks

Two methods for assessing strategy use provide useful feedback: asking learners what strategies they are using or have just used and observing learners to determine what they are doing at any given time that would provide insight as to strategy use (Macaro, 2001). Even with observation, researchers typically resort to some sort of retrospective self-reporting to accompany or supplement the observation. There are advantages and

disadvantages to each method. Asking learners about strategy use provides them the opportunity to express their own thoughts without the researcher or instructor imposing an expected response. It's also a lot less time-consuming to simply ask learners than to do extensive observation and interpretation. However, learners may have difficulty expressing their mental processes accurately, or they may fall into the trap of responding in the way they believe the researcher expects them to respond. The very fact that they have been asked to comment on or explain their use of strategies may encourage learners to provide an answer just to please the instructor, whether they have answers or not. Despite the drawbacks, these methods are the predominant ones used in recent and current research studies and the best way devised to date (Chamot, 2005). In the following section, several common strategies assessment methods will be examined, and both benefits and drawbacks to each method will be discussed.

Retrospective Reporting

Assessing L2 listening strategies presents even greater challenges than does assessing strategies in reading or writing, where learners have more opportunity to contemplate and articulate their mental processes. To get at their strategy use during a listening activity, learners must either interrupt the flow of aural discourse to articulate what processes they are using at that moment or rely on memory to describe the processes in a retrospective reporting activity. Both methods are problematic in that the former may short-circuit the learner's comprehension of the text, thus confusing the issue of what strategies may have been used or are in the process of being used, and the latter may give the learner time to forget the processes or to even distort what processes have

taken place. It is imperative, then, for the researcher to choose carefully the assessment method to be used in a study of listening strategies. “Since language learning strategies are generally internal or mentalistic processes, certain research approaches may fail to reveal adequately which strategies learners apply” (Cohen & Scott, 1996, p. 90).

Several research approaches, each with its advantages and disadvantages, should be considered in the research design (Chamot, 2004; Cohen & Scott, 1996). Using questionnaires and retrospective interviews offers the researcher many levels of control over both structure of the questions and how much information the question may elicit. Questions must be carefully constructed to ensure that all learners will readily comprehend them. In addition, it is very important to carefully decide whether to use open-ended or Likert-scale-type questions (Macaro, 2001).

One type of interview that has shown promise can be orchestrated by videotaping the learner during a listening task, then, while he watches the videotape, allowing the learner to verbalize what he believes was taking place (Chamot, 2004, 2005; Macaro, 2001). A highly structured questionnaire or interview might require a simple yes/no response or a choice of 1-5 numbers on a Likert-type scale of agreement/disagreement to a statement. This type of response can provide researchers data for quantitative statistical analysis. Oxford’s Strategies Inventory for Language Learners (SILL) is such a questionnaire (Oxford, 1990). Questionnaires and interviews can be much more open-ended, allowing learners to express deeper understanding of their use of strategies or to have freedom to describe ideas that might not have been a part of a more controlled questionnaire. Though a more open-ended model offers perhaps richer, more personalized data, that data can be much more difficult to interpret. Cohen and Scott

cautioned that in using questionnaires or interviews, “much of the data constitutes self-report or the learners’ generalized statements about their learning strategy use” (Cohen & Scott, 1996, p. 93). In response to questionnaires, learners may not be able to reproduce the strategies they have used or they might report using strategies that, in fact, they haven’t used. If the questionnaire is written in the L2, they may not understand the questions or Likert-scaled statements and thus give inaccurate responses (Chamot, 2004). A serious drawback to using questionnaires is that these instruments, though the basis of many dissertations and research studies, have not undergone standardization. In many studies, the SILL has been translated into different languages or modified to fit the specifics of the particular study; the result is that researchers cannot easily compare their findings across studies (Chamot, 2004). Researchers frequently use a combination of questionnaires and interviews, first administering the questionnaire and then selecting a few students with whom to follow up with interviews (Macaro, 2001).

Observation

Though in general, observation provides another valuable method for assessing learners’ use of learning strategies, it has limited value in assessing listening strategies. Behaviors such as facial expression and other body language might offer insights as to what a listener is experiencing; however, it would not, in itself, provide much information about the mental processes taking place during a listening task. Verbal reports, wherein a learner self-reports what mental processes s/he has just used, may be of greater value in analyzing strategies for listening. As many listening activities take place in a language-laboratory setting, students could, in fact, participate in an activity and then use the

language laboratory recording facilities to self-report their strategy use. The closer in time the reporting occurs, the more accurate it is likely to be. As with other types of oral or written reporting, however, the possibility of distortion or exaggeration exists, particularly when the reporting occurs after time has elapsed. Learners may report what they think they do rather than what they actually do, or they may feel it imperative to give the researcher an answer the students think is expected. For learners, listening to L2 and having to report in L2, or listening in L2 and having to report in a language different from that of the listening activity, can both create problems in reporting. All of these drawbacks must be recognized and precautions built into the research.

Think-Aloud Protocol

A think-aloud protocol is a technique used to analyze the actual thinking processes a learner uses during a learning task. The learner is encouraged to pause either during the task or immediately upon task completion to express to the investigator the thoughts or strategies used during completion of the task (Chamot, 2005). The student's attention, thus, is focused on what occurred during processing rather than on the outcome of the task. Using a think-aloud protocol is considered to be a metacognitive strategy which can help them to be cognizant of what occurs during processing and what strategies they can call into play to boost their attention and their approach to listening (Anderson & Vandergrift, 1996).

In one study of listening strategies, participants were asked to execute a hand signal at any point during their listening when they knew they were thinking of the content of the passage and how they were processing it. Immediately after the learners

had completed the listening task, they were given the opportunity to verbalize the strategies they believed they had been using (Bacon, 1992). Benefits of this type of self-reporting include providing insight into how the brain functions during listening activities. For the learner, self-reporting can raise awareness of the benefits of using strategies appropriate for certain types of listening task.

Several drawbacks to this particular type of reporting, particularly when the student tries to report during a listening activity, must be noted. First, a conflict arises in how the student can simultaneously listen and speak. Postponing the reflection does not present a good option; the student may have forgotten what was going on by the time the student has the opportunity to report. A preferred method may be to allow the learner to stop the flow of the aural text long enough for self-report to take place. In addition, some of the processes involved in listening may be automatized and will go unreported. Third, trying to explain the process taking place using the second language may create a problem, particularly in a learner of lower proficiency level. A way to address this drawback is to allow the learner to use the L1 for reporting. Another problem can arise if students happen to feel ill at ease with the procedure or unsure of what they are expected to produce (Macaro, 2001). Finally, the cognitive processing required during a think-aloud protocol is taxing and may inhibit learners' articulation of strategy use.

Certainly, providing training in think-aloud protocols will be helpful for language learners (Macaro, 2001). The instructor could model the procedure or ask another student to do so. Videotaping a learner during a listening task and then asking for clarification or additional comments might also be of benefit. Think-aloud protocol is frequently used in conjunction with strategy inventory investigation (Chamot, 2004).

Listening Journals

Another approach to assessing listening strategies involves students' journaling about their experiences in listening (Chen, 2005; Cohen & Scott, 1996). Such a journal might take the form of a personal diary or a dialog journal, with responses to learner entries by the instructor or another student. Of course, writing about listening strategies would, once again, involve retrospective insight rather than spontaneous strategy use since the listener cannot simultaneously listen for comprehension and write about his or her mental processes (Smidt & Hegelheimer, 2004).

Providing students with the opportunity to keep a written record of thoughts and responses to language tasks (or requiring them to do so) encourages additional self-reflection about the use of listening strategies. Such a record can provide researchers a broad longitudinal view of learners' strategy use as well as development. Providing a set of guiding headings or questions can help learners to focus their thoughts and simultaneously assist researchers to more readily interpret written records (Macaro, 2001). Learners could record their experiences in either L1 or L2, depending upon whether someone other than the student will analyze the journal. Often listening journals are shared with peers as well as classroom instructors and can provide students with insights as to how others approach listening tasks. Language researchers can analyze such journals qualitatively or quantitatively (Chamot, 2004; Oxford, et al., 1996). Affective and social strategies may become more apparent when students have had the opportunity to record their reflections on which strategies have worked for them and which ones have not.

One particular category of learning strategy, social-affective, could be identified rather readily in learner journaling as the student might be apt to write about frustrations or emotional response to the difficulties of improving listening comprehension. The open-ended nature of journaling would make it very difficult for researchers to sort through and quantify data, though this method could provide qualitative data that would not become apparent in other approaches to assessing strategies (Chamot, 2004; Cohen & Scott, 1996).

Computer Technologies

A newer assessment technique incorporates computer technologies (Bailey, 1996; Smidt & Hegelheimer, 2004) to track strategy use. In one study (Smidt & Hegelheimer, 2004), Camtasia® was used to capture students' mouse movements as well as their spoken comments as they were performing a listening task. It was found, however, that the technology, while appealing in its newness or novelty, did not always elucidate strategy use. Though using screen capture holds great promise for researchers, interpreting results is time-intensive. In addition, because "the learner's verbal utterance may compete with the activity's audio output" (p. 540), the result may be totally "unintelligible data" (p. 540).

All of these assessment tools provide instructors a means to evaluate the strategies their students are accustomed to using before strategies instruction is offered. Teachers can certainly devise their own tailor-made starting point questionnaires, or they might consider using Oxford's SILL (Oxford, 1990), which, in its standard form, would provide a "global picture of their students' learning strategies in general" (Chamot, 2004, p. 16).

Though using single assessment tools to discover student strategies use is of value, combining or cycling through two or more of the protocols will be of greater benefit to instructors, researchers, and students alike.

Written Texts and Spoken Texts: Differences and Difficulties

In the current study, the focus was on the ability to process academic lectures, both comprehending overall meaning and producing lecture notes. An academic lecture, while likely to be highly planned and perhaps even prepared as written text, will employ many of the features of spoken text in its delivery, but great differences exist between written text and spoken text (Flowerdew & Miller, 2005). A written text is more carefully structured than a spoken text and, unlike a spoken text, does not allow for much interaction between text and listener. The units of information are much longer; sentence structures are more complex; vocabulary is generally much more sophisticated; words tend to be longer and more complex; the passive voice is used more frequently; and key words and phrases are repeated often (coherence). In comparison, a spoken text lacks many of the more formal features of a written text. Spontaneous speech contains features that planned or read texts do not, for example, hesitations, repetitions, fillers like “um” or “uh,” and more co-ordination than subordination. Use of contractions is much greater, as is stopping/starting and false starting. Sentences tend to be shorter, with a prevalence of sentence fragments or short, simple sentences connected by coordinators (“and,” “but,” etc.), and imperatives and questions are used frequently as are “I” and “you” rather than third person pronouns. Using authentic listening materials for teaching listening skills is far superior to using contrived ones, allowing the listener to feel an interactive tie to an

authentic spoken text. Naturally, formality ranges dictate the extent of formality and linguistic features used in both written and spoken texts, with written texts much more likely to be planned than spoken ones (Field, 2002; Flowerdew & Miller, 2005). Using unsimplified, spontaneous authentic spoken texts with second language learners and adjusting the level of their learning tasks is preferable to simplifying the language of planned texts.

Readers can take much more time to process a written text; listeners, on the other hand, can neither control the speed of the text, nor backtrack to examine an unknown vocabulary item. Speakers often try to account for such difficulties in the way they deliver an oral text. For example, while content words are very closely spaced in written text, this is not the case in spoken text. Important content words and phrases are often repeated and are less densely spaced. Instead of the punctuation used in written texts, spoken texts rely on pausing to mark boundaries between units of information. Stress and intonation are liberally used to show importance and relationships of ideas. "Spoken language has the potential for much more emotional nuance, contextual sensitivity, personal weighting, interactive hooks, and reference to the real world outside the text" (Flowerdew & Miller, 2005, p. 51-2).

Academic listening can be very difficult for second-language students. "To be a successful academic listener, a student needs relevant background knowledge, the ability to distinguish between important and unimportant information and appropriate skills like note-taking, etc." (Huang, 2004, p. 212). Listeners need both micro and macro skills to be successful. Micro skills are, for example, ability to determine the focus or purpose of a lecture, ability to follow the logic of the lecture and to be able to pick out relevant

discourse markers. Filler expressions and hesitations are also considered micro markers. Macro markers include the way the speaker signals that a new topic is imminent. Macro markers are "the higher order discourse markers signaling major transitions and emphasis in the lectures [and] are more conducive to successful recall of the lecture than micro markers" (p. 214-5). Often, non-native speakers get lost in trying to decode at sentence level and miss the overall meaning of the discourse. Brown (1994) lists three "linguistic sources" (p. 215) that make listening difficult: use of colloquial language, reduced forms and prosodic features, including stress, rhythm and intonation, and an overuse of these types of markers, which can be distracting to listeners. Instructors can help students to recognize and use these macro markers appropriately.

In listening, non-native speakers of English experience such problems as outside noise, inability to decode every single spoken word, fatigue from having to focus carefully and for an extended period during a lecture, and handling a variety of accents (Ur, 1998). For many non-native learners, English grammar is radically different from their native grammar, so they face many challenges in decoding.

In a study of Chinese students at an American university, it was found that several aspects of the professors' speech decreased the students' ability to comprehend academic English: rapidity of speech, "lack of clear pronunciation, ... use of long and complex sentences, ... use of colloquial language and slang, and lack of clear definition of terms and concepts" (Huang, 2004, p. 217-18). Most learners indicated a positive reaction to professors' use of discourse markers.

Study participants offered suggestions to American professors including: "they might slow down their speech, pronounce more distinctly, explain or define unfamiliar

words, carefully plan and explain examples to be used. Most suggestions for American professors required them to be aware of the non-native English students in their classes and try to help them learn more effectively" (p. 222).

About 53.8% of the students in the study indicated they had difficulty understanding academic lectures because of the rapid speech. 44.9% said they have difficulty because of professors' pronunciation. 43.6% indicated difficulty because sentences were long and complex. Over 50% indicated difficulty due to use of slang or colloquialisms. Lack of adequate definitions caused problems for 47.5%. However, 60% said the use of discourse markers helped them understand a lecture.

Will instruction in the use of strategies help listeners approach their academic tasks with more confidence and greater ability to comprehend the aural discourse? Current research efforts seek to answer this question.

Teaching Listening Strategies: To Teach or Not To Teach

Until recently, most research focused on discovering and categorizing the types of learning strategies used in language learning or the differences between strategy use in successful language learners as compared to those of less successful learners (Chamot, 2005). The focus has shifted to research into ways to teach effective strategy use. Information that has been gathered from descriptive studies is now being used to “measure relationships between strategy use and language proficiency, metacognition, motivation, and self-efficacy” (Chamot, 2005, p. 115). Guidelines offered for structuring an intervention study included randomizing the assignment of participants to treatment and control groups, standardizing the instruction--other than the intervention training--

within groups, pre- and post-testing participants on instruments that have been tested for both validity and reliability to “identify not only knowledge about and use of the innovation (e.g. learning strategies), but also measure other factors deemed important in learning, such as achievement/proficiency, motivation, attitude and/or self-efficacy” (Chamot, 2005, p. 116). Because many of this type of study take place in a regular classroom setting, it is very difficult or impossible to meet all the guidelines for researching strategies intervention.

Researchers disagree on whether or not learning and listening strategies should be actively taught to L2 learners. Several researchers believe that the research is, in fact, inconclusive as to whether instruction in strategies really produces any positive effect for learners (Chamot, 1995; Rubin, 1994) though it should be noted that this type of research is very difficult to conduct and results may not be clear. For example, in a study of student success in developing and using learning strategies (Thompson & Rubin, 1996), it was found that L2 students did show some improvement in their use of strategies in comprehension of videotaped materials. However, the study did not show a positive correlation between strategy instruction and learner performance. In addition, no distinction was made between those strategies intended to assist in extracting meaning and those intended for learning a new language. A study of how raising awareness of the strategies L2 speakers can use showed that those learners who were given instruction in strategies for oral communication realized greater improvement in their speaking abilities than did the control group, which did not receive strategies instruction (Nakatani, 2005). Other studies have also shown that intervention, the teaching of strategies, has been

beneficial for L2 learners (McGruddy, 1998; O'Malley & Chamot, 1990; Ross & Rost, 1991; Thompson & Rubin, 1996).

Even among those researchers who believe strategies should be taught, there is disagreement about in what context that should occur. Is it better to teach strategies as part of the ESL or foreign language curriculum, or might it be better to provide a course of strategy instruction in isolation? There is concern about whether or not students will transfer what they've learned into real-world learning, for example, using a newly learned and practiced strategy in an academic content course. It is certainly one thing to learn how to attend to an academic lecture that is recorded at slow speed, with many organizational cues built in, as is likely in an ESL listening course with audio tapes. The student may be provided with ample opportunity to listen over and over to the audio-taped lecture and practice listening and note-taking strategies. However, will that same student be able to attend an authentic academic lecture in one of his content courses and successfully comprehend the lecture as well as take usable lecture notes? Chamot (2004) proposed that "teachers should opt for explicit instruction and should probably integrate the instruction into their regular course work, rather than providing a separate learning strategies course" (p. 19). Further, she advised teachers in all content courses to learn about and actively teach students the strategies they would need to succeed in those courses. Does strategy training and instruction transfer to other types of tasks? Despite results from early studies showing that strategies did not seem to transfer to new learning situations, more recent studies have shown that when metacognitive strategies are prioritized, transfer does occur. With this more positive outcome in mind, the author

urged teachers to model metacognitive strategies with their students in an effort to both show the value in real situations and to help raise student consciousness.

Rubin (1996) focused on three approaches in teaching strategy use: raising teacher awareness so that instructors can be more effective in teaching strategies, providing learners text-based instructional materials, and using media-based instruction. Rubin's 1989 Language Learning Strategies Program relied on computer and videodisk input to help learners identify successful learning strategies.

An important component of strategy instruction is the increase in students' awareness of the background knowledge they bring to the task. Many learners fail to realize that they already know a great deal about grammar, vocabulary, and communication. They often do not know how to transfer that knowledge to learning another language. Students may not realize they can use what they know about the world and about human interaction to direct their critical thinking and problem solving. Learners need to be reminded how they filter information through that which they already know, as well as how this filter can help or hinder as they learn a new communicative system. (Rubin, 1996, p. 152)

A number of studies have shown increases in various categories of learning strategy use as a result of instruction (Bailey, 1996; Chamot et. al., 1996; Chamot & O'Malley, 1996; Flaitz, & Feyten, 1996; Goh, 1998; Goh, 2002a; McGruddy, 1998; Rubin, 1996; Yang, 1996).

In the debate of whether or not to teach learning strategies, researchers recognize the importance of learner dispositions and temperaments. If a learner takes risks in other

areas, particularly in speaking, that learner is more likely to take risks in listening as well (Field, 1988). Two types of second language listeners exist: those who are willing to take risks and those who are not (Field, 2002). The former are willing to build upon their recognition of a few words in spoken text; they form hypotheses about the meaning but then fail to review those hypotheses, which can lead to mistakes or even distortion of the message. The latter are less willing to make any hypotheses until they have gathered concrete evidence. Their lack of confidence may lead them to feel they are unable to decode the text. An important goal (Field, 2002; Smidt & Hegelheimer, 2004) is to provide authentic texts along with enough encouragement that learners can feel comfortable in listening without understanding much of the text. In addition, it is important to set the task to match learners' levels.

A strategy that has proven helpful is to provide for students advance organizers and teach them to seek out and use such organizers. Students who learned to use advance organizers were less dependent on bottom-up processing, freeing their "attentional capacity for focusing on desired details" (Vandergrift, 2004, p. 6). Students should be encouraged to move away from translating word-for-word and to rely on grasping overall meaning, a more top-down approach.

Even when students have been instructed in listening strategies, obstacles can arise. A definition for the term "listening strategy" (Chen, 2005) states: "L2/FL learning and strategy learning are considered to be the learning of complex cognitive skills." Results of a study of EFL learners who received intense listening strategies training and were asked to keep listening and working journals showed seven different categories of obstacles to success in listening comprehension. Included as main categories were

obstacles or barriers in affect, such as anxiety and frustration and attitude; habits that were hard to break, such as resorting to former ways for processing listening tasks; individual learning difficulties, for example, an inability to recognize known words when they are linked in rapid speech; use of strategies, for example, forgetting to use a learned strategy or regarding a strategy use as more of a burden than a help; and materials students used in learning exercises, in levels of difficulty or quality of spoken language. Additionally, each of the main barriers listed several sub-topics.

To illustrate, even though a second language listener might actually know a vocabulary item or phrase, s/he might not recognize that item when it is presented in a stream of speech. In fast, conversational speech, at word or syllable boundaries, native speakers of a language tend to link--or run together--ending phonemes with succeeding beginning phonemes. For example, in the utterance: "He wishes he'd finished earlier," the words *wishes* and *he'd* may sound more like *wishezeed*, and the words *finished* and *earlier* might sound like *finish terlier*. A high-beginner in a speaking and listening course, listening to a poem that referenced an "ice bear" recorded in her notes "iced beer"! This rather amusing example illustrates the difficulty inherent in comprehending aural text when the vocabulary and the sound system of English are still in development stages for the L2 student (ESL Program, Duquesne University, November 15, personal communication). As an alternative to the teaching of strategies like predicting or listening for key terms, giving listeners opportunities to listen over and over, each time adding to what they *have* been able to identify and then giving them access to a written script so that they can compare their hypotheses to the actual, may help L2 listeners to feel more comfortable with their listening tasks. The goal is to show students how much they are

able to understand rather than allowing them to focus on their failure to understand. This process is very like the actual process of listening and comprehending aural discourse.

Some researchers believe that teaching sub-skills rather than listening strategies provides better outcomes for L2 learners. Teaching sub-skills (Field, 1998) as opposed to listening strategies can be helpful for learners. The concept of sub-skills has been in the literature since the early 1980s (Richards, 1983), but it appears that curriculum writers and teachers have not been actively using sub-skills as a basis for teaching listening comprehension. Sub-skills fall into three target areas. The first is the type of listening required for a certain task. For example, students are called upon to listen for overall meaning--or gist--or for specific pieces of information. The second involves listening for various discourse markers, for example, transitional phrases like "Let's move on now to...." The third is the sub-skill of techniques the listener might use to decipher discourse, such as predicting what information might follow or using intonation patterns to assist in comprehension.

Seven types of exercises which are very easy to design have been proposed (Field, 1998). Many involve some aspect of listening dictation. These are exemplified in Fields' list:

1. Discrimination: distinguishing minimally different words
2. Segmentation: identifying words in continuous speech
3. Extrapolation: working out the spelling of unrecognized words
4. Anticipation: working out what comes next
5. Reference relating pronouns, etc., to the items they refer to

6. Monitoring for information

7. Relevance: identifying important points made (p. 114)

Again, use of authentic materials is urged, as there are significant differences between scripted texts and authentic texts (Field, 2002; Smidt & Hegelheimer, 2004). In authentic texts, students will encounter natural rhythms of conversational spoken discourse, the use of fillers, mis-starts and reparations. If students have no opportunity to listen to authentic discourse, these features will cause great difficulties for comprehension. L2 learners can be provided activities that involve listening to short passages containing particular features of authentic spoken discourse which they then have to transcribe.

In one study, it was shown that even when the text is authentic, as in a videotaped lecture, for example, it can be very helpful to provide captioning for students in addition to allowing them to control their own rate of listening. Students who were permitted to view a videotaped, captioned lecture as many times as they needed showed greater retention of vocabulary as well as overall message (Vandergrift, 2004).

Teaching listening comprehension by helping students to make informed guesses and encouraging them to take the process of making mistakes as a normal one is, therefore, proposed. “Subskills are seen as competencies which native listeners possess and which non-natives need to acquire in relation to the language they are learning. They involve mastering the auditory phonetics, the work-identification techniques, the patterns of reference, and the distribution of information which occur in the target language. Strategies, by contrast, are strictly compensatory; as the listener’s listening ability

improves, they are required less and less. Because such compensatory strategies are already available in L1, the goal is to ensure that they are transferred into L2 and applied in a controlled way” (Field, 1988, p. 117). Field did not entirely discount the teaching of strategies; he recognized that using predicting strategies, identification of key words and intonation patterns as signals, and using context clues to determine word meanings are all typical and helpful strategies for learners.

Proponents of active teaching of both learning and listening strategies (Arnold, 2000; Field, 1998; Flowerdew & Miller, 2005; Goh, 1998; Harley & Birgit, 2000; Morley, 2001; Park, 2000; Thompson and Rubin, 1996; Vandergrift, 1999, 2002) base their beliefs on various pieces of research. L2 learners, research shows, do benefit from being actively taught do use various strategies as they approach listening tasks. Proponents believe instructors must be well-trained in as well as committed to instructing use of strategies.

These five factors have been found to affect L2 listening comprehension: characteristics of the aural text, listener-speaker interactions, the task required of listeners, the listener, and the process of listening (Rubin, 1994). Mendelsohn (1995) offered the premise that it is a listening instructor’s responsibility to teach students to use strategies rather than simply provide opportunities for students to listen to oral passages.

Many studies make fine distinctions between various types of strategies. Communication strategies and learning strategies differ in their processes and their intent. Communication strategies are those that lead to some comprehension and successful contribution to the discourse. Learning strategies, on the other hand, are those that lead to some type of learning. For example, teaching a student to ask for clarification when

comprehension breaks down is considered a learning strategy. This type of strategy is known as a repair strategy, a way to repair the break in comprehension (Field, 2002).

Goh (1998) distinguished between cognitive awareness and metacognitive awareness. Cognitive strategies are used when students manipulate or transform their learning materials in some way. Cognitive tasks often involve using background knowledge to fit new material into an already existing schema. Metacognitive strategies include those that help students to plan how they will approach the listening task, self-monitor comprehension and then perform some sort of evaluative task. "Metacognitive strategies, therefore, involve thinking about the way information is processed and stored, and taking appropriate steps to manage and regulate these cognitive processes" (p. 126).

In a study in which one group of L2 students received instruction in learning strategies while the other group did not, it was shown that teaching strategies (Anderson, 2002; Goh, 1998) was helpful to L2 learners. The researcher distinguished between strategies and tactics, with strategies being seen as more general and tactics the specific steps taken "to assist or enhance comprehension" (Goh, 1998, p. 125).

It was found (Mendelsohn, 1995) that learners in a higher proficiency group used many more strategies as well as many more tactics than did students of lower proficiency. Since there was no explicit training in the use of either tactics or strategies, it is believed (Macaro, 2006) that transfer of strategies from L1 occurs in such a way that learners use the very same strategies they've used in their L1. However, this doesn't explain the discrepancy between the high and low proficiency groups. It has been proposed that many learners are unable to accomplish the transfer from L1 to L2, and this might account for their inability to use tactics and strategies as they listen in L2. Raising

metacognitive awareness may be a good way to assist learners in being able to transfer their strategies and tactics.

Students at beginning stages of learning an L2 are likely to be somewhat anxious about their ability to comprehend and speak English. Self-esteem can be greatly undermined when they make mistakes, making them even more reluctant to take chances in speaking in class or in public. Due to the fact that listening is a receptive skill, beginners, in particular, need substantial processing time to build their listening competence before they are expected to verbalize in the L2. While more advanced learners may process the incoming message and be able to quickly produce a response, for beginners, so much time is required to process the incoming message that they may find it impossible to produce a coherent response.

Two strategies are offered to help offset anxiety associated with L2 exam situations involving listening and speaking. The first is for the instructor to have a very supportive attitude, allowing students adequate processing time before speaking is required. The other is to help students to recognize and learn to cope with the anxiety-producing situation. It was found (Arnold, 2000) that students who learned techniques to relax just before a listening examination performed better on exams than those who did not practice relaxation techniques.

In another research study (Vandergrift 2002), elementary-aged L2/FL learners were taught specific strategies, such as listening for key terms and focusing on the task at hand, and then asked to reflect on their performance on listening tasks. In discussion and on a questionnaire, they were asked questions about what had helped them to understand, and whether they had used certain strategies during the tasks. Students were encouraged

to comment both on specific tasks and on the instruments used for each task. Results showed that even young students are aware of many of the strategies they use in L2 or FL listening. Vandergrift sorted student responses into three main types: metacognitive strategies involving planning, monitoring, and evaluation as well as knowledge of the required task and knowledge of self. It appeared that these young students' awareness had been raised enough for them to take responsibility for their own planning, monitoring and evaluation during listening activities and to be satisfied with their progress. Key to the metacognitive development is students' ability to take their knowledge of strategies and then transfer and use the strategies in other listening tasks.

The Current Study

Allowing learners to use their own learning strategies, based on their own language learning preferences, is really the best, most student-centered way to present materials and activities. Providing activities that not only are based on schema activation, but that also offer variety and real-world application, thus making it possible for learners to actively interact with the listening task, are some ways to assist learners with listening strategies (Flowerdew & Miller, 2005; McGruddy, 1998). It is through the interaction that the task will have real meaning for the learner. If instruction can guide learners to discover their own listening and learning strategies, they will be more greatly empowered to take responsibility for their own learning. A good activity for learners might be to discover and discuss what their personal listening strategies are. What works for them? How does the particular strategy help them? When they actively express their

metacognitive knowledge or strategies, they become more aware of the process they utilize to make sense of new input.

In addition, instruction needs to present strategies in both top-down and bottom-up processing (Park, 2000). Students need instruction so they can build both kinds of knowledge.

Today, in the teaching of listening comprehension, it is much more common to see various approaches, rather than just one, presented. Among the variety of listening exercises offered may be some to activate schema, some to encourage listening for discrete words and phrases, some for overall meaning--or gist--of a passage, and some that encourage higher level critical listening skills. These latter might require the learner to reflect upon meaning and then participate in a controversial discussion based upon the listening passage.

The following implications from various studies apply to curriculum design and teaching: language learners need help to recognize the strategies they use in their first language so that they may be better able to transfer their knowledge to listening in the second language. Also helpful would be instruction in specific tactics and increased awareness of the strategies and tactics they are already using. By encouraging students to verbalize or write down strategies and tactics and share these with others, the instructor can help to raise awareness for all students.

Research, then, points to the benefits of intervention, or explicit instruction of listening strategies, to facilitate students' learning to become more effective listeners. In many cases, classroom teachers may need to, themselves, become better versed in which

strategies can be of help to their students as well as how to go about modeling the strategies during instructional time.

The current study addressed benefits to L2 learners of exposure to and teaching of listening strategies. For ESL university students to be successful in their academic studies, the ability to use strategies effectively in their academic listening is crucial (Carrier, 2003). These students need explicit instruction as well as modeling of strategies so they can actively and selectively choose the strategies most applicable for a given listening situation. They should also learn to continually evaluate strategy effectiveness in their everyday learning tasks. Moreover, if learners are to successfully interact with transactional discourse and be able to “negotiate meaningfully with input in authentic contexts” (McGruddy, 1998), researchers and instructors need to know how to proceed in actively and explicitly teaching listening strategies in the L2 classroom so as “to prepare their students for high academic achievement” (Carrier, 2003).

Summary

The review of literature relevant to this study began by showing, through a brief historical overview of the methods for teaching FL/ESL listening comprehension, that listening has not received the same research attention as have the skill areas of grammar, reading, writing, and speaking. Only in the past thirty to forty years have listening skills been addressed by text writers and publishers. Much of the listening strategies research that has been undertaken has focused on description and categorization of strategies. More recently, the pressing need for more research into actively and explicitly instructing learners to use listening strategies has directed research into this area. Many prominent

researchers (Carrier, 2003; Chamot, 2004, 2005; Chamot, et. al., 1996; Goh, 2002b; Oxford et. al, 1996; Thompson & Rubin, 1996; Vandergrift, 2003) have made significant contributions in the area of intervention training; however, it is clear that further research is of crucial importance if instructors are to assist L2 students in improving their listening comprehension skills.

CHAPTER III

METHODOLOGY

Introduction

This chapter identifies the research questions the study addressed and describes the setting for the study, study participants, research instruments that were used in the study, procedures that were instituted to carry out the study, and the statistical analyses that were used to evaluate results. The goal of this experimental study was to investigate benefits of intervention training in the area of L2 listening strategies. As described in Chapters I and II, this was an intervention training study, with the goal of demonstrating benefits of academic listening strategies instruction for L2 university degree or pre-degree students at intermediate to advanced proficiency levels.

Research Questions

The following research questions formed the basis of the study:

Research Question One: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when university attended is controlled statistically?

Research Question Two: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when level of instruction is controlled statistically?

Research Question Three: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when native language is controlled statistically?

Research Question Four: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when listening proficiency level is controlled statistically?

Settings

The study took place at Duquesne University and the University of Pittsburgh, both located in Pittsburgh, Pennsylvania. The ESL Program (ESLP) at Duquesne University is situated within the McAnulty College of Liberal Arts and Graduate Study. The English Language Institute (ELI) at the University of Pittsburgh is attached to the Department of Linguistics within the School of Arts and Sciences. While Duquesne's ESL Program is staffed entirely with trained and TESOL (Teachers of English to Speakers of Other Languages) certified instructors and administrators, the University of Pittsburgh's ELI is staffed with both trained and TESOL certified instructors and administrators and graduate-level teaching assistants under close supervision. Proficiency levels are designated similarly in both programs, with non-credit intensive English as Second Language classes offered at basic through advanced levels, with a total of four levels at the University of Pittsburgh and three levels at Duquesne University. Both programs offer selected credit-bearing ESL courses as well. During any given term, the ELI, which offers support to a total university student body of more than 26,000, might serve international students representing 20 – 25 different countries. Average enrollment

in the ELI is 100 + per term. Duquesne's ESL Program offers support to a total university student body of approximately 10,000 and also serves international students representing many different countries. Average enrollment in the ESL Program ranges from 50 – 125 per term.

At Duquesne, Note-taking/Discussion classes meet each term for one hour and forty minutes on Tuesdays and Thursdays. In these skill-based classes, there is a distinct focus on increasing listening comprehension and developing note-taking skills. The University of Pittsburgh's ELI Listening classes meet for 50-minute sessions on Mondays, Tuesdays, Thursdays, and Fridays with similar foci. At both universities, specific text series are used in instruction of the listening courses.

At Duquesne, Open Lab hours are provided in one of the computer labs for the express use of ESL Program students. Thus, ample time for supplementary practice in listening is provided to students. In addition, through a system of either instructor- or self-referral, the ESL Program provides trained tutors to support students in their language study. The University of Pittsburgh also provides computer and language lab support to ELI students.

In conjunction with IRB clearance from Duquesne University, permission was secured from the Director of the ESL Program for administration of the research tasks. Upon submission of IRB clearance from the University of Pittsburgh along with a formal permission form requesting access to ELI students for research purposes, administrators of the English Language Institute also granted the researcher permission to conduct the study.

Participants

Participants for this study were international students who were enrolled in the ESLP at Duquesne University and the ELI at the University of Pittsburgh during the fall term of 2006. All international students whose native language is not English are screened by the two programs to determine English language proficiency. Those students needing further development of their English language skills are enrolled in the respective ESL programs, are tested for proficiency, and are subsequently placed in one of the programs' several levels. Students range from those whose English is at basic level to those who are at advanced level. Proficiency levels are determined through standardized language proficiency tests. Unless students provide a current and valid score on the Test of English as a Foreign Language (TOEFL), they will complete a test of listening comprehension administered by the respective program. Many of the intermediate to advanced ESL Program students at Duquesne University are enrolled as degree students and are taking a limited number of academic classes. Administrators and full-time faculty within the program act as advisors for the students in the program. The same is true of University of Pittsburgh's ELI students.

The target number of participants for this study was a minimum of 60. The research was conducted within a single term by including participants from ESL programs at both universities.

Students taking part in the study were of two types, those who were newly registered into the ESL classes and those who had been promoted from lower levels (or who may have been repeating a level they failed in a previous term). Class size depended

upon enrollment for the term, and was not a factor for the study. Class sizes ranges from a low of 10 to a high of 17.

The study was limited to low-intermediate- to advanced-level classes because students with basic-level proficiency may have difficulty expressing strategy use and may, in fact, have insufficient proficiency to process the listening tasks presented during the study. The study required access to the students for a total of 6-7 class sessions, and the time devoted to research tasks remained equal regardless of the discrepancy in meeting times for Tuesday/Thursday or Monday/Tuesday/Thursday/Friday schedules.

Instruments

Three research instruments were used in the study. The first was the listening comprehension portion of the Michigan Listening Comprehension Test (Upshur et. al., 1972), which was administered at the beginning of the study to determine listening comprehension proficiency levels of participants. This is one part of the complete Michigan Test, which is used to determine proficiency level for those students who enter the ESL Program with no TOEFL (ETS, 2006) score. For the purposes of this study, the listening portion of the test determined appropriate listening proficiency levels of the participants. Since students were placed in course levels based upon results from an entire battery of tests, some students may, in fact, have possessed a listening proficiency level somewhat higher or lower than one might expect from their overall course placement. The listening test was administered in the classroom with a tape player and speakers. During the test administration, participants heard a statement and then chose an appropriate response from four choices per statement. The test had 45 items, and was hand-scored by

the researcher. The instrument allows for the conversion of raw scores to standardized test scores. Converted scores are then used to place students into the appropriate proficiency level for classroom work, as was the case for this study.

The second instrument was a slightly modified version of Rebecca Oxford's 1990 version of the Strategies Inventory for Language Learning (SILL) Modifications included a change in language in selected inventory statements to focus on listening tasks rather than more general learning strategies. The ESL/EFL version of the inventory is a 50 item self-scored inventory that has undergone multiple validity tests (Oxford & Burry-Stock, 1995).

It is estimated that [as of 1995] 40-50 major studies, including a dozen dissertations and theses, have been done using the SILL. These studies have involved an estimated 8000-8500 language learners. According to research reports and articles published in the English language within the last 10-15 years, the SILL appears to be the only language learning strategy instrument that has been extensively checked for reliability and validated in multiple ways. (p. 4)

The SILL is a self-report instrument on which participants respond to strategies-related statements by indicating on a five-point Likert scale their disagreement/agreement with a statement. For this study, self-report was chosen since listeners could not simultaneously listen and orally report their strategy use. In addition, it would have been impossible for the researcher to observe student strategy use during the listening tasks.

Students were provided instructions with a sample item for illustration purposes, the inventory (50 item ESL/EFL version), a worksheet designed to walk students through the self-scoring process, and a summary profile that could help students to interpret their

results along with a graph that could be used by students to plot their own results (Oxford, 1990). This instrument was designed to raise students' awareness of their individual strategy use and learning progress as well as to provide researchers a means to assess students' strategy use. For an online version of the inventory, please see http://ell.phil.tu-chemnitz.de/cing/frontend/questionnaires/oxford_quest.php

The third instrument consisted of a set of researcher-designed survey questionnaires, consisting of three statements to which participants responded at the close of each intervention and a researcher-designed survey questionnaire entitled "Listening Strategies Survey" consisting of ten statements to which participants responded using a Likert scale. The four individual post-intervention surveys can be found in Appendix A. Participants completed the 10-item survey at the close of the study, following the interventions, the post-proficiency test, and the post-intervention SILL. The purpose of this survey was to allow participants the opportunity to express their opinions as to the effectiveness of each of the interventions in addition to their overall perceptions of their learning and use of listening strategies (See Appendix B).

Procedure

Prior to the initiation of the study, the researcher met with classroom teachers to orient them to the delivery of the interventions. During the first week of the term designated for the study, the researcher attended all sections of the targeted classes and was introduced to student participants and to instructors. Students were informed, during this contact, that the purpose of the study was not to test participants but rather to measure their self-perceived use of strategies. This early contact was designed to

demonstrate that the researcher was an experienced ESL instructor and that the study would be of value to the participants as well as to the entire field of ESL instruction and learning.

It was assumed that by the second week of the term, students would be accustomed to the procedures of listening to short academic passages and answering comprehension questions. Participants would also be comfortable with various types of electronic media in their listening practice, such as various audio-taped and video-taped lectures and interviews and Internet-based exercises. Since it was impossible to determine, other than by having students fill in the SILL, which strategies they had been taught or had learned or transferred from L1 on their own, no attempt to control for pre-experiment strategies instruction was made.

The researcher explained to student participants that all responses would remain anonymous (with the exception of students' first language backgrounds although no specific students of a particular language background would be identified). No names would ever be made public. Participants completed a questionnaire with demographic data. Next, the Listening Comprehension Test (Upshur et al., 1972) was administered. The test took approximately 20 minutes and was delivered via tape deck and speakers in respective classrooms. Students were subsequently classified into two proficiency levels, intermediate and advanced, based upon their scores from this test, with those scoring under 60/100 designated intermediate level and those scoring 60 or above designated advanced. For those participants placed in a class level other than that shown from results of the proficiency test, no class level adjustment was made; the proficiency levels

designated for this study did not supersede those determined for student placement into their listening classes.

In the third class session, prior to completing any of the listening tasks, students completed the SILL. Participant responses were based on what they perceive to be true of their own listening strategies. All participants were provided with a pre-listening vocabulary exercise to be completed prior to the first intervention and each subsequent intervention class session.

During the fourth and fifth class periods, participants were presented the first of the listening strategies interventions. This was delivered via an introductory PowerPoint presentation explaining and illustrating a particular listening procedure with its underlying strategies and then a web-based screen capture video in which the strategies were presented in a “show and tell” manner, which were designed to reinforce the teaching as well as show the participants how they might use the strategy in their academic listening. During this session, students first participated in a brief schema-building exercise, such as a discussion about the topic and discussion of any particularly difficult new vocabulary. In the second part, participants were given opportunity to practice the strategy in class by completing a listening task similar to the one in the instruction. In addition to these activities, participants were given opportunity to engage in discussion about how the strategy worked and how it could benefit them. Oxford (1990) provided the following rationale for strategies training: “Strategy training is most effective when students learn why and when specific strategies are important, how to use these strategies, and how to transfer them to new situations” (p. 12).

Two weeks later—and continuing every two weeks throughout the term for a total of four interventional teaching sessions, participants were introduced to a new listening process with several underlying strategies, delivered in the same manner as the first. Participants took part in schema building as before and then listened to an academic passage. This task will also was at a comparable level, from the same text series. Participants answered comprehension questions and were encouraged to engage in discussion about the strategies they felt they used as they were listening for comprehension of the text.

During the week following the final intervention, participants once again completed the SILL and then were given the opportunity to complete the accompanying graph so that they could observe any changes. Upon final completion of the SILL, students completed a survey created by the researcher to investigate their reaction and response to the media-based presentation of the intervention. Finally, a second administration of the Michigan Listening Comprehension Test (Upshur et al., 1972) took place to complete the study. Students were provided scores from both pre- and post-study Michigan tests.

Statistical Analysis

Descriptive Statistics

Descriptive statistics were gathered from the study and analyzed with Statistical Package for Social Sciences (SPSS) Graduate Pack, Version 12.0 for Windows (2003). Of interest were various pieces of demographic data, the distribution of participants' first language in addition to their previous English language study.

Inferential Statistics

To determine whether there was a treatment effect associated with the study interventions, differences between treatment groups were determined with Analysis of Variance (ANOVA) and Analysis of Covariance (ANCOVA) procedures. Because in educational settings it is often ethically, as well as practically, impossible to randomize class membership, the ANCOVA procedure is typically used to equate groups after statistically controlling for a variable or series of variables. Specific covariates used in the present study are described below. Two approaches were followed, first very conservative analyses of variance and covariance with a confidence level set at .05 and, second, a more liberal analysis of variance with the confidence level set at .007. The more conservative of the analyses looked specifically at total scores on the Strategies Inventory of Language Learning (Oxford, 1990), and the latter, more liberal investigate the differences in scores from Pre- to Post-SILL. In the first analyses, the dependent variable was the scores that participants self-reported on the SILL in pre-intervention/post-intervention surveys. In the second analyses, mean score differences served as the dependent variable.

Four covariates were included in the study. Since the study took place using participants from two university ESL Programs, the first covariate was the university participants attended. Listening courses taught at Duquesne University meet twice a week for 100 minutes per class, while those at the University of Pittsburgh meet four times a week for 50 minutes per class. Though the overall time spent in class is identical, the researcher wanted to determine whether longer duration over the course of fewer days

could have some unexpected results. In addition, of interest was whether teaching materials may have had some impact. Teaching materials differ between the two participating schools, with one three-level text series used at the University of Pittsburgh and a different three-level series used at Duquesne University. In fact, at Duquesne, the text used in the intermediate level was not part of the typical series used in that ESL Program.

The second covariate included in the study was the level of text and teaching since at one of the schools, there were three classes designated as low-intermediate through advanced, while at the other, there were two. In other words, at Duquesne, students were drawn from low-intermediate, intermediate, and advanced levels while at the University of Pittsburgh, participants were drawn from two levels, intermediate (designated as level 4) and advanced (designated as level 5).

Participants' native language was the third covariate for the study. Only after the enrollment period was it known which language groups were represented in study participants. While it had been anticipated that one language group would be in an overwhelming majority, indeed, this was not the case. Nevertheless, with the percentage of Arabic speakers approaching 50% of all participants, this factor was of interest.

The final covariate in the study was participants' level of listening proficiency. Because the study was conducted in regularly scheduled listening classes, it was impossible to randomly assign participants according to their level of proficiency. Participants, then, remained in their designated class level and used the learning materials and instruction that are normally delivered in that level, regardless of the scores realized on the listening proficiency portion of the Michigan Test (Upshur et al., 1972).

Intervention

The intervention consisted of a series of teaching pieces for various listening strategies. The teaching pieces were identical for participating students at each university regardless of proficiency level. The lessons were electronically delivered, utilizing a “show and tell” format so that participants could view the strategy in action. The electronic delivery helped control for possible variation in instructors’ teaching or delivery styles, though it is important to note that some instructors spent more time on each lesson or expected more response from students. For example, some of the instructors required students to take notes and actively complete all suggested activities while others simply “walked” students through the lessons.

Each teaching piece presented a general listening process (predicting, note-taking, summarizing, and making inferences), broken down into specific underlying strategies that participants had opportunity to discuss and practice. In the first part of the teaching piece, PowerPoint slides were used as the medium for presenting the process and specific (underlying) strategies. Following explicit presentation of the strategies, participants were provided with pre-listening questions or discussion and introduction of new vocabulary. Please see Figures 1, 2, and 3 for examples of some of the lessons delivered during the first phase of each intervention. Part two of each lesson consisted of a quick review, often with a dialogue or other type of audio exercise. These activities led to an illustrated Camtasia[®] screen capture video, prepared by the researcher as a means to present the practice lecture. In the second part of the teaching piece, participants viewed, either individually or in a teacher-led activity, illustration of the strategy via screen capture

video, which was incorporated into the main task of the lesson, a 6 – 8 minute audio-taped lecture supported with selected photographic support, followed by post listening exercises for strategy practice. Sprinkled throughout these video presentations were hints and various types of questions to reinforce each lesson. Optionally, at the classroom teacher's discretion, students were encouraged to view the practice lecture again or to practice the listening process by listening to a different passage or lecture. Please see Table 2 for an overview of the four interventions used in this study.

Table 2

Overview of the Four Interventions Used in the Study

	Lecture Topic	Strategies Cluster	Underlying Strategies	Pre- Listening Activities	Post- Listening Linked Activities
Intervention One	“English: A Global Language?”*	Predicting	- Selective attention - Getting the mind ready to hear new material and link it to what we already know - Making use of visual cues	- Predicting from title, picture, and short audio clip - Pre- recorded vocabulary - Pre- recorded conversation	Options: - Link to a website for further practice - Replay the video

Table 2 (*continued*).

	Lecture Topic	Strategies Cluster	Underlying Strategies	Pre- Listening Activities	Post- Listening Linked Activities
Intervention Two	“What’s in a Name?”*	Taking Notes	- Selective attention - Predicting - - Visual representation -Noting key information	- Visual example of organized notes - Pre- recorded vocabulary - Pre- recorded conversation -Discussion questions	Options: - Link to a different lecture for further practice* - Replay the video

Table 2 (*continued*).

	Lecture Topic	Strategies Cluster	Underlying Strategies	Pre-Listening Activities	Post- Listening Linked Activities
Intervention Three	“High Anxieties: Phobias”*	Summarizing during/after listening	-Focus on main ideas -Indent to show importance of ideas -Use abbreviations - Note key words and phrases	-Information about a summary - Taking note to a lecture clip and comparing notes with classmates - Discussion questions - Pre-recorded interview - Pre-recorded vocabulary	Options: - Link to a website for further practice - Replay the video

Table 2 (continued).

	Lecture Topic	Strategies Cluster	Underlying Strategies	Pre-Listening Activities	Post-Listening Linked Activities
Intervention Four	“Culture Shock: Part One”**	Making Inferences	- Predicting - Activating background information - Listening for key terms - Inferring - Making informed guesses	- Pre-listening interactive quiz - Pre-recorded vocabulary - Discussion question	Options: - Link to part 2 of the lecture for further practice** - Replay the video


Note. * This lecture was used by permission of Pearson Education.

** This unpublished lecture was used by permission of the author, Cynthia Lennox, and developer, Jeanette Clement.

● ● ● | **Let's Predict**

If you hear this title: "A New Way to Learn a Language"

And you see this picture:



What do you **predict** the talk will be about?

How does the title help you to predict? How does the picture help?


Jeanette Clement copyright 2006

Figure 1. Pre-listening activity for a listening-strategies lesson

● ● ● | **Let's Check the Prediction**

Title: "A New Way to Learn a Language"

Picture:



Listen to the talk:




[Click here to listen](#)


Was your prediction accurate? What **strategies** did you use as you were predicting what you might hear?

Jeanette Clement copyright 2006

Figure 2. Pre-listening activity with link to accompanying audio

● ● ● | Practice With an Academic Lecture

Listen to the following conversation between two students, and try to predict what the professor will present in their next class. 

Now, listen to the lecture and do the activities. 

Jeanette Clement copyright 2006

Figure 3. Pre-listening activity with link to accompanying audio and video files

By permission from the publisher (Pearson Publishing), one of three pre-recorded lectures from *Contemporary Topics 2: High-Intermediate Listening and Note-Taking Skills* for learners of English as a Second Language (Kisslinger, 2002) and one lesson created by the researcher and her colleague provided the main listening activity for each lesson. The lectures average 7 minutes, and though they are representative of lectures a student could expect to hear in an academic setting, the lectures were not authentic (recorded live in an actual academic class). Rather they featured “the authentic sound” of an academic lecture (p. v). “[The] intent [is] to give ... students practice with a classroom experience that is as realistic and natural as possible, while still ensuring that the lectures are comprehensible” (p. v). All lectures, explanations, and activities were presented in native- or near native-speaker English.

Classroom instructors were instructed to pause the recording at designated places to enable live discussion among participants. The researcher believes that it is valuable for participants to make connections with the strategies they already use, the ones they learn, and how these may transfer to listening activities other than those presented in the instruction. In addition, built in to the end of each Camtasia[®] video were hyperlinks leading students to optional listening tasks, also in native- or near native-speaker English, so that participants could use any remaining time to further practice the strategies explored in the teaching piece. See Figures 4 and 5 for screen shots of the Camtasia[®] videos that were used during phase two of each intervention.

Did you write down some of the examples for occupation names?

Here are some of them:

- Baker = bakes bread
- Tailor = sews clothes
- Miller = makes flour for bread
- Smith (listen for more about this one)

To continue, click in this box or click on the PLAY button.

Lecture from *Contemporary Topics 2* © 2002 Pearson Longman. Used by permission.

06:48 / 09:04

Figure 4. Listening activity with tips for taking notes

C

Inference Question #1

When an international student is not feeling well, s/he is suffering from culture shock.

- 1) True
- 2) False
- 3) We don't have enough information to answer

Submit

02:45 / 07:24

Figure 5. Practice question as part of listening video

Each intervention was delivered as a Web-ready, downloadable file that could be accessed individually by students in a computer lab. The lessons were placed on the desktop of computers in respective computer labs. Optionally, interventions could be presented in class with a single computer and LCD projector. Several of the instructors opted to present the lesson in this manner. In all cases, student responses to survey items after delivery of each lesson were completed on paper and then forwarded by instructors to the researcher, who subsequently input data by hand to SPSS.

Following the collection of participants' scores on the SILL, the "Listening Strategies Survey" was administered in class, the purpose of which was not only to gather participants' perception of each of the interventions, but also to ascertain participants' views on the use of electronic media to deliver the treatment during the study. This survey consisted of statements to which participants responded using a five-point Likert scale.

CHAPTER IV

RESULTS

Overview

The study took place during fall term of 2006, September through late November. The study investigated students' use of listening strategies in intensive English as a Second Language classes at two institutions, the University of Pittsburgh's English Language Institute and Duquesne University's English as a Second Language Program. Students first completed a strategies inventory and a proficiency exam. Then they participated in four interventions, technology-based lessons that addressed clusters of listening strategies. At the end of the study, participants again completed the strategies inventory and took a second proficiency exam. In addition, they completed a 10-item survey about the study interventions.

This chapter presents information about the statistical analyses and the procedures used in the study and the results of the tests. Discussion and recommendations will be presented in the final chapter.

Demographics

Descriptive Statistics: Mean Pre- and Post-SILL Scores by School

The total number of participants whose data were used was sixty-four, with 26 participants from Duquesne and 38 participants from the University of Pittsburgh. Of this number, 46 were male and 17 were female. One participant chose not to divulge gender. Participants ranged in age from 18 to 43; three participants opted not to reveal their age.

A total of seven classes participated in the study, three at Duquesne University's ESL Program and five at the University of Pittsburgh's English Language Institute. Of the seven classes, seventy-seven students consented to participate in the study. However, two of those dropped the class within the first two weeks of the term. Two others stopped attending classes by the middle of the term. Nine more did not complete the final inventories because of absences from class.

The first covariate in the study was the school that participants attended. At Duquesne, classes included the low-intermediate, intermediate, and advanced note-taking/discussion classes. At the University of Pittsburgh, classes included high-intermediate and advanced listening classes. While it had originally been planned that the University of Pittsburgh's low-intermediate listening classes would also participate, making available the necessary computer laboratory time for those classes to participate in the computer-based lessons was not possible. Therefore, the lower-intermediates at the University of Pittsburgh were not included in the study. See Tables 3 and 4 for data on mean scores for participants' Pre- and Post- Strategies Inventory for Language Learning at each participating institution. Table 3 shows the percentage of total participants represented by each school, the maximum and minimum scores, and the mean scores and standard deviations on Pre-SILL totals by school. Table 4 shows the percentage of total participants represented by each school, the maximum and minimum scores, and the mean scores and standard deviations on the Post-SILL totals by school.

Each part of the Strategies Inventory for Language Learning (SILL) (Oxford, 1990) focuses on a different category of listening strategies. Oxford designated items 1 to 9 as Part A, "Remembering more effectively." Items 10 to 23 are Part B, "Using all your

mental processes.” Part C, items 24 to 29, is designated “Compensating for missing information.” Part D includes items 30 to 38, “Organizing and evaluating your knowledge.” Part E, “Managing your emotions,” includes items 39 to 44. The final section, Part F, includes items 45 to 50 and is designated “Learning with others.”

Scores on each item of the SILL ranged from one to five, with one indicating that the statement is rarely or never true of the student while five indicated that it is always or almost always true of the student. The SILL scale is accompanied by a worksheet that can help students to interpret their scores. For example, if the average on a given part of the SILL is 3.5 or higher, the student is said to have a high use of that type of strategies. If the average score is between 2.5 and 3.4, that indicates a medium use of that type of strategies, and a score between 1.0 and 2.4 indicates low use. Scores for each part of the SILL are included in the tables that follow.

Table 3

Descriptive Statistics of Mean Pre-SILL Scores by School

School		Pre-SILL A	Pre-SILL B	Pre-SILL C	Pre-SILL D	Pre-SILL E	Pre-SILL F	Pre-SILL Total
1	N	26	26	26	26	26	26	26
	%	40.6%	40.6%	40.6%	40.6%	40.6%	40.6%	40.6%
	Min.	16	28	13	16	10	14	109
	Max.	40	70	28	45	26	28	230
	Mean	28.23	48.85	20.88	35.77	19.12	22.50	175.35
	SD	4.85	8.94	4.39	6.79	4.32	4.05	26.36
2	N	38	38	38	38	38	38	38
	%	59.4%	59.4%	59.4%	59.4%	59.4%	59.4%	59.4%
	Min.	17	35	12	24	12	11	130
	Max.	37	66	28	45	28	29	215
	Mean	26.61	47.32	19.95	34.82	18.00	21.92	168.61
	SD	4.86	6.84	4.26	5.28	3.65	4.26	17.56

Table 3 (*continued*).

School		Pre-	Pre-	Pre-	Pre-	Pre-	Pre-	Pre-
		SILL	SILL	SILL	SILL	SILL	SILL	SILL
		A	B	C	D	E	F	Total
Total	N	64	64	64	64	64	64	64
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Min.	16	28	12	16	10	11	109
	Max.	40	70	28	45	28	29	230
	Mean	27.27	47.94	20.33	35.20	18.45	22.16	171.34
	SD	4.88	7.73	4.30	5.90	3.94	4.16	21.63

Note. SILL = Strategies Inventory for Language Learning (Oxford, 1990).

1 = Duquesne University's English as a Second Language Program

2 = University of Pittsburgh's English Language Institute

Min. = Minimum scores

Max = Maximum scores

% = Percent of total number of participants

Table 4

Descriptive Statistics of Mean Post-SILL Scores by School

School		Post-SILL A	Post-SILL B	Post-SILL C	Post-SILL D	Post-SILL E	Post-SILL F	Post-SILL Total
1	N	26	26	26	26	26	26	26
	%	40.6%	40.6%	40.6%	40.6%	40.6%	40.6%	40.6%
	Min.	25	40	15	18	14	9	129
	Max.	43	69	28	44	27	25	224
	Mean	31.73	51.81	21.81	35.54	20.62	19.08	180.58
	SD	4.82	7.64	3.64	6.14	3.71	3.55	23.72
2	N	38	38	38	38	38	38	38
	%	59.4%	59.4%	59.4%	59.4%	59.4%	59.4%	59.4%
	Min.	19	37	15	23	13	15	137
	Max.	42	64	29	44	28	25	224
	Mean	30.03	50.92	23.21	35.68	18.71	20.24	178.79
	SD	5.69	6.95	3.70	5.29	3.49	2.84	20.47

Table 4 (*continued*).

School		Post- SILL A	Post- SILL B	Post- SILL C	Post- SILL D	Post- SILL E	Post- SILL F	Post- SILL Total
Total	N	64	64	64	64	64	64	64
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Min.	19	37	15	18	13	9	129
	Max.	43	69	29	44	28	25	224
	Mean	30.72	51.28	22.64	35.63	19.48	19.77	179.52
	SD	5.38	7.19	3.71	5.61	3.67	3.18	21.68

Note. SILL = Strategies Inventory for Language Learning (Oxford, 1990).

1 = Duquesne University's English as a Second Language Program

2 = University of Pittsburgh's English Language Institute

Min. = Minimum scores

Max = Maximum scores

% = Percent of total number of participants

Descriptive Statistics: Mean Pre- and Post-SILL Scores by Level of Instruction

Class level of instruction by overall placement was the second covariate in the study. Students were placed in their class levels as a result of each institution's overall proficiency placement scores, not just the Michigan Listening Comprehension Test (Upshur et al., 1972). The four levels designated for this study were low-intermediate, intermediate, high-intermediate, and advanced.

Classes participating in the study used different main texts for listening and note-taking skill building. However, all of the texts contained a focus on building listening and/or note-taking strategies. Six instructors were responsible for teaching the seven classes; one instructor at the University of Pittsburgh taught two of the high-intermediate sections. The researcher taught the intermediate section at Duquesne University. See Tables 5 and 6 for data on mean scores by designated class levels. Table 5 shows the percentage of total participants represented by each school, the maximum and minimum scores, and the mean scores and standard deviations on Pre-SILL totals by level of instruction. Table 6 shows the percentage of total participants represented by each school, the maximum and minimum scores, and the mean scores and standard deviations on the Post-SILL totals by level of instruction.

Table 5

Descriptive Statistics for Mean Pre-SILL Scores by Level

		Pre	Pre	Pre	Pre	Pre	Pre	Pre
Level		SILL	SILL	SILL	SILL	SILL	SILL	SILL
		A	B	C	D	E	F	Total
2	N	8	8	8	8	8	8	8
	%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
	Min.	16	28	13	16	10	14	109
	Max.	31	54	26	41	24	25	187
	Mean	24.88	41.63	18.88	32.00	16.75	19.88	154.00
	SD	4.79	7.87	4.85	8.62	4.92	4.22	27.02
3	N	9	9	9	9	9	9	9
	%	14.1%	14.1%	14.1%	14.1%	14.1%	14.1%	14.1%
	Min.	23	43	16	27	17	20	155
	Max.	40	70	28	44	26	27	230
	Mean	30.00	53.33	22.67	37.00	20.89	23.78	187.67
	SD	4.85	9.35	4.24	5.70	3.22	2.99	21.99

Table 5 (continued).

Level		Pre	Pre	Pre	Pre	Pre	Pre	Pre
		SILL	SILL	SILL	SILL	SILL	SILL	SILL
		A	B	C	D	E	F	Total
4	N	27	27	27	27	27	27	27
	%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
	Min.	18	35	12	24	12	11	130
	Max.	36	55	27	45	28	29	198
	Mean	26.48	45.89	19.48	34.52	18.37	21.70	166.44
	SD	4.28	5.97	4.19	5.24	4.01	4.58	14.87
5	N	20	20	20	20	20	20	20
	%	31.3%	31.3%	31.3%	31.3%	31.3%	31.3%	31.3%
	Min.	17	39	14	24	12	16	138
	Max.	37	66	28	45	26	28	215
	Mean	28.05	50.80	21.00	36.60	18.15	22.95	177.55
	SD	5.31	6.67	4.00	5.33	3.47	3.72	21.18
Total	N	64	64	64	64	64	64	64
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Min.	16	28	12	16	10	11	109
	Max.	40	70	28	45	28	29	230
	Mean	27.27	47.94	20.33	35.20	18.45	22.16	171.34
	SD	4.88	7.73	4.30	5.90	3.94	4.16	21.63

Table 5 (*continued*).

Note. SILL = Strategies Inventory for Language Learning (Oxford, 1990).

Level 2 = Low-Intermediate

Level 3 = Intermediate

Level 4 = High-Intermediate

Level 5 = Advanced

Min. = Minimum scores

Max = Maximum scores

% = Percent of total number of participants

Table 6

Descriptive Statistics for Mean Post-SILL Scores by Level

Level		Post-SILL A	Post-SILL B	Post-SILL C	Post-SILL D	Post-SILL E	Post-SILL F	Post-SILL Total
2	N	8	8	8	8	8	8	8
	%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
	Min.	26	40	15	25	14	10	144
	Max.	43	69	25	41	27	21	217
	Mean	32.88	50.63	20.00	32.75	19.88	18.25	174.38
	SD	5.49	9.99	3.70	5.63	4.52	3.69	26.51
3	N	9	9	9	9	9	9	9
	%	14.1%	14.1%	14.1%	14.1%	14.1%	14.1%	14.1%
	Min.	27	41	17	18	15	9	129
	Max.	42	64	28	44	27	25	224
	Mean	32.78	53.89	23.00	37.00	21.22	19.00	186.89
	SD	5.04	7.44	3.74	7.67	3.70	4.53	27.51

Table 6 (continued).

Level		Post- SILL A	Post- SILL B	Post- SILL C	Post- SILL D	Post- SILL E	Post- SILL F	Post- SILL Total
4	N	27	27	27	27	27	27	27
	%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
	Min.	22	37	18	24	13	15	152
	Max.	40	61	29	44	28	25	212
	Mean	30.00	50.63	23.30	35.63	18.89	20.22	178.67
	SD	4.39	6.96	3.58	5.09	3.26	2.86	17.67
5	N	20	20	20	20	20	20	20
	%	31.3%	31.3%	31.3%	31.3%	31.3%	31.3%	31.3%
	Min.	19	40	15	23	14	15	137
	Max.	42	64	28	43	28	25	224
	Mean	29.90	51.25	22.65	36.15	19.35	20.10	179.40
	SD	6.52	6.41	3.69	5.25	3.86	2.63	22.73
Total	N	64	64	64	64	64	64	64
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Min.	19	37	15	18	13	9	129
	Max.	43	69	29	44	28	25	224
	Mean	30.72	51.28	22.64	35.63	19.48	19.77	179.52
	SD	5.38	7.19	3.71	5.61	3.67	3.18	21.68

Table 6 (*continued*).

Note. SILL = Strategies Inventory for Language Learning (Oxford, 1990).

Level 2 = Low-Intermediate

Level 3 = Intermediate

Level 4 = High-Intermediate

Level 5 = Advanced

Min. = Minimum scores

Max = Maximum scores

% = Percent of total number of participants

Descriptive Statistics of Mean Scores on Pre- and Post-SILL by First Languages (Mother Tongue)

The third covariate was participants' first or native language (mother tongue). In the study, a total of fourteen different languages were represented. Though sixteen different languages were reported by the original 77 participants who signed consent forms, only 14 languages were represented in the final count. Of the 14 different first languages identified, 31 participants' first language was Arabic. This accounts for half of all participants who provided this information. Two participants opted not to declare a first language. Six were native speakers of Korean, six spoke Chinese, five spoke Turkish, four spoke Japanese, and two spoke Portuguese. Of the remaining eight languages represented, with one speaker each, were Creole, French, Kikongo, Poular, Spanish, Vietnamese, Kazakh, and Maraka. All participants' languages were self-

reported as part of the demographics survey. Table 7 shows the percentage of total participants represented by each school, the maximum and minimum scores, and the mean scores and standard deviations on Pre-SILL totals by native language. Table 8 shows the percentage of total participants represented by each school, the maximum and minimum scores, and the mean scores and standard deviations on the Post-SILL totals by native language.

Table 7

Descriptive Statistics of Mean Scores on Pre- SILL by First Languages (Mother Tongue)

Language		Pre-	Pre-	Pre-	Pre-	Pre-	Pre-	Pre-
		SILL	SILL	SILL	SILL	SILL	SILL	SILL
		A	B	C	D	E	F	Total
1	N	31	31	31	31	31	31	31
	%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	Min.	17	36	14	24	12	14	138
	Max.	40	70	28	45	28	29	230
	Mean	28.00	50.16	21.19	35.87	19.29	22.52	177.03
	SD	4.77	7.96	4.42	5.76	4.02	4.21	21.54
2	N	6	6	6	6	6	6	6
	%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%
	Min.	18	37	12	24	15	16	130
	Max.	37	58	24	40	26	27	196
	Mean	26.67	45.33	19.83	34.17	18.33	20.83	165.17
	SD	6.59	8.71	4.49	5.71	4.32	4.26	24.99
3	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	30	47	16	44	19	22	178
	Max.	30	47	16	44	19	22	178
	Mean	30.00	47.00	16.00	44.00	19.00	22.00	178.00
	SD							

Table 7 (continued).

Language		Pre-	Pre-	Pre-	Pre-	Pre-	Pre-	Pre-
		SILL	SILL	SILL	SILL	SILL	SILL	SILL
		A	B	C	D	E	F	Total
4	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	30	45	17	41	14	25	172
	Max.	30	45	17	41	14	25	172
	Mean	30.00	45.00	17.00	41.00	14.00	25.00	172.00
	SD							
5	N	4	4	4	4	4	4	4
	%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
	Min.	23	44	16	31	18	17	158
	Max.	33	55	23	35	22	26	186
	Mean	28.75	50.00	18.25	33.75	19.75	22.00	172.50
	SD	4.35	4.69	3.20	1.89	2.06	3.92	14.55
6	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	23	41	19	32	20	20	155
	Max.	23	41	19	32	20	20	155
	Mean	23.00	41.00	19.00	32.00	20.00	20.00	155.00
	SD							

Table 7 (continued).

Language		Pre-	Pre-	Pre-	Pre-	Pre-	Pre-	Pre-
		SILL	SILL	SILL	SILL	SILL	SILL	SILL
		A	B	C	D	E	F	Total
7	N	6	6	6	6	6	6	6
	%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%
	Min.	20	39	15	29	17	18	144
	Max.	33	53	26	42	21	28	189
	Mean	27.83	46.17	19.83	34.17	18.83	22.83	169.67
	SD	4.79	5.08	4.26	4.96	1.72	3.55	17.32
8	N	2	2	2	2	2	2	2
	%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
	Min.	22	35	19	33	13	23	149
	Max.	29	51	24	39	18	27	184
	Mean	25.50	43.00	21.50	36.00	15.50	25.00	166.50
	SD	4.95	11.31	3.54	4.24	3.54	2.83	24.75
9	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	23	45	13	43	12	28	164
	Max.	23	45	13	43	12	28	164
	Mean	23.00	45.00	13.00	43.00	12.00	28.00	164.00
	SD							

Table 7 (continued).

Language		Pre-	Pre-	Pre-	Pre-	Pre-	Pre-	Pre-
		SILL	SILL	SILL	SILL	SILL	SILL	SILL
		A	B	C	D	E	F	Total
10	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	22	37	27	31	15	27	159
	Max.	22	37	27	31	15	27	159
	Mean	22.00	37.00	27.00	31.00	15.00	27.00	159.00
	SD							
13	N	5	5	5	5	5	5	5
	%	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%
	Min.	16	28	13	16	10	11	109
	Max.	33	54	21	38	25	27	196
	Mean	25.40	41.80	17.00	30.20	17.40	18.20	150.00
	SD	6.80	10.16	3.39	9.04	6.80	5.89	33.89
14	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	30	46	25	35	17	20	173
	Max.	30	46	25	35	17	20	173
	Mean	30.00	46.00	25.00	35.00	17.00	20.00	173.00
	SD							

Table 7 (continued).

Language		Pre-	Pre-	Pre-	Pre-	Pre-	Pre-	Pre-
		SILL	SILL	SILL	SILL	SILL	SILL	SILL
		A	B	C	D	E	F	Total
15	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	29	50	23	42	15	23	182
	Max.	29	50	23	42	15	23	182
	Mean	29.00	50.00	23.00	42.00	15.00	23.00	182.00
	SD							
16	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	28	55	21	31	16	20	171
	Max.	28	55	21	31	16	20	171
	Mean	28.00	55.00	21.00	31.00	16.00	20.00	171.00
	SD							
Total	N	62	62	62	62	62	62	62
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Min.	16	28	12	16	10	11	109
	Max.	40	70	28	45	28	29	230
	Mean	27.47	47.82	20.27	35.15	18.48	22.16	171.35
	SD	4.83	7.81	4.30	5.81	3.95	4.19	21.65

Note. SILL = Strategies Inventory for Language Learning (Oxford, 1990).

1 = Arabic

2 = Chinese

Table 7 (*continued*).

3 = Creole

4 = French

5 = Japanese

6 = Kikongo

7 = Korean

8 = Portuguese

9 = Poular (Fulani)

10 = Spanish

13 = Turkish

14 = Vietnamese

15 = Kazakh

16 = Maraka

Min. = Minimum scores

Max = Maximum scores

% = Percent of total number of participants

Table 8

Descriptive Statistics of Mean Scores on Post- SILL by First Languages (Mother Tongue)

Language		Post-	Post-	Post-	Post-	Post-	Post-	Post-
		SILL	SILL	SILL	SILL	SILL	SILL	SILL
		A	B	C	D	E	F	Total
1	N	31	31	31	31	31	31	31
	%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	Min.	21	40	17	18	13	9	129
	Max.	43	69	29	44	28	25	224
	Mean	30.61	52.39	23.52	36.00	19.84	19.90	182.26
	SD	5.61	7.34	3.79	6.04	3.93	4.00	23.73
2	N	6	6	6	6	6	6	6
	%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%
	Min.	19	40	19	30	14	16	146
	Max.	42	64	25	41	24	22	211
	Mean	29.00	51.33	22.00	34.50	19.33	19.17	175.33
	SD	8.30	8.21	2.37	4.04	3.45	2.32	24.62
3	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	37	59	21	44	25	17	203
	Max.	37	59	21	44	25	17	203
	Mean	37.00	59.00	21.00	44.00	25.00	17.00	203.00
	SD							

Table 8 (continued).

Language		Post-SILL A	Post-SILL B	Post-SILL C	Post-SILL D	Post-SILL E	Post-SILL F	Post-SILL Total
4	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	26	49	20	41	14	21	171
	Max.	26	49	20	41	14	21	171
	Mean	26.00	49.00	20.00	41.00	14.00	21.00	171.00
	SD							
5	N	4	4	4	4	4	4	4
	%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
	Min.	23	37	15	31	18	18	153
	Max.	36	59	25	41	22	22	193
	Mean	29.75	48.25	20.50	35.25	19.75	19.25	172.75
	SD	5.56	9.22	4.12	4.65	1.71	1.89	21.17
6	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	26	44	21	31	15	20	157
	Max.	26	44	21	31	15	20	157
	Mean	26.00	44.00	21.00	31.00	15.00	20.00	157.00
	SD							

Table 8 (continued).

Language		Post-SILL	Post-SILL	Post-SILL	Post-SILL	Post-SILL	Post-SILL	Post-SILL
		A	B	C	D	E	F	Total
7	N	6	6	6	6	6	6	6
	%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%
	Min.	28	45	16	30	14	17	164
	Max.	40	59	28	40	28	22	212
	Mean	34.67	52.83	23.67	35.83	20.83	19.67	187.50
	SD	4.76	4.75	4.23	3.97	5.12	1.86	18.76
8	N	2	2	2	2	2	2	2
	%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
	Min.	25	41	19	32	19	18	154
	Max.	29	58	26	42	21	20	196
	Mean	27.00	49.50	22.50	37.00	20.00	19.00	175.00
	SD	2.83	12.02	4.95	7.07	1.41	1.41	29.70
9	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	27	60	22	40	14	25	188
	Max.	27	60	22	40	14	25	188
	Mean	27.00	60.00	22.00	40.00	14.00	25.00	188.00
	SD							

Table 8 (continued).

Language		Post-SILL A	Post-SILL B	Post-SILL C	Post-SILL D	Post-SILL E	Post-SILL F	Post-SILL Total
10	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	33	37	24	24	16	22	156
	Max.	33	37	24	24	16	22	156
	Mean	33.00	37.00	24.00	24.00	16.00	22.00	156.00
	SD							
13	N	5	5	5	5	5	5	5
	%	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%
	Min.	28	41	15	25	18	17	151
	Max.	35	55	26	41	22	23	200
	Mean	31.40	48.40	19.40	33.20	19.80	19.60	171.80
	SD	2.70	6.77	4.28	6.94	1.79	2.41	20.78
14	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	31	49	24	38	19	18	179
	Max.	31	49	24	38	19	18	179
	Mean	31.00	49.00	24.00	38.00	19.00	18.00	179.00
	SD							

Table 8 (continued).

Language		Post-SILL A	Post-SILL B	Post-SILL C	Post-SILL D	Post-SILL E	Post-SILL F	Post-SILL Total
15	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	27	45	18	31	18	18	157
	Max.	27	45	18	31	18	18	157
	Mean	27.00	45.00	18.00	31.00	18.00	18.00	157.00
	SD							
16	N	1	1	1	1	1	1	1
	%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
	Min.	36	55	25	41	14	19	190
	Max.	36	55	25	41	14	19	190
	Mean	36.00	55.00	25.00	41.00	14.00	19.00	190.00
	SD							
Total	N	62	62	62	62	62	62	62
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Min.	19	37	15	18	13	9	129
	Max.	43	69	29	44	28	25	224
	Mean	30.71	51.31	22.61	35.63	19.50	19.73	179.48
	SD	5.47	7.29	3.72	5.64	3.73	3.17	21.90

Note. SILL = Strategies Inventory for Language Learning (Oxford, 1990).

1 = Arabic

2 = Chinese

Table 8 (*continued*).

3 = Creole

4 = French

5 = Japanese

6 = Kikongo

7 = Korean

8 = Portuguese

9 = Poular (Fulani)

10 = Spanish

13 = Turkish

14 = Vietnamese

15 = Kazakh

16 = Maraka

Min. = Minimum scores

Max = Maximum scores

% = Percent of total number of participants

Descriptive Statistics: Mean Pre- and Post-SILL Scores by Proficiency Levels

As stated previously, proficiency levels were determined, not by class placement, but by scores from the Michigan Listening Proficiency Test (Upshur et al., 1972). The creators of this test note:

The LTC [Listening Comprehension Test] is used to estimate a student's ability to comprehend basic English structures orally presented. It is not a direct test of his ability to make proper discriminations of the English sound system; rather it is assumed that phonemic discrimination is basic to comprehension of natural utterances. The LCT integrates grammar and aural comprehension testing in short, isolated sentences. It does not involve questions which require the processing of longer discourse, nor does it provide students with redundancies and additional contextual information as would occur in expanded discourse. (1986, p. 1)

Equated scores on the test range from a low of 21 to a high of 99. There are 45 items on the test. The raw scores (number correct out of 45 possible) have been equated by the developers of the test, which has undergone reliability and validity study (p. 12). The equated scores indicate percentile ranking. For the current study, those participants who scored below 60 on the proficiency exam were designated intermediates and those who scored above 60 were designated advanced. Because both participating universities either currently use or have recently used this test for intake placement purposes, the scores they have used to designate levels were used in this study as well. It must be noted, however, that in placing students in class levels, other scores are taken into

consideration in addition to the Michigan Listening Comprehension Test (Upshur et al., 1972). Scores for the study sample ranged from a low of 31 to a high of 87. Twenty, or 31.3%, of participants were classified as intermediates, while 44, or 68.8%, were classified as advanced, based upon pre-test scores. In a small number of cases, the participants missed the initial testing session. For those participants, scores from a follow-up testing session were used. Table 9 shows the percentage of total participants represented by each school, the maximum and minimum scores, and the mean scores and standard deviations on Pre-SILL totals by designated proficiency level. Table 10 shows the percentage of total participants represented by each school, the maximum and minimum scores, and the mean scores and standard deviations on the Post-SILL totals by designated proficiency level, and Table 11 shows the range of proficiency scores of study participants. Tables for determining equated scores are provided by the creators of the Michigan Listening Comprehension Test (Upshur et al., 1972).

Table 9

Descriptive Statistics of Mean Pre-SILL Scores by Proficiency Levels

Rank-		Pre-	Pre-	Pre-	Pre-	Pre-	Pre-	Pre-
prof		SILL	SILL	SILL	SILL	SILL	SILL	SILL
		A	B	C	D	E	F	Total
1	N	20	20	20	20	20	20	20
	%	31.3%	31.3%	31.3%	31.3%	31.3%	31.3%	31.3%
	Min.	16	28	12	16	10	11	109
	Max.	40	70	28	44	26	27	230
	Mean	27.65	46.85	19.95	33.95	18.50	21.45	168.35
	SD	5.32	10.26	4.96	6.85	4.53	4.58	27.11
2	N	44	44	44	44	44	44	44
	%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%
	Min.	17	35	13	24	12	15	130
	Max.	36	66	28	45	28	29	215
	Mean	27.09	48.43	20.50	35.77	18.43	22.48	172.70
	SD	4.72	6.34	4.02	5.41	3.70	3.96	18.83

Table 9 (continued).

Rank- prof		Pre- SILL A	Pre- SILL B	Pre- SILL C	Pre- SILL D	Pre- SILL E	Pre- SILL F	Pre- SILL Total
Total	N	64	64	64	64	64	64	64
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Min.	16	28	12	16	10	11	109
	Max.	40	70	28	45	28	29	230
	Mean	27.27	47.94	20.33	35.20	18.45	22.16	171.34
	SD	4.88	7.73	4.30	5.90	3.94	4.16	21.63

Note. SILL = Strategies Inventory for Language Learning (Oxford, 1990).

Rankprof = The rank in two proficiency levels designated for this study

1 = Under 60 on the Michigan Listening Comprehension Test (designated intermediate for this study) (Upshur et al., 1972)

2 = 60 or more on the Michigan Listening Comprehension Test (designated advanced for this study)

Min. = Minimum scores

Max = Maximum scores

% = Percent of total number of participants

Table 10

Descriptive Statistics of Mean Post-SILL Scores by Proficiency Levels

Rank-		Post-	Post-	Post-	Post-	Post-	Post-	Post-
prof		SILL	SILL	SILL	SILL	SILL	SILL	SILL
		A	B	C	D	E	F	Total
1	N	20	20	20	20	20	20	20
	%	31.3%	31.3%	31.3%	31.3%	31.3%	31.3%	31.3%
	Min.	24	37	15	18	14	9	129
	Max.	42	64	28	44	27	25	224
	Mean	31.65	51.00	21.85	35.00	19.40	19.10	178.00
	SD	5.32	8.18	4.16	7.01	3.33	4.00	25.24
2	N	44	44	44	44	44	44	44
	%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%
	Min.	19	37	15	23	13	15	137
	Max.	43	69	29	44	28	25	224
	Mean	30.30	51.41	23.00	35.91	19.52	20.07	180.20
	SD	5.42	6.79	3.48	4.90	3.86	2.72	20.15

Table 10 (*continued*).

Rank- prof		Post- SILL A	Post- SILL B	Post- SILL C	Post- SILL D	Post- SILL E	Post- SILL F	Post- SILL Total
Total	N	64	64	64	64	64	64	64
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Min.	19	37	15	18	13	9	129
	Max.	43	69	29	44	28	25	224
	Mean	30.72	51.28	22.64	35.63	19.48	19.77	179.52
	SD	5.38	7.19	3.71	5.61	3.67	3.18	21.68

Note. SILL = Strategies Inventory for Language Learning (Oxford, 1990).

Rankprof = The rank in two proficiency levels designated for this study

1 = Under 60 on the Michigan Listening Comprehension Test (designated intermediate for this study) (Upshur et al., 1972)

2 = 60 or more on the Michigan Listening Comprehension Test (designated advanced for this study)

Min. = Minimum scores

Max = Maximum scores

% = Percent of total number of participants

Table 11

Range of Proficiency Scores for Study Participants

Equated Scores	N	%
31	1	1.5
36	1	1.5
45	1	1.5
46	1	1.5
49	3	4.6
51	1	1.5
53	3	4.6
56	5	7.7
59	4	6.2
63	3	4.6
68	4	6.2
70	2	3.1
72	2	3.1
74	6	9.2
76	8	12.3
78	4	6.2

Table 11 (*continued*).

Equated Scores	N	%
79	5	7.7
81	3	4.6
83	2	3.1
87	1	1.5
91	1	1.5
Total	61	100.0

Note. The listening proficiency score for the Michigan Listening Comprehension Test (LTC) (Upshur et al., 1972) comprises just 1/3 of the score for the entire Michigan English Proficiency Exam. Scores are presented as converted according to the scale provided by the authors of the test.

Participants' Self-rating of Proficiency

Participants completed a demographics questionnaire at the beginning of the study. On this questionnaire, participants were asked how long they had been studying English. Ranges, in years, were between zero and 10 years, with nearly 50% of participants reporting study of at least 3 years. When asked to rank their proficiency according to whether they thought their English proficiency was excellent, good, fair, or poor, more than 50 % indicated they believed their proficiency to be good or excellent. Table 12 shows the number of participants and the respective percentage of total participants who fell within each self-rated category.

On the demographics questionnaire, when asked to rate themselves in comparison to native speakers of English, using the same rating system, more than 67% indicated they believe their English was good or excellent. Please see Table 13 for the number of participants and the respective percentage of total participants who fell within each self-rated category.

Table 12

Participants' Self-rating of Proficiency

Proficiency (Self-Rating)	N	Percent
Poor	1	1.5
Fair	23	35.4
Good	34	52.3
Excellent	5	7.7
Missing	1	1.5
Total	65	100.0

Note. Data were gathered from a demographics survey. Not all participants submitted responses to every question.

Table 13

Participants Self-rating of English Proficiency as Compared to Native Speakers of English

Proficiency (Self-Rating)	N	Percent
Poor	1	1.5
Fair	18	27.7
Good	31	47.7
Excellent	13	20.0
Missing	1	1.5
Total	65	100.0

Note. Data were gathered from a demographics survey. Not all participants submitted responses to every question.

Analyses of Dependent Variables and Covariates

Analysis of Variance: Total Pre- and Post-Study Scores of SILL

For each of the covariates, with Pre- and Post-study Strategy Inventory for Language Learners (SILL) (Oxford, 1990) scores acting as the dependent variable, an analysis of variance (ANOVA) was administered, using Statistical Package for the Social Sciences (SPSS), Version 12 (2003). First, for each covariate, total scores from the pre- and post-study SILL were analyzed for statistical significance. Sums of squares, degrees of freedom, mean squares, and F-ratios are presented in Tables 14 through 17. The level of confidence for these analyses was set at .05.

Table 14 shows sums of squares, degrees of freedom, mean squares, and F-ratios for the school attended. The analysis of variance for the Pre-SILL did not reveal a significant difference, $F(1, 62) = 1.51, p = .22, \eta^2 = 0.02$. The analysis of variance for the Post-SILL also showed no significant difference, $F(1,62) = .10, p = .75, \eta^2 = .00$.

Table 14

Analysis of Variance of Pre- and Post-Study Scores of SILL and Participants' School Attended

		Sum of		Mean		
		Squares	df	Square	F	Sig.
Pre-SILL Total	Between	701.47	1	701.47	1.51	.22
	Within	28774.96	62	464.11		
	Total	29476.44	63			
Post-SILL Total	Between	49.32	1	49.32	.10	.75
	Within	29570.66	62	476.95		
	Total	29619.98	63			

Table 15 shows sums of squares, degrees of freedom, mean squares, and F-ratios for the participants' level of instruction. The analysis of variance for the Pre-SILL revealed a significant difference, $F(1, 62) = 5.35, p = .00, \eta^2 = 0.21$. For the Post-SILL, the analysis of variance did not reveal a significant difference, $F(1, 62) = .50, p = .69, \eta^2 = 0.02$.

Table 15

Analysis of Variance of Pre- and Post-Study Scores of SILL and Participants' Level of Instruction

		Sum of		Mean		
		Squares	df	Square	F	Sig.
Pre-SILL Total	Between Groups	6222.82	3	2074.27	5.35	.00*
	Within Groups	23253.62	60	387.56		
	Total	29476.44	63			
Post-SILL Total	Between Groups	720.42	3	240.14	.50	.69
	Within Groups	28899.56	60	481.66		
	Total	29619.98	63			

Note. The levels of instruction were classified as low-intermediate, intermediate, high-intermediate, and advanced.

*significant at $p < .05$

Table 16 shows sums of squares, degrees of freedom, mean squares, and F-ratios for the participants' native languages. The analysis of variance for the Pre-SILL did not reveal a significant difference, $F(1, 62) = .64, p = .81, \eta^2 = 0.15$. For the Post-SILL, the analysis of variance also did not reveal a significant difference, $F(1, 62) = .52, p = .90, \eta^2 = 0.12$.

Table 16

Analysis of Variance of Pre- and Post-Study Scores of SILL and Participants' Native (First) Language

		Sum of		Mean		
		Squares	df	Square	F	Sig.
Pre-SILL Total	Between Groups	4213.60	13	324.12	.64	.81
	Within Groups	24380.63	48	507.93		
	Total	28594.19	61			
Post-SILL Total	Between Groups	3615.17	13	278.09	.52	.90
	Within Groups	25638.32	48	534.13		
	Total	29253.48	61			

Table 17 shows sums of squares, degrees of freedom, mean squares, and F-ratios for the participants' proficiency level. The analysis of variance for the Pre-SILL did not reveal a significant difference, $F(1, 62) = .55, p = .46, \eta^2 = 0.00$. For the Post-SILL, the analysis of variance also did not reveal a significant difference, $F(1, 62) = .14, p = .71, \eta^2 = 0.00$.

It must be noted, then, that regardless of school attended, native language (or mother tongue) spoken, or proficiency level, there was no significant difference in mean scores on the Pre- and Post SILL totals. However, designated class levels of instruction showed a statistically significant difference in mean scores on the Pre- SILL total, while the Post-SILL totals for that variable did not show a significant difference.

Table 17

Analysis of Variance of Pre- and Post-Study Scores of SILL and Participants' Proficiency Level

		Sum of		Mean		
		Squares	df	Square	F	Sig.
Pre-SILL Total	Between Groups	260.73	1	260.73	.55	.46
	Within Groups	29215.71	62	471.22		
	Total	29476.44	63			
Post-SILL Total	Between Groups	66.83	1	66.83	.14	.71
	Within Groups	29553.16	62	476.66		
	Total	29619.98	63			

Note. Proficiency levels were determined by scores on the Michigan Listening Comprehension Test (Upshur et al., 1972). Participants who scored 59 or lower were designated Intermediate, and those who scored 63 and above were designated Advanced.

Descriptive Statistics and Analysis of Covariance: Difference in Mean Scores on Pre- and Post-SILL Totals by Covariates School, Language, Proficiency Levels and Level of Instruction

The final steps in the analyses were conducted by first computing the difference between the Pre- and Post-SILL Total mean scores. The greatest overall loss in score was 50 points, and the greatest overall gain in score was 55 points. Mean increase from Pre- to Post-SILL was 8.17 with a standard deviation of 17.77. Please see Table 18 for these data. Next, an analysis of covariance, with the difference as the dependant variable and the four covariates (school, level of instruction, first language, and proficiency) was executed. Results are shown in Table 19.

The analysis of covariance for school revealed no significant difference, $F(1, 62) = .84, p = .36, \eta^2 = 0.02$.

The analysis of covariance for level of instruction revealed a significant difference, $F(3, 60) = 3.48, p = .02, \eta^2 = 0.16$.

For native language the analysis of covariance revealed no significant difference, $F(1, 62) = 2.07, p = .16, \eta^2 = 0.04$.

The analysis of covariance for proficiency level, as determined by the Michigan Listening Comprehension Test (Upshur et al., 1972), revealed no significant difference, $F(1, 62) = .01, p = .95, \eta^2 = 0.00$.

Table 18

Descriptive Statistics of Increase in Mean Scores from Pre-SILL Total to Post-SILL Total

	N	Minimum	Maximum	Mean	Std. Deviation
difftotal	64	-50.00	55.00	8.17	17.77
Valid N (listwise)	64				

Note. Difftotal = difference in total scores

Table 19

Analysis of Covariance for the Difference in Mean Scores on Pre-SILL Total and Post-SILL Total by Covariates School, Level of Instruction, Language, and Proficiency Levels

Source	Type III			F	Sig.	Partial
	Sum of Squares	df	Mean Square			Eta Squared
Corrected Model	4160.08(a)	6	693.35	2.44	.04	.21
Intercept	37.80	1	37.79	.133	.72	.00
School	238.85	1	238.85	.842	.36	.02
Level	2960.78	3	986.93	3.48	.02*	.16
Language	586.82	1	586.82	2.07	.16	.04
Proficiency	1.37	1	1.37	.01	.95	.00
Error	15608.89	55	283.80			
Total	23866.00	62				
Corrected Total	19768.97	61				

Note. a R Squared = .21 (Adjusted R Squared = .12)

*significant at $p < .05$

*Analysis of Variance: Pre- and Post-Study Scores of SILL by Parts and Participants'**Level of Instruction*

Because level of instruction Pre-SILL mean scores revealed a significant difference, the pre- and post-study scores on each of the six parts of the SILL were analyzed using the same procedure as was used for the total scores. This represents a more liberal analysis than was conducted for the analysis of Pre- and Post-SILL Total scores; thus, the confidence level for these analyses of variance was set at .007.

See Tables 20 through 25 for the data from these analyses of variance (ANOVA). Table 20 shows sums of squares, degrees of freedom, mean squares, and F-ratios for the participants' level of instruction on Pre- and Post-SILL Part A. The analysis of variance for the Pre-SILL did not reveal a significant difference, $F(3, 60) = 2.09, p = .11, \eta^2 = 0.09$. For the Post-SILL, the analysis of variance also did not reveal a significant difference, $F(3, 60) = 1.19, p = .32, \eta^2 = 0.06$.

Table 20

*Analysis of Variance of Pre- and Post-Study Scores of SILL Part A and Participants'**Level of Instruction*

		Sum of		Mean		
		Squares	df	Square	F	Sig.
Pre-SILL A	Between Groups	141.92	3	47.31	2.09	.11
	Within Groups	1360.57	60	22.68		
	Total	1502.48	63			
Post-SILL A	Between Groups	102.71	3	34.24	1.19	.32
	Within Groups	1722.23	60	28.70		
	Total	1824.94	63			

For Part B of the Pre-study SILL, the sums of squares, degrees of freedom, mean squares, and F-ratios are presented for level of instruction in Table 21. The analysis of variance (ANOVA) for the Pre-SILL, Part B revealed a significant difference, $F(3, 60) =$

5.91, $p = .00$, $\eta^2 = 0.22$. For the Post-SILL, the analysis of variance did not reveal a significant difference, $F(3,60) = .48$, $p = .70$, $\eta^2 = 0.02$.

Table 21

Analysis of Variance of Pre- and Post-Study Scores of SILL Part B and Participants'

Level of Instruction

		Sum of		Mean		
		Squares	df	Square	F	Sig.
Pre-SILL B	Between	858.01	3	286.00	5.91	.00*
	Within	2905.74	60	48.43		
	Total	3763.75	63			
Post-SILL B	Between	76.13	3	25.38	.48	.70
	Within	3180.81	60	53.01		
	Total	3256.94	63			

Note. * significant at $p < .007$

For Part C of the Pre-study SILL, the sums of squares, degrees of freedom, mean squares, and F-ratios are presented for level of instruction in Table 22. The analysis of variance (ANOVA) for the Pre-SILL, Part C did not reveal a significant difference, $F(3, 60) = 1.77, p = .16, \eta^2 = 0.08$. For the Post-SILL, the analysis of variance also did not reveal a significant difference, $F(3,60) = 1.71, p = .17, \eta^2 = 0.08$.

Table 22

*Analysis of Variance of Pre- and Post-Study Scores of SILL Part C and Participants'**Level of Instruction*

		Sum of		Mean		
		Squares	df	Square	F	Sig.
Pre-SILL C	Between Groups	94.49	3	31.50	1.77	.16
	Within Groups	1069.62	60	17.83		
	Total	1164.11	63			
Post-SILL C	Between Groups	68.56	3	22.85	1.71	.17
	Within Groups	800.18	60	13.34		
	Total	868.73	63			

The sums of squares, degrees of freedom, mean squares, and F-ratios are presented for level of instruction for Part D of the Pre-study SILL in Table 23. The analysis of variance (ANOVA) for the Pre-SILL, Part D did not reveal a significant

difference, $F(3, 60) = 1.60, p = .20, \eta^2 = 0.07$. For the Post-SILL, the analysis of variance also did not reveal a significant difference, $F(3, 60) = .94, p = .43, \eta^2 = 0.04$.

Table 23

Analysis of Variance of Pre- and Post-Study Scores of SILL Part D and Participants'

Level of Instruction

		Sum of		Mean		
		Squares	df	Square	F	Sig.
Pre-SILL D	Between	162.82	3	54.27	1.60	.20
	Groups					
	Within	2033.54	60	33.89		
	Groups					
	Total	2196.36	63			
Post-SILL D	Between	88.65	3	29.55	.94	.43
	Groups					
	Within	1890.35	60	31.51		
	Groups					
	Total	1979.00	63			

Table 24 presents the sums of squares, degrees of freedom, mean squares, and F-ratios for level of instruction for Part E of the Pre-study SILL. The analysis of variance (ANOVA) for the Pre-SILL, Part E did not reveal a significant difference, $F(3, 60) = 1.75$, $p = .17$, $\eta^2 = 0.08$, nor did the analysis of variance reveal a significant difference for the Post-SILL, $F(3, 60) = .95$, $p = .42$, $\eta^2 = 0.04$.

Table 24

Analysis of Variance of Pre- and Post-Study Scores of SILL Part E and Participants'

Level of Instruction

		Sum of		Mean		
		Squares	df	Square	F	Sig.
Pre-SILL E	Between Groups	78.62	3	26.21	1.75	.17
	Within Groups	899.24	60	14.99		
	Total	977.86	63			
Post-SILL E	Between Groups	38.34	3	12.78	.95	.43
	Within Groups	811.65	60	13.52		
	Total	849.99	63			

Table 25 presents the sums of squares, degrees of freedom, mean squares, and F-ratios for level of instruction for Part F of the Pre-study SILL. The analysis of variance (ANOVA) for the Pre-SILL, Part F did not reveal a significant difference, $F(3, 60) = 1.66$,

$p = .19$, $\eta^2 = 0.08$, nor did the analysis of variance reveal a significant difference for the Post-SILL, $F(3, 60) = 1.04$, $p = .38$, $\eta^2 = 0.05$.

Table 25

Analysis of Variance of Pre- and Post-Study Scores of SILL Part F and Participants' Level of Instruction

		Sum of		Mean		
		Squares	df	Square	F	Sig.
Pre-SILL F	Between Groups	83.43	3	27.81	1.66	.19
	Within Groups	1005.01	60	16.75		
	Total	1088.44	63			
Post-SILL F	Between Groups	31.52	3	10.51	1.04	.38
	Within Groups	603.97	60	10.07		
	Total	635.48	63			

After an analysis of the demographics data and the inferential statistics, further descriptive data were gathered to determine frequencies of responses on the survey instruments used in the study. These analyses are reported in the next section.

Individual Lesson Surveys

Frequency of Participant Responses for Lesson 1, Items 1- 3

After each intervention during the study, participants were asked to complete a 3-item survey, for which they indicated their agreement with statements about the lesson. Intervention 1, the lesson on the cluster of predicting strategies included the following statements, along with possible responses:

1. This exercise helped me to better understand the listening strategy of predicting what the speaker will talk about.

agree somewhat agree somewhat disagree disagree

2. Viewing the video about predicting will help me to use this strategy when I listen to new lectures.

agree somewhat agree somewhat disagree disagree

3. I _____ try to predict what the speaker will say next.

always most of the time sometimes rarely or never

Tables 26 through 28 show the frequencies of responses among participants as well as percentage of total responses for intervention (lesson) 1.

Table 26

Frequency of Participant Responses for Lesson 1, Item 1

		Frequency	Percent
Valid	1	36	56.3
	2	23	35.9
	3	1	1.6
	Total	60	93.8
Missing	System	4	6.3
Total		64	100.0

Table 27

Frequency of Participant Responses for Lesson 1, Item 2

		Frequency	Percent
Valid	1	38	59.4
	2	21	32.8
	3	1	1.6
	Total	60	93.8
Missing	System	4	6.3
Total		64	100.0

Table 28

Frequency of Participant Responses for Lesson 1, Item 3

		Frequency	Percent
Valid	1	13	20.3
	2	23	35.9
	3	23	35.9
	4	1	1.6
	Total	60	93.8
Missing	System	4	6.3
Total		64	100.0

Frequency of Participant Responses for Lesson 2, Items 1 - 3

The second intervention presented a cluster of strategies for note-taking. The statements, along with the possible responses were as follows:

1. This exercise helped me to better understand the process of taking notes for an academic lecture.

agree somewhat agree somewhat disagree disagree

2. Viewing the video about note-taking will help me to use this strategy when I listen to new lectures.

agree somewhat agree somewhat disagree disagree

3. I _____ take notes when I listen to a new lecture or other spoken message.

always most of the time sometimes rarely or never

Tables 29 through 31 show the frequencies of responses among participants as well as percentage of total responses for intervention (lesson) 2.

Table 29

Frequency of Participant Responses for Lesson 2, Item 1

		Frequency	Percent
Valid	1	41	64.1
	2	14	21.9
	3	1	1.6
	Total	56	87.5
Missing	System	8	12.5
Total		64	100.0

Table 30

Frequency of Participant Responses for Lesson 2, Item 2

		Frequency	Percent
Valid	1	37	57.8
	2	18	28.1
	4	1	1.6
	Total	56	87.5
Missing	System	8	12.5
Total		64	100.0

Table 31

Frequency of Participant Responses for Lesson 2, Item 3

		Frequency	Percent
Valid	1	8	12.5
	2	22	34.4
	3	26	40.6
	Total	56	87.5
Missing	System	8	12.5
Total		64	100.0

Frequency of Participant Responses for Lesson 3, Items 1 - 3

The third intervention was one that addressed a cluster of strategies for summarizing while listening. The items and their possible responses are listed below.

1. This exercise helped me to better understand the process of summarizing ideas from an academic lecture and other spoken messages.

agree somewhat agree somewhat disagree disagree

2. Viewing the video about summarizing will help me to use this strategy when I listen to new lectures.

agree somewhat agree somewhat disagree disagree

3. I _____ summarize what I hear in a new lecture or other spoken message, either in my mind or in writing.

always most of the time sometimes rarely or never

Tables 32 through 34 show the frequencies of responses among participants as well as percentage of total responses for intervention (lesson) 3.

Table 32

Frequency of Participant Responses for Lesson 3, Item 1

		Frequency	Percent
Valid	1	33	51.6
	2	21	32.8
	Total	54	84.4
Missing	System	10	15.6
Total		64	100.0

Table 33

Frequency of Participant Responses for Lesson 3, Item 2

		Frequency	Percent
Valid	1	33	51.6
	2	18	28.1
	3	1	1.6
	4	2	3.1
	Total	54	84.4
Missing	System	10	15.6
Total		64	100.0

Table 34

Frequency of Participant Responses for Lesson 3, Item 3

		Frequency	Percent
Valid	1	5	7.8
	2	22	34.4
	3	27	42.2
	Total	54	84.4
Missing	System	10	15.6
Total		64	100.0

Frequency of Participant Responses for Lesson 4, Items 1 - 3

The final intervention was a lesson that addressed a cluster of strategies involved in making inferences. The statements along with their possible responses follow.

1. This exercise helped me to better understand the process of making inferences when I listen to an academic lecture and other spoken messages.

agree somewhat agree somewhat disagree disagree

2. Viewing the video about making inferences will help me to use this strategy when I listen to new lectures.

agree somewhat agree somewhat disagree disagree

3. I _____ try to infer the meaning of new words and ideas when I listen to a lecture or other spoken message.

always most of the time sometimes rarely or never

Tables 35 through 37 show the frequencies of responses among participants as well as percentage of total responses for intervention (lesson) 4.

Table 35

Frequency of Participant Responses for Lesson 4, Item 1

		Frequency	Percent
Valid	0	1	1.6
	1	30	46.9
	2	25	39.1
	3	2	3.1
	4	1	1.6
	Total	59	92.2
Missing	System	5	7.8
Total		64	100.0

Table 36

Frequency of Participant Responses for Lesson 4, Item 2

		Frequency	Percent
Valid	1	30	46.9
	2	26	40.6
	3	3	4.7
	Total	59	92.2
Missing	System	5	7.8
Total		64	100.0

Table 37

Frequency of Participant Responses for Lesson 4, Item 3

		Frequency	Percent
Valid	1	12	18.8
	2	30	46.9
	3	17	26.6
	Total	59	92.2
Missing	System	5	7.8
Total		64	100.0

End-of-Study Surveys

Frequencies: Participant Responses for End of Study Survey

At the very end of the study, after participants had taken part in the four interventions and completed the post-study SILL, they were asked to reflect over the entire study and respond to the following statements. They were asked to respond using a Likert-type scale once again. That scale is as follows:

1. Never or almost never true of me
2. Usually not true of me
3. Somewhat true of me
4. Usually true of me
5. Always or almost always true of me

Participants were provided the following explanation:

NEVER OR ALMOST NEVER TRUE OF ME means that the statement is very rarely true of you.

USUALLY NOT TRUE OF ME means that the statement is true less than half the time.

SOMEWHAT TRUE OF ME means that the statement is true of you about half the time.

USUALLY TRUE OF ME means that the statement is true more than half the time.

ALWAYS OR ALMOST ALWAYS TRUE OF ME means that the statement is true of you nearly all the time.

1. The video lessons for listening strategies helped me to learn new strategies I can use when I listen to academic English.

2. Seeing in the video how I can predict what I will hear helped me to use this strategy in my academic listening.
3. Having pauses in the listening passage to allow me to practice inferring information from the passage helped me to improve my listening skills.
4. The video that demonstrated how to listen for new vocabulary helped me to improve my use of this strategy.
5. Viewing how other learners take good lecture notes helped me to improve the way I take notes.
6. The videos of listening strategies were interesting.
7. The videos of listening strategies effectively showed me how to improve my use of listening strategies.
8. Watching the videos was not any more effective in teaching me new strategies than reading the information in my textbook.
9. Discussing the content of the videos with my classmates was helpful for me.
10. Overall, viewing the videos on listening strategies was a positive experience for me.

For all ten of the items, 50% or more of the participants indicated that the statements were usually or always true of them. Tables 38 – 47 display the frequencies of participants' responses to the ten items as well as percentages of the total responses.

Table 38

Frequency of Participant Responses for End of Study Survey, Item 1

		Frequency	Percent
Valid	1	3	4.7
	2	5	7.8
	3	13	20.3
	4	29	45.3
	5	12	18.8
	Total	62	96.9
Missing	System	2	3.1
Total		64	100.0

Table 39

Frequency of Participant Responses for End of Study Survey, Item 2

		Frequency	Percent
Valid	2	8	12.5
	3	14	21.9
	4	29	45.3
	5	11	17.2
	Total	62	96.9
Missing	System	2	3.1
Total		64	100.0

Table 40

Frequency of Participant Responses for End of Study Survey, Item 3

		Frequency	Percent
Valid	2	1	1.6
	3	21	32.8
	4	24	37.5
	5	16	25.0
	Total	62	96.9
Missing	System	2	3.1
Total		64	100.0

Table 41

Frequency of Participant Responses for End of Study Survey, Item 4

		Frequency	Percent
Valid	1	1	1.6
	2	2	3.1
	3	17	26.6
	4	29	45.3
	5	12	18.8
	Total	61	95.3
Missing	System	3	4.7
Total		64	100.0

Table 42

Frequency of Participant Responses for End of Study Survey, Item 5

		Frequency	Percent
Valid	1	1	1.6
	2	4	6.3
	3	22	34.4
	4	17	26.6
	5	18	28.1
	Total	62	96.9
Missing	System	2	3.1
Total		64	100.0

Table 43

Frequency of Participant Responses for End of Study Survey, Item 6

		Frequency	Percent
Valid	1	1	1.6
	2	8	12.5
	3	20	31.3
	4	20	31.3
	5	13	20.3
	Total	62	96.9
Missing	System	2	3.1
Total		64	100.0

Table 44

Frequency of Participant Responses for End of Study Survey, Item 7

		Frequency	Percent
Valid	1	2	3.1
	2	7	10.9
	3	18	28.1
	4	27	42.2
	5	8	12.5
	Total	62	96.9
Missing	System	2	3.1
Total		64	100.0

Table 45

Frequency of Participant Responses for End of Study Survey, Item 8

		Frequency	Percent
Valid	1	4	6.3
	2	8	12.5
	3	17	26.6
	4	24	37.5
	5	8	12.5
	Total	61	95.3
Missing	System	3	4.7
Total		64	100.0

Table 46

Frequency of Participant Responses for End of Study Survey, Item 9

		Frequency	Percent
Valid	1	3	4.7
	2	3	4.7
	3	11	17.2
	4	31	48.4
	5	14	21.9
	Total	62	96.9
Missing	System	2	3.1
Total		64	100.0

Table 47

Frequency of Participant Responses for End of Study Survey, Item 10

		Frequency	Percent
Valid	1	1	1.6
	2	4	6.3
	3	12	18.8
	4	23	35.9
	5	21	32.8
	Total	61	95.3
Missing	System	3	4.7
Total		64	100.0

Summary

This chapter presented statistical analyses of the data collected during a study of the teaching of explicit listening strategies with ESL students at low-intermediate, intermediate, high-intermediate, and advanced levels at two universities, Duquesne University and the University of Pittsburgh. First, descriptive statistics of Pre-SILL and Post-SILL total scores were presented for school attended, level of instruction, native language, and proficiency level.

Analysis of variance (ANOVA) revealed a significant difference for one variable, level of instruction, for the Pre-SILL total scores. No significant difference was revealed for level for Post-SILL total scores, nor did any of the analyses of variance reveal significant differences for school attended, native language, or level of proficiency. An analysis of covariance (ANCOVA) revealed a significant difference for level when the difference between Pre-SILL and Post-SILL total scores was the dependant variable. No other significant differences by variable were revealed in the analysis of covariance. Analyses of variance (ANOVA) by parts of the SILL were executed, and results showed that there was a significant difference in mean scores for Pre-SILL Part B. For end of intervention and end of study surveys, frequencies of responses were presented.

CHAPTER V

CONCLUSIONS

Discussion

Purpose of the Study

The purpose of this dissertation study was to evaluate the impact of teaching explicit listening strategies to adult intermediate- and advanced-level ESL university students. The participants in the study were students in two English as Second Language programs, most of whom were pursuing or planning to pursue academic degrees in U.S. institutions. The primary instrument used in the study was Oxford's Strategies Inventory for Language Learning (SILL) (Oxford, 1990), which students completed at the onset of the study and again at the end of the study. Four covariates were taken into account: the school participants attended, the level of instruction they received, their native language, and their listening proficiency. Four interventions were presented, each exposing and illustrating clusters of listening strategies. During the interventions, participants were given opportunities to practice the strategies.

Summary of the Procedures

This study investigated explicit teaching of and training in the use of strategies for improving second language listening comprehension. At the beginning of the study, in their regularly scheduled ESL listening or note-taking classes, participants first completed a demographics survey. Next, they completed a 50-item strategies inventory and a listening proficiency exam, which was used in determining their status as

intermediate or advanced. Then, over the course of several weeks, they were presented a series of four interventions, each a lesson delivered electronically. Each lesson introduced a cluster of listening strategies and then provided web-based illustration and practice in using the strategies. After each intervention, participants responded to a three-item survey on which they were asked to consider statements such as *This exercise helped me to better understand the process of making inferences when I listen to an academic lecture and other spoken messages*; *Viewing the video about making inferences will help me to use this strategy when I listen to new lectures*; and *I (always/most of the time/sometimes/rarely or never) try to infer the meaning of new words and ideas when I listen to a lecture or other spoken message*. At the end of the study, participants once again completed the 50-item inventory and the listening proficiency exam and also completed a 10-item end-of-study survey. The final survey sought participants' feedback on the interventions. For all parts of the study, all students enrolled in the classes participated in the activities. Data were collected for only those who had consented to be participants in the study.

Summary of the Findings

Data were analyzed through frequency studies and analyses of variance (ANOVA) and covariance (ANCOVA). Demographics for study participants and results on their total scores for the variables school attended, level of instruction, native language, and proficiency level were described first. In addition, as part of a demographics questionnaire administered at the beginning of the study, participants provided self-ratings of their proficiency level. They also rated themselves as they believed their

English proficiency would compare to that of a native speaker. These self-ratings of proficiency were included in the study as points of interest only. It seemed that most of the participants felt their English language proficiency to be good, and they thought that they compared very favorably to native speaker English. This was interpreted as a sign that the students' outlook on their ability to improve their English skills was quite positive.

Next, analyses of variance were presented for each of the four variables. Taking a very conservative approach, with the confidence level set at .05, four ANOVAs were presented to investigate the total mean scores for Pre- and Post-SILLs. The analysis of variance for the Pre-SILL total scores for level of instruction revealed a significant difference; analyses of variance for the other variables, however, did not reveal any significant differences. Next, an analysis of covariance, with difference in Pre- and Post-SILL scores as dependent variable, was executed. This ANCOVA revealed a significant difference in level of instruction ($p < .05$). Because researchers disagree on the parametric reliability of the SILL for such a study (Dornyei, 2005; Hsiao & Oxford, 2002; Macaro, 2001; Oxford & Burry-Stock, 1995), it was decided to include in the study a more liberal set of tests, set at a confidence level of .007. Thus, another set of ANOVAs investigating level of instruction for each of the six parts of the Pre- and Post SILL (A through F) was executed, revealing a significant difference on the section Pre-SILL B.

Additional analyses were conducted to determine frequency levels of student responses on surveys gathered at the finish of each of four interventions and at the finish of the study. For data on Pre- and Post-SILL mean scores as they corresponded with each of the four covariates, please see the tables and analyses in Chapter 4.

Four research questions were developed and investigated in the study. Each of the four research questions will be presented here, along with statistical analysis of each and summary of the findings.

Research Question One: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when university attended is controlled statistically?

In this study, there were no statistically significant differences in mean scores on the two SILLs as regards the school participants attended. At each school, participants represented a variety of countries and language backgrounds although at each, Arabic speakers predominated (12 of the 26 participants at Duquesne, or 46%, and 19 of the 38, or 50%, at the University of Pittsburgh). Each of these schools attracts similar groups of students. The University of Pittsburgh always or nearly always has a somewhat larger enrollment than does Duquesne, and the term in which the study was conducted was no exception. However, the percentage of eligible students who consented to participate was much higher at Duquesne than at the University of Pittsburgh. It is my belief that this may have occurred because I acted as an instructor at Duquesne; thus, the Duquesne students were familiar with me and may have felt quite comfortable participating in a research study I was conducting. The students at the University of Pittsburgh had not had prior interaction with me, so there was no feeling of identification with the researcher. In addition, in prior terms, many of them had been asked to participate in a number of research studies at the University of Pittsburgh, for which they had had to sign informed

consent forms. The latter could be a reason why they seemed reticent to participate in yet another research study, an understandable reaction.

With similar populations, teaching methods, and outcomes expectations at both institutions, it was no surprise that mean Pre- and Post-SILL scores were very similar. In addition, it is encouraging that there is a lack of difference in this area. This shows that the two institutions' choice of listening texts and focus on teaching listening strategies are working well.

Research Question Two: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when level of instruction is controlled statistically?

The only one of the covariates identified in the study that showed statistically significant difference in Pre- and Post-SILL scores was that of participants' level of instruction. As noted previously, participants' Michigan Listening Comprehension Test (Upshur et al., 1972) scores did not determine class levels; these were determined through more holistic placement instruments. In some cases, though a student had achieved a high listening proficiency score, his/her writing, grammar, vocabulary, or reading score – or a combination of these scores – precluded the higher class level placement. Conversely, in a few cases, a student's listening proficiency seemed lower than might have been expected for that student's class level. Thus, the level of instruction placement seemed to be the more accurate assessment of the students' actual overall proficiency level. Four instructional levels were involved in the study. These were identified as low-intermediate, intermediate, high-intermediate, and advanced.

In addition, of note is that all of the interventions involved more than participants' listening ability. The SILL is entirely text-based, as were portions of each of the interventions and all of the surveys. Without a doubt, in many listening tasks, far more than "just listening" is involved. The literature review of this dissertation pointed to the importance of both bottom-up and top-down processing. Listening involves knowledge of the sound system of a language, in this case, English, but it also involves background knowledge—or schema activation. Though many students learn "through the ear," others learn "through the eye." In other words, some learners are exposed far more to aural discourse than to written discourse and vice versa. What cannot be discounted, however, is that in the setting for this study, participants were in programs that have a particular focus on academic English. As such, both programs contained a distinct need for reading proficiency as well as other proficiencies. It seems that the level to which students were assigned was a much more reliable indicator of their actual overall English language proficiency level than was the Michigan Listening Comprehension Test (Upshur et al., 1972).

For the study, two approaches were followed for analyzing the data collected, first, a more conservative approach with the .05 level of confidence designated. Because research sources vary in their acceptance of the SILL as a parametrically reliable instrument to use in studies such as this, (See Dornyei, 2005; Hsiao & Oxford, 2002; Macaro, 2001; Oxford & Burry-Stock, 1995) and for the sake of investigation, a second, more liberal approach was included in the analysis as well, with an adjustment of the confidence level to .007. The first approach, an analysis of variance investigating solely

total Pre- and Post-SILL mean scores showed that the difference in total mean scores for level of instruction on the Pre-SILL was statistically significant at the $p < .05$ level.

Next, the covariate level of instruction was analyzed according to the difference between total Pre- and Post-SILL mean scores. An analysis of covariance was executed to control for all variables. This ANCOVA revealed a significant difference in level of instruction on the difference between the Pre-SILL scores and the Post-SILL scores. Descriptive statistics leading to the ANCOVA showed that participants varied widely from their Pre- to Post-SILL scores, from a loss of 50 points to a gain of 55 points. Though students completing the SILL would not be expected to report that they had achieved the maximum score, on the inventory this total maximum score would be 250 – a score of 5 indicating “always or almost always true of me” on each of the 50 items. The mean difference in Pre-SILL to Post-SILL scores was an increase of 8.17 (SD 17.77). Next, the decision was made to further investigate participants’ placement in class levels as it might have impacted their mean scores on the SILL. To that end, in the second, more liberal approach, with $p < .007$, analyses of variance (ANOVA) were performed for Parts A, B, C, D, E, and F of the Pre- and Post-SILL mean scores with level of instruction as the covariant. These analyses showed a statistically significant difference in mean scores for just one area, Part B of the Pre-SILL.

The spread of points lost or gained from Pre-to Post-SILL seems to be quite wide, with 33% of the participants experiencing decreases in their scores. While decreases of just a few points would not have seemed unusual, I was very surprised with the rather extreme decrease of 25 or more points. In total, 21 participants’ scores decreased, with these decreases ranging from the negative 50 already noted to negative 1. Of the low-

intermediate group, consisting of 8 members, 2—or25% showed lower scores on the Post-SILL than on the Pre-SILL. This group, however, showed the most impressive gains; 5 participants—or 75% of that group--showed gains of 30 – 45 points. They also showed the fewest points in the negative, with a -1 and a -4 score. In the intermediate group, with a membership of 9 participants, 5 participants increased from +2 to + 25 points, while 4 participants showed losses of -1, -6, -11, and -50 points. The high intermediate group, 27 participants, showed a 30% decrease rate, with one participant breaking even and gains of between +2 and +55. Five of these showed increases of over 30 points. Finally, of the advanced group, with 22 participants, there was a 31% rate of decreased scores on the Post-SILL. Increases were from +1 to +17, and decreases were from -1 to -25. Thus, there was no discernable pattern to the spread of decreased scores by level, except that those participants were in a level of instruction other than the lowest (low intermediate). I would venture two possible explanations. First, with a heightened awareness of how these participants use certain strategies, perhaps they realized that they had originally rated their use of strategies higher than it really was. Second, and, I believe, a plausible possibility, is that participants may have been in a hurry to finish the final piece of the study and hurriedly and without great effort marked the inventory to “get done with it.” Though not a desired outcome, this wouldn’t really seem unreasonable. The final SILL was distributed and collected at the very end of the term, when students were anticipating the long winter holiday break, making arrangements for trips home, and, in the case of the Duquesne students, preparing for final exams in all of their classes. The inventory was heavy in reading with 50 items to be read and comprehended and then responded to. At this particular point in the term, instructors were scrambling to squeeze

in as much practice with listening and note-taking as possible and may have allowed the bare minimum of time for students to complete the final inventory. It would not be surprising for participants to hurry through the task, knowing that the task was required of them yet would have no impact upon their course grades.

In contrast, however, scores for 43, or 66% of participants, showed either no change (1 participant) or an increase in their scores, several with increases of over 30 points. In total, 10 participants showed an increase of 30 or more points from Pre-SILL to Post-SILL. Interestingly, at level 2, or low-intermediate, 6 of the participants showed very impressive gains and relatively small losses (-1 and -4). These findings suggest that students with lower overall proficiency levels, when presented with explicit instruction in strategies for listening comprehension improvement, may benefit even more from the instruction than those with higher overall proficiency. The exposure to, illustration of, and practice with strategies may have allowed these students to “catch up” with the more advanced learners as concerns strategy usage. Low-intermediate participants showed an increase on the Michigan Listening Comprehension Test (Upshur et al., 1972) of 7.71 points (SD 12.80) and intermediates showed an increase of 9 points (SD 11.63), while high intermediate- and advanced-level participants realized increases of 4.54 (SD 9.50) and 5.83 (SD 6.46) respectively. Along these same lines, Ehrman, Leaver, and Oxford (2003) found that beginners may actually use more strategies than their more advanced counterparts but they may use the strategies more randomly or with less success.

Closer investigation of Part B of the SILL shows that the 14 items represented cognitive learning strategies according to Oxford’s classification (1990; Tseng, Dornyei, & Schmitt, 2006). These are grouped under “Using all of your mental processes” (Oxford,

1990, p. 299). Included are items that ask respondents to consider how whether they try to predict what they will next hear or whether they try to summarize what they've heard in conversation or in a lecture. Other items ask respondents to whether they listen to television shows or movies in English or if they write down notes or messages in English.

Part B also represents the section of the SILL with the highest number of items. The four clusters of listening strategies presented in the interventions included predicting what one might hear, taking notes, summarizing what one has heard, and making inferences based upon what one hears and connecting them to what one already knows. These strategy clusters were all represented within the group of items in Part B. Although strategies presented in the study lessons can also be identified in other parts of the SILL, Part B focused directly on “using all one’s mental processes,” or cognitive processes, rather than “remembering more effectively,” “compensating for missing knowledge,” “organizing and evaluating your learning,” “managing your emotions,” or “learning with others” (p. 299), Oxford’s five remaining classification descriptors for the SILL.

It seems, then, that the lessons participants were exposed to contributed to a heightened awareness of cognitive strategies, as shown by their increased scores on Part B of the SILL. This would, indeed, be a very positive outcome to students. By focusing on and practicing using these cognitive strategies, the sample for this study indicated an increase in not only their awareness but also their use of this type of strategy to help them increase their listening comprehension.

Because Part B of the SILL was where a statistical difference was revealed for level of instruction, differences in mean score increases or decreases from Pre-SILL Part

B to Post-SILL Part B were also computed. One participant's score showed a decrease of 13 points. At the other end of the comparison, two participants' scores showed an increase of 18 points. The mean difference for all participants from Pre- SILL Part B to Post-SILL Part B showed a mean increase of 3.34. As with total score differences, this spread also seems to be quite wide. While I might have expected one or two point differences, I was very surprised with the rather extreme decrease of 13, 9, 7, or even 6 points. In total, 16 participants' scores decreased, ranging from negative 13 to negative 1. Half of the participants who decreased in scores were in the advanced level, with the other 8 spread across levels 3 and 4. No participant in level 2 showed a decrease in scores. Thus, in this set of data, there was also no discernable pattern to the spread of decreased scores by level, other than that the lowest, level 2—low intermediates, had no decreases in scores for this part of the inventory. It seems the low-intermediates showed the most impressive gains in both Part B and total Post-SILL scores. Therefore, particularly for students who were at the lower level of instruction, it appears that explicit teaching of cognitive listening strategies can be of great benefit. Please see Figure 6 for an overview of the score increases and decreases for Part B of the SILL.

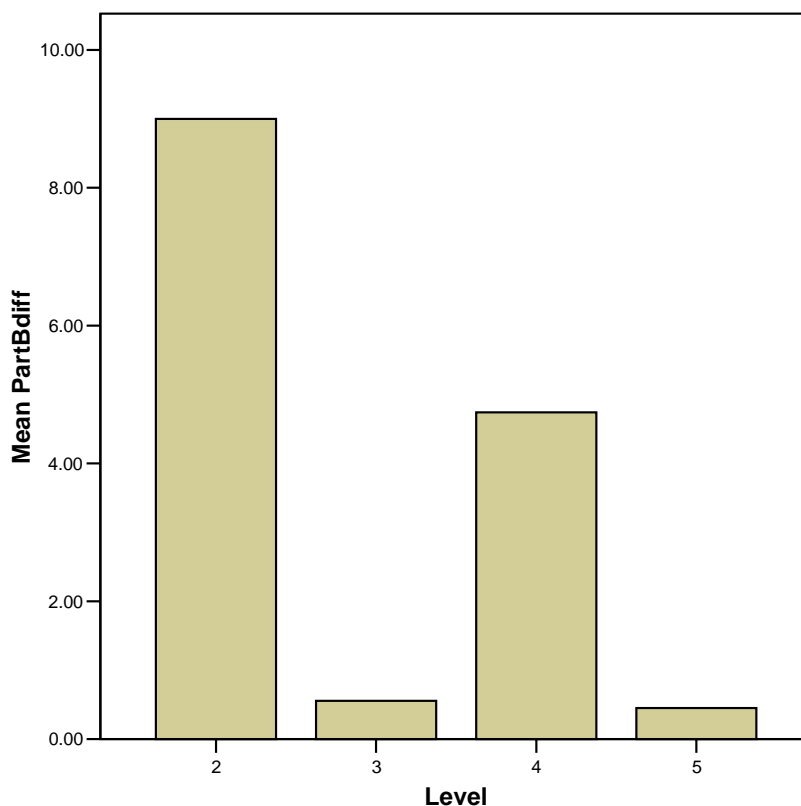


Figure 6. Mean SILL Part B differences by level of instruction

Again, I can offer similar conjecture as to why these types of increases or decreases in scores were evident. It could be that such impressive increases in the Part B section of the SILL can be attributed to heightened awareness of particular strategies. I would like to believe that the strategies interventions helped teach participants new, useful strategies. What I cannot overlook is that participants completed identical inventories within a span of a few weeks; it could be that they were still familiar with the items on the inventory and this familiarity encouraged them to work through it very quickly and confidently. In addition, since so much reading was involved, it could have

been that they were much more familiar with the vocabulary and conceptual content of the inventory the second time around. This could be particularly true of the lowest level group. Their instructor informed me that her group had asked many more clarification questions on the second inventory than they had on the first. Presumably, they were at least somewhat more interested in comprehending the inventory after they had been exposed to the strategies-based interventions.

Students at the intermediate level (designated as level 3) showed great interest in the strategy inventory both times they completed it. There was a lot of discussion of vocabulary as well as how the strategies related to their personal experiences. During and after each of the interventions, this group, the one for whom I was instructor, enthusiastically shared personal experiences and various ways they could use the material they had just viewed and practiced.

A post hoc analysis of variance was performed to examine total Pre- and Post-SILL total scores by individual instructors. This ANOVA produced a significant difference in the mean scores by instructor on the Pre-SILL, $F(7,63) = 3.52$, $p = .003$. On the Post-SILL, however, no significant difference was revealed, $F(7,63) = 1.22$, $p = .31$. This should not be interpreted that one or another instructor was “better” or more successful than the others. It does suggest, however, that while there was a significant difference between one or more instructors’ scores at the beginning of the study, after the four interventions, those participants’ awareness and use of strategies progressed to the point that a significant difference no longer existed. Figure 7 shows the Pre- to Post-SILL difference in mean scores by class/instructor. The mean scores are consistent with scores

on the overall level of instruction, with the biggest gains realized among participants in the low-intermediate class.

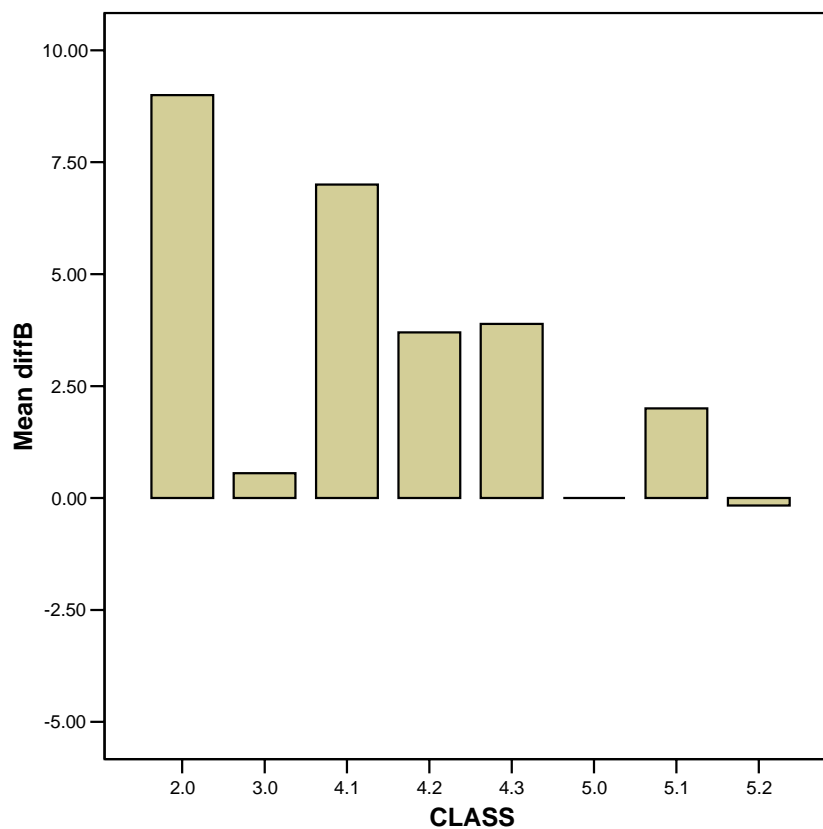


Figure 7. Differences in Pre- to Post-SILL mean scores by class

Note. 2.0 = low-intermediate

3.0 = intermediate

4.1 – 4.3 = high intermediate

5.0 – 5.2 = advanced

Mean diffB = Pre- Post-SILL Part B increased or decreased mean scores

Research Question Three: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when native language is controlled statistically?

No statistically significant differences in Pre- and Post-SILL scores were evident when participants' native languages and proficiency scores were analyzed. As anticipated, a limitation of the study involved language and cultural backgrounds. Arabic speakers comprised nearly 50% of the participants who took part in the study. Because language groups other than Arabic were so varied, as well as so much smaller in number, to compare the mean scores by individual languages or cultural origins would not have been a fair comparison. Eight of the 14 language groups who participated in the study had a single representative. In the majority of cases, individual participants' SILL scores showed increases from pre- to post-inventories; however, no language-based patterns were detected. While it might have been expected that differences would occur because of differing cultural leaning styles (Brown & Kysilka, 2002; Flowerdew & Miller, 2005, Oxford, 1996), which can be related to language spoken, this outcome was not evident in this study. It was expected that a difference between cultural groups who tend to learn more through the study of reading and writing English as compared to those who tend to learn more through speaking and listening might surface, but, in fact, no such patterns were revealed in the study. Perhaps if the cultural groups had been more evenly represented, such a distinction might have been shown.

Research Question Four: Following exposure to a technology-based intervention which includes visual presentation of listening strategies, is there an increase in self-reported strategy use when listening proficiency level is controlled statistically?

I had anticipated that mean Pre- and Post-SILL scores by proficiency level might have shown statistical difference. In several research studies, it has been suggested that learners with higher language proficiency tend to use more strategies than do learners with lower language proficiency (Abraham & Vann, 1987; Berne, 2004; Ehrman, Leaver, & Oxford, 2003; Vandergrift, 2003; Vandergrift, 2004). Tsui and Fullilove (1998), however, did not find this to be the case. In their study, one's level of available background knowledge proved to be key to comprehension of a listening task. In the current study, mean differences in Pre- and Post-SILL scores between those participants designated intermediates and those designated advanced were not statistically significant.

Although it might seem that level of instruction and proficiency level should be identical, this was not the case. As explained previously, I chose a proficiency exam that could be used as a common instrument with the two institutions involved in the study. In fact, neither school based class level placement on this exam; both used more holistic placement criteria. One important reason for this is that, at the two institutions, students are always placed according to their *overall* language proficiency, and the Michigan Listening Comprehension Exam (Upshur et al., 1972) is not a good instrument for overall placement of students within instructional levels, nor is it meant to be used as such. The exam is based on the students' recognition of grammatical patterns in spoken English, which makes it an inadequate instrument for overall placement purposes. In addition, the items on this exam are presented as discrete listening tasks, whereas academic listening

involves listening within the context of a discussion, lecture, or presentation. While the listening exam can be used for a rough estimate of a student's listening comprehension, the more holistic instruments used at each institution seem to be doing a very good job of placing students within appropriate levels of instruction.

Additional Analysis

In the Carrier (2003) study, research showed that when high school students were taught explicit listening strategies, the students' listening ability and comprehension improved. In addition, the students were better able to successfully transfer the strategies to learning in their academic classes. Participants in the current study were asked to complete several surveys, one goal of which was to gain participant feedback on the transferability of the listening strategies they were presented during the course of the study. Participants responded to a three-item survey at the close of each of the four interventions. Please see Appendix A for these surveys. On each, question two asked them to "agree," "somewhat agree," "somewhat disagree," or "disagree" to the following: *Viewing the video about predicting (note-taking, summarizing, making inferences) will help me to use this strategy when I listen to new lectures.* For all four of the interventions, at least 80% of respondents indicated that they either agreed or somewhat agreed with the statements about transferability of the strategies they'd learned during the lessons. I found this to be a very encouraging outcome of the study since most of the participants will be going on to academic programs in the United States.

When asked to complete a ten-item survey at the conclusion of the study and reflect upon the four interventions (See Appendix B), participants in the study indicated

that they were very receptive to the presentation mode for each of the interventions. They were asked to respond to the statement: *The video lessons for listening strategies helped me to learn new strategies I can use when I listen to academic English.* Sixty-six % of respondents indicated that the statement was “usually, almost always, or always true of me.” Similarly, when asked to respond to this item: *The videos of listening strategies effectively showed me how to improve my use of listening strategies,* 66% of respondents provided the same responses as above. This level of affirmation was particularly encouraging to me and seems to indicate that students may respond very favorably to the type of electronic presentation of strategies that was used in this study. In addition, participants’ seemingly enthusiastic responses may reflect their enjoyment of a new or novel approach to the learning and use of listening strategies. Indeed, I personally attended five of the seven classes during the presentation of the first intervention. Participants showed great interest in the lesson and were generally very engaged during the video portion of the lesson.

Questions 2, 3, and 5 of the post-study survey asked specifically about some of the strategy clusters covered in the interventions. Question 2: *Seeing in the video how I can predict what I will hear helped me to use this strategy in my academic listening,* and question 3: *Having pauses in the listening passage to allow me to practice inferring information from the passage helped me to improve my listening skills,* each showed a response of “usually, almost always, or always true of me” for 65% of respondents. Question 5: *Viewing how other learners take good lecture notes helped me to improve the way I take notes,* showed the same affirmative responses by 56% of respondents. Two of the instructors were particularly enthusiastic about the lesson that presented note-taking

strategies and commented that their students had shown immediate improvement in their notes on the next and succeeding note-taking activities in class work. The same instructors commented that they thought that particular lesson was the most helpful of all four presented during the study. The video portion of the intervention addressing note-taking illustrated for participants the development on-screen of actual lecture notes. Students in my intermediate class also reacted very affirmatively to this feature of the intervention. They told me that seeing how the notes might develop while simultaneously hearing the lecture helped them to understand how they could take better notes.

On one of the post-survey items: *Watching the videos was not any more effective in teaching me new strategies than reading the information in my textbook*, 20% of respondents indicated that this statement was “somewhat, usually, almost always, or always true of me.” I took care to draw participants’ attention to the negative wording of the statement by using bold print, and I also used reverse coding of input in my data to reflect the nature of this item. While I would like to take this as an affirmation that students find the electronic presentation to be more effective than reading the information in a text, I’m cautious in doing so. First, the negative wording may have confused some of the respondents; it was the only item out of the approximately 125 inventory and survey items to which they responded that was worded in a negative way. In addition, it seems highly unlikely that students in an intensive English program such as either of the participating programs would be expected to simply read about strategies. Though listening strategies were covered by the text series used by each institution, it can be presumed that instructors illustrated the use of strategies for listening and otherwise interacted with students to assist them in discovering and learning new strategies for

listening. With all those caveats aside, it is encouraging that students found the web-based lessons to be at least, if not more, effective than similarly presented print-based lessons.

Participants were asked to react to a statement about their interest level with the electronic interventions: *The videos of listening strategies were interesting*. Of all the items on the ending survey, this one had the lowest rate of respondents who indicated “usually, almost always, or always true of me,” at 53%. While it might seem encouraging that at least half of the participants believed the lessons were interesting, this doesn’t really tell us much about the value of the lessons to those students! Once again, the novelty of presentation mode may have been a contributing factor to participants’ perceived interest levels. *Overall, viewing the videos on listening strategies was a positive experience for me*, the final survey item, resulted in 72% of participants indicating the statement was “usually, almost always, or always true of me.”

Although it had been anticipated that classroom discussion would accompany each presentation of a new cluster of strategies, I doubt that actually occurred in all classes. Time was very limited for each lesson, particularly for the 50-minute class sessions at the University of Pittsburgh. It was unclear whether there was any consistency in follow-up or discussion of the concepts presented during the four interventions. Nevertheless, when presented with this item: *Discussing the content of the videos with my classmates was helpful for me*, the percentage of respondents who indicated the statement was “usually, almost always, or always true of me” was 73%.

Each of the four interventions for this study was technology-driven. Participants were taken into a language/computer lab setting, or their class met in such a setting all the

time. In either case, students enjoyed “a break” from their typical classroom presentation of listening strategies or listening activities while they were completing the lessons designed for this study. The novelty of presentation mode could have contributed to participants’ overwhelmingly affirmative responses to the survey items. Rost (2007) indicated his agreement that the use of technology in teaching listening skills should be more than just a novel addition to the curriculum. He indicated that if technology doesn’t help instructors to teach more effectively, it shouldn’t be used—a very strong statement with which I agree. In addition, however, he said that a new technology should be appealing to both emotions and reason; if students have positive response to the use of technology, it will help them to meet their goals. In the case of participants’ affirmative responses to the lessons—or interventions—presented during the study, I believe that the lessons helped to motivate participants and to help them approach learning and using listening strategies more efficiently and more effectively.

Recommendations

To gain a better understanding of how students progress when they have sustained explicit training in the use of listening strategies, a study of longer duration is recommended. The current study took place during one term of 15 weeks, with the actual tasks themselves occurring over the course of about 10-12 weeks for most classes. This was an unavoidable drawback in conducting the study in the two intensive English as a Second Language programs. Enrollments are such that it was impossible to follow participants’ progress for a longer period of time. Students at the advanced proficiency level would almost certainly have moved into their academic studies upon completion of

the advanced level; this study made no provisions for following participants' progress past their intensive English study. McGruddy (1998), citing the heavy demands put on learners' cognitive development, came to a similar conclusion that such a study needs to take place over a far longer period of time for students to realize the greatest benefit, and she offered the same recommendation.

A second recommendation concerns determining listening proficiency levels of students. As Chamot (2005) proposed, pre- and post-testing in the areas of "achievement/proficiency, motivation, attitude, and/or self-efficacy" (p. 116) is of great importance in this type of research. While the Michigan Listening Comprehension Test (Upshur et al., 1972) is widely used for placement purposes, the current study points to a need for a more comprehensive leveling of students. Indeed, the publishers of this test recommend using the entire Michigan battery rather than the single listening proficiency piece. The listening comprehension portion of the proficiency exam was chosen as a common testing instrument because the two university programs each used a different, more holistic method for placing students in their respective listening class levels. Consistency in the testing procedure and instruments to determine proficiency levels is strongly recommended. In addition, although it was noted that randomization of participants can be particularly troublesome when research is conducted in regularly scheduled classes (Chamot, 2005), randomizing selection of participants for research in the area of listening strategies would be advisable.

Another aspect of the study that proved problematic was the oversight of the instructors of participating classes. Once again, because two institutions were involved in the study, it became very difficult for me, because I was also teaching one of the classes,

to closely monitor instructors' treatment of the four lessons. In two instances, weekly schedules changed at the program level, making it impossible for individual classes to have their regularly scheduled language lab hours. The result was that students had to join with others they didn't know well and possibly be taught by a teacher with whom they were not familiar. In addition, some of the teachers chose to take an active role in the presentation of the strategies, while others opted to allow students to complete the lesson in a totally self-access mode. To circumvent the variation in treatment of electronic or web-based presentations of strategies lessons, preparing totally self-contained, self-access lessons would be recommended. This might be accomplished by creating a video presentation of the strategy instruction to complement the video presentation of the practice segment for each of the strategy clusters. Allowing for student discussion of the strategies would still be recommended.

In addition, more balance in both proficiency levels and gender is recommended. The ratio of advanced to intermediate learners for this study was approximately 2:1, whether the distinction was drawn through level of instruction or proficiency level. Ideally, that ratio would be closer to 1:1. Though gender was not addressed in this study, it would also be preferable to have a more balanced ratio of male to female participants. Of interest would be to conduct the same or a similar study with an equal number of males and females. Selected studies have shown that females tend to use strategies more frequently than males and that they also tend to use different types of strategies (Ehrman & Oxford, 1989; Macaro, 2000; Oxford & Niykos, 1989). One of the key studies upon which the current one was based (Goh, 2002b), however, did not show that gender made a significant difference in the use of strategies as reported by study participants. Because

web-based materials were used in the current study, it would be of particular interest to investigate results from the perspective of gender.

The difficulty in adequately and specifically defining learning strategies remains. For complete understanding of what constitutes a strategy, continued research is needed (Goh, 2002b, Macaro, 2006). Dörnyei (2005) expressed this need but also indicated that research in the field of language learning has seemed very tolerant of the lack of total understanding of both definition and workings of strategies. He wrote of

an increasing body of research evidence that learning strategies played an important role in L2 attainment and their study offered a glimpse into the subtle mechanisms that constituted the complex process of learning. This was a particularly welcome development for many because the complex of learning had been long seen as a metaphorical ‘black box:’ we could describe what went in (input) and measure what came out (output) without having much of an understanding of what was going on inside. Learning strategies offered the potential of becoming floodlights into this box. The practical significance of this recognition was also augmented by the emerging view that learning strategies could be specifically taught to language learners....” (p. 169-170)

While the current study made no attempt to further define strategies, I was very cognizant of the elusiveness of the definition. It was difficult to determine whose definition to use and whose taxonomy of strategies to draw upon. Because I believe, as does Macaro (2006) that strategies are not individual items, independent of other such items, this study looked at groupings or clusters of strategies rather than at individual,

isolated strategies. While I believe that strategies do exist and are available to all learners of a second or foreign language, whether a learner intentionally or unconsciously chooses to use certain strategies remains a necessary point for further study.

Limitations of the Study and Implications for Future Research

One of the greatest limitations of this research centers on the main instrument used in the study. While I believe the Strategies Inventory for Language Learning (Oxford, 1990) is a very effective tool for the purpose of awareness-raising of listening/learning strategies available to learners of English as a Second Language, I do not believe it is a psychometrically reliable tool to use for the purposes of the study. As Macaro (2001) pointed out, recent strategies research has tended to focus primarily on empowering students to use strategies, to raise awareness of strategies available to them and how to capitalize upon those strategies. Self-report questionnaires, or inventories such as the SILL, are frequently used to measure strategy use (Dörnyei, 2005), with the Oxford (1990) inventory probably the most frequently used one in ESL or EFL studies. “The SILL...focuses on specific strategic behaviors and the scale descriptors indicate frequencies of strategy use (ranging between ‘never’ to ‘always’)” (p. 181). This, according to Dörnyei, means that the inventory approaches self-report of strategy use in behavioral terms, which “means that we cannot assume a linear relationship between the individual item scores and the total scale scores” (p. 181-182). He went on to say that one should not attempt to use the SILL in research that requires psychometric reliability.

In thinking about the way learners tend to use learning/listening strategies, it should be recalled here that learners approach the use of strategies in a very individual

fashion. What one learner may find useful or natural, another will find foreign or even useless. However, patterns have been identified. There is a tendency for more advanced learners to consciously pick and choose the strategies they use according to the task at hand, while less proficient learners often pick strategies somewhat randomly (Ehrman et al., 2003). What can result is that more advanced learners may rely on just a handful of strategies that have proven effective for them, and beginners may have many strategies that they try out at random, with or without success. A beginner, then, may actually use far more strategies than his advanced classmate but use them far less effectively.

In my experience as one of the instructors during the study, my intermediate-level students reacted very positively to the SILL. They often identified with a specific statement, relating how they had reacted in ways similar to the statement. As the term progressed, they sometimes referred back to a situation they had read while they were completing the inventory. I made it a point to draw their attention to several strategies and remind them of their responses. Interestingly, some of the greatest losses in total scores from the pre- to the post-study SILLs occurred in my intermediate class. I did not take this as a negative outcome, however, because I witnessed the greatly improved awareness of strategies with this group of learners over the course of the study. I believe that they exited the class armed with greater understanding and with a wider array of strategies they would be able to use in their more advanced class and beyond. Instead, I prefer to think that, because they had become much more aware of the availability of listening strategies and their personal use of strategies, they were more selective—and honest—in their self-appraisal on the Post-SILL.

Certainly, researchers disagree on the validity of the SILL for research purposes. One study (Oxford & Burry-Stock, 1995) showed convincing data on its psychometric validity. It cannot be disputed that the SILL has been used in many research studies and dissertations with outcomes pointing toward its usefulness in teaching learning strategies. Findings in the current study pointed in this direction also, particularly in the area of cognitive strategies, which Part B represented. I believe, however, that the inventory's greatest strength is in providing a tool for awareness-raising among students. The SILL "may be a useful instrument for raising student awareness of L2 learning strategies and for initiating class discussions" (Dörnyei, 2005, p.183); however, "its use for research purposes is questionable" (p.183).

Another major limitation of the study was the relatively small number (64) of participants. Of the potential one hundred thirty or more students who might have participated in the study, less than half consented to have their data collected and analyzed. While a sample size of 64 would have been adequate had I analyzed total scores on the Pre- and Post-SILL, I had chosen from the beginning to use both this conservative approach as well as a more liberal approach, looking at the six individual levels of the inventories. In fact, results of the analysis of the difference in mean scores by level of instruction on the Pre-and Post-SILL totals showed statistical significance. The analysis of Part B differences in score by level of instruction also showed statistical significance. With a greater number of participants, it is likely that the analyses would have shown statistically significant differences in other parts of the inventory as well. Results of this study, then, have limited generalizability due to the small sample size; however, future studies incorporating a substantially larger sample may look more

closely at the leveling of participants and the resultant effect that might have on use of strategies as reported with a similar instrument.

A third limitation of the study related to the imbalance in cultural and language backgrounds of participants. Approximately 50% of study participants were of one language background, while the other 50% were spread across 13 more. In a number of cases, a particular language background had a single representative in the study. Did the overwhelming majority of Arabic speakers in some way skew results? Although this did not seem to affect outcomes, it would be advisable to have a sample that was more evenly distributed in its cultural/language representation. Here it is beneficial to remember that, in addition to individual learning style differences, learners of different cultures exhibit very different cultural learning styles (Brown & Kysilka, 2002). In my class, a marked difference existed in both quality and quantity of lecture notes when language backgrounds were taken into account, for example. It is to be hoped that with a much larger sample, there would also come a more equal distribution of cultural/language backgrounds.

It was impossible to control for participants' prior exposure to listening strategies instruction or to their propensity to initiate use of the strategies outside of class. It is likely that many participants had experienced similar instruction in prior texts and/or classroom instruction. Certainly, participants who had been students in previous terms in either of the ESL programs represented in the study had used lower levels of the same text series. Presumably, listening strategies had been a point of instruction and practice. In addition, instructors were not questioned as to the amount of time they spent on

strategies instruction *in addition to* that of the interventions. It would be very difficult to control for any of these factors.

Some of the most encouraging outcomes of the study concern the presentation of listening strategies through the web-based medium. Participant feedback from survey items indicated they believed the presentation of clusters of listening strategies to be helpful to them and they expected to have lasting effects from their learning and use of the strategies presented and illustrated. It would be valuable to further investigate this mode of presentation. This study examined neither individual strategies nor frequency of use of individual strategies. However, with the levels of affirmation with the type—or medium--of instruction used in the study, future research using this medium may expose patterns of strategy use by proficiency levels.

Chapter Summary

This final chapter presented discussion, recommendations, and limitations of the study conducted for this dissertation. Sixty-four participants, students in one of two participating institutions completed a 50-item Strategies Inventory for Language Learning (Oxford, 1990) both before and after 4 interventions, which presented to them clusters of listening strategies. Participants also completed pre- and post-study listening proficiency exams for the purpose of proficiency leveling. Level of instruction was determined by their placement into 4 different levels of listening classes, three of these at Duquesne University and two at the University of Pittsburgh. Significant differences were revealed in the analyses of variance (ANOVA) at the .05 level of confidence for Pre- and Post-SILL total scores for level of instruction. In addition, an analysis of covariance

(ANCOVA) revealed a significant difference in Pre- and Post-SILL scores by level of instruction. Analyses of variance (ANOVA) for each of the six parts of the SILL revealed a significant difference for level of instruction on Part B, cognitive strategies as defined by Oxford (1990).

Intervention-final surveys and study-final surveys were administered throughout the study. On each, participants were asked to agree with statements pertaining to the value to them of the interventions or to state how frequently they used the clusters of strategies covered in the web-based interventions. Responses on these survey items indicated a high level of agreement to statements that the lessons were valuable to them or that they would use the strategy clusters in future academic listening activities.

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APPENDIX A

Intervention Final Surveys

Lesson 1 Survey

Listening Strategies Survey: "Global English"

Please circle your response to the following statements.

1 This exercise helped me to better understand the process of predicting what I will hear when I listen to an academic lecture and other spoken messages.

agree somewhat agree somewhat disagree disagree

2. Viewing the video about predicting will help me to use this strategy when I listen to new lectures.

agree somewhat agree somewhat disagree disagree

3. I _____ try to what I will hear when I listen to a lecture or other spoken message.

always most of the time sometimes rarely or never

Thank you for your feedback.

Lesson 2 Survey

Listening Strategies Survey: "What's in a Name?"

Please circle your response to the following statements.

1 This exercise helped me to better understand the process of taking notes for an academic lecture.

agree somewhat agree somewhat disagree disagree

2. Viewing the video about note-taking will help me to use this strategy when I listen to new lectures.

agree somewhat agree somewhat disagree disagree

3. I _____ take notes when I listen to a lecture or other spoken message.

always most of the time sometimes rarely or never

Thank you for your feedback.

Lesson 3 Survey

Listening Strategies Survey: "High Anxiety: Phobias"

Please circle your response to the following statements.

1 This exercise helped me to better understand the process of summarizing ideas from an academic lecture and other spoken messages.

agree somewhat agree somewhat disagree disagree

2. Viewing the video about summarizing will help me to use this strategy when I listen to new lectures.

agree somewhat agree somewhat disagree disagree

3. I _____ summarize what I hear in a lecture or other spoken message, either in my mind or in writing.

always most of the time sometimes rarely or never

Thank you for your feedback.

Lesson 4 Survey

Listening Strategies Survey: "Global English"

Please circle your response to the following statements.

1 This exercise helped me to better understand the process of making inferences when I listen to an academic lecture and other spoken messages.

agree somewhat agree somewhat disagree disagree

2. Viewing the video about making inferences will help me to use this strategy when I listen to new lectures.

agree somewhat agree somewhat disagree disagree

3. I _____ try to infer the meaning of new words and ideas when I listen to a lecture or other spoken message.

always most of the time sometimes rarely or never

Thank you for your feedback.

APPENDIX B

Listening Strategies Surveys

LISTENING STRATEGIES SURVEY

Your ID Number _____ Date _____

Please carefully reflect upon the electronic lessons in listening strategies that were presented in your listening comprehension class this term. We are very interested in your opinions about those lessons.

To complete the survey, read each statement, and then circle the response that most closely describes your agreement with the statement. Note that the responses are the same as the responses you used on the Strategies Inventory for Language Learners (SILL) which you completed during the research study.

1. Never or almost never true of me
2. Usually not true of me
3. Somewhat true of me
4. Usually true of me
5. Always or almost always true of me

NEVER OR ALMOST NEVER TRUE OF ME means that the statement is very rarely true of you.

USUALLY NOT TRUE OF ME means that the statement is true less than half the time.

SOMEWHAT TRUE OF ME means that the statement is true of you about half the time.

USUALLY TRUE OF ME means that the statement is true more than half the time.

ALWAYS OR ALMOST ALWAYS TRUE OF ME means that the statement is true of you nearly all the time.

When you read each statement, think about how well the statement describes you. Do not think about how other people may respond or about what you think the response should be. Remember, there are not right or wrong answers to these questions.

1. The video lessons for listening strategies helped me to learn new strategies I can use when I listen to academic English.

1 2 3 4 5

2. Seeing in the video how I can predict what I will hear helped me to use this strategy in my academic listening.

1 2 3 4 5

3. Having pauses in the listening passage to allow me to practice inferring information from the passage helped me to improve my listening skills.

1 2 3 4 5

4. The video that demonstrated how to listen for new vocabulary helped me to improve my use of this strategy.

1 2 3 4 5

5. Viewing how other learners take good lecture notes helped me to improve the way I take notes.

1 2 3 4 5

6. The videos of listening strategies were interesting.

1 2 3 4 5

7. The videos of listening strategies effectively showed me how to improve my use of listening strategies.

1 2 3 4 5

8. Watching the videos was not any more effective in teaching me new strategies than reading the information in my textbook.

1 2 3 4 5

9. Discussing the content of the videos with my classmates was helpful for me.

1 2 3 4 5

10. Overall, viewing the videos on listening strategies was a positive experience for me.

1 2 3 4 5