Learner application of strategies in a strategies-focused ESL listening curriculum

by

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Abstract

This thesis presents a study of language learning strategy use in a working ESL listening curriculum that incorporates explicit strategy training. The main goal of this study was to investigate listening strategy use in a regular classroom setting as opposed to a controlled experiment. Thus, strategy training was not prescribed as a treatment for experimental purposes, but rather already existed as part of the normal classroom routine. Specifically, this study sought to answer: 1) whether students would use those strategies they learned about; 2) whether there would be a difference in frequency of strategy use between authentic texts and those created specifically for language instruction; 3) whether those who typically use strategies would perceive them to be easier than those who didn't; and 4) whether those who typically use strategies would perform better on listening comprehension exercises. Participants were those students who the host institution placed in two sections of its high-intermediate ESL listening course, and as such constituted a naturally occurring classroom group. Data on learning strategy use was elicited through written retrospective reports students wrote in six three-question surveys that accompanied classroom listening exercises. Key findings were that learners do not consistently report that they use those strategies for which they receive explicit training; learners do not report the use of social and affective strategies; students report significantly less strategy use on authentic exercises than they do on exercises from the course materials; those who typically use strategies found exercises to be easier, overall, than those who didn't typically use them; and that there was no reliable relationship between strategy use and performance on multiple choice comprehension questions. The study confirms Donato & McCormick's (1994) claim that instruction in "encapsulated" strategies will not necessarily lead to strategy use and concludes that literature on language learning strategies tends to neglect the external variables such as input complexity and social context that inherently exist in a natural classroom language learning setting.

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0. Introduction

0.1. Background: Origin and definition of learning strategies concepts

The simplest definition of learning strategies comes from Chamot (1995, p. 13): "Learning strategies are steps, plans, insights, and reflections that learners employ to learn more effectively." Beginning in the mid-1970s, second language researchers sought to describe the strategies effective language learners employ (Naiman, Frohlich, Stern and Todesco, 1978, 1996) and more importantly began to suggest that instructors could explicitly train less effective learners to use similar strategies (Rubin, 1975). In the following two decades, researchers applied analytic frameworks to these descriptive studies (Bialystok, 1981; Rubin, 1987; O'Malley & Chamot, 1990). Using these frameworks, researchers sought links between strategy use and language acquisition (Politzer & McGroarty, 1985), as well as improved classroom language learning and testing performance (Rubin and Thompson, 1996; Kim, 2000; Ozeki, 2000; Taguchi, 2001). This in turn motivated proposals (Mendelsohn, 1994, 1995) for materials that incorporate explicit instruction in listening strategies (Lebauer, 2000; Hartmann & Blass, 2000) and course curricula like the one I studied here (University of Pittsburgh English Language Institute, 2002).

0.2. Statement of problem

Strategy training concepts have already made their way from theory to pedagogical practice. Researchers have fairly well established that successful language learners use effective strategies through descriptive studies that systematically categorized and labeled those strategies. Controlled experiments have suggested that explicit training in these strategies may be associated

with improved performance. Based on this research, applied linguists have proposed methods of teaching these strategies in a classroom context. Institutes like the one in the present study have incorporated aspects of these proposals into their curricula. However, a natural classroom context presents variables not present in an experimental setting (Donato, 1994). Still missing from the literature is a study of a working curriculum that incorporates explicit strategy instruction. This thesis offers data intended to meet this need.

0.3. Motivation

Before we can consider calls for explicit strategy training to be valid, we must demonstrate that, in a genuine classroom context, learners are aware of and do indeed use the strategies for which they receive explicit training. My primary motivation for this study was not to test the relationship between conscious application of strategies and listening performance in a controlled experimental setting, but rather to find out whether students actually apply these strategies in a naturally occurring classroom sample group where strategy training is part of the normal routine of classroom events. As such, I made every attempt to allow classroom events to occur much the way they would in the absence of a study. Other than procedures for administering several classroom comprehension exercises and strategy use surveys that served as the main data collection instrument in this study, I provided the classroom instructors with no special instructions or advice in terms of how to conduct the course. They conducted the course in the manner prescribed by the course curriculum and according to their own training and background in the teaching of English to speakers of other languages. The curriculum, in turn, had already been influenced by research promoting the explicit instruction of learning strategies, specifically those designed to aid second language students in listening.

Furthermore, it is important to conduct studies like the present one to investigate how pedagogical theories actually work in the social context of a natural classroom setting. Much of the previous research on listening strategies has assumed that the learner's goal in listening is simply to comprehend the information received through aural input. Donato (1994, pp. 34-35) refers to this perceived goal of "sending and receiving linguistic tokens" as the "message model". As he points out, "the problem with this theoretical orientation is that it only *superficially* recognizes the influence of the social context on individual linguistic development."

0.4. Research Questions

The study aims to answer the following questions:

1. Will participants report that they apply the conscious strategies taught in a strategies-focused listening curriculum in an English for Academic Purposes context?
2. Will there be any difference in reported strategy use between "authentic" texts and "created" texts?
3. Will participants who report using strategies also report perceiving the listening texts to be easier than those who report no strategy use?
4. Will participants who report using strategies perform better than those who don't on a measure of their listening comprehension?

0.5. Significance

The present study aims to contribute to general research on learning strategies and research specific to listening strategies by providing an account of one context where strategy training is part of the normal classroom routine. Though this study does not provide conclusive answers about *why* learners do or don't apply strategies that they learn through explicit training, it does

make some suggestions as to *which* strategies they apply and in which situations they apply them. This information could be used for two purposes: 1) The host institution may use it in curriculum development or teacher training; 2) Future researchers may find the starting point for other strategy use studies.

0.6. Delimitations

The present study was delimited to the 37 students enrolled in the high-intermediate listening course at the University of Pittsburgh's English Language Institute. Furthermore, for the comprehension measures, I have excluded data from participants with absences.

0.7. Limitations

The study has the following recognized limitations:

1. The measures of listening performance used in this study were classroom exercises developed with course-specific needs in mind. They are not generalizable outside of the context of this curriculum.
2. The cultural makeup of a sample group such as the one studied here may be highly variable and difficult to replicate, also making generalization difficult.
3. The instrument with which I measured strategy use relies on retrospective self-reports from participants, such that it only demonstrates *conscious, reported* strategy use. Furthermore, this methodology does not account for other *non-reported* strategies which I strongly believe to have occurred, such as translation or substitution (selecting alternative approaches – e.g. copying from the person sitting next to you – to complete a task) (O'Malley & Chamot, 1990).

4. Classroom observations were not a part of the study, which means that I had to rely on instructors' retrospective reports to confirm whether they actually explicitly taught the strategies represented in the materials and curriculum.

0.8. Paper overview

This thesis has four chapters. In the first chapter, I review literature covering the body of research into learning strategy training. This includes the theoretical underpinnings of learning strategy research; the descriptive research on second language learners' use of learning strategies; the literature proposing the explicit instruction of learning strategies in ESL listening courses; and previous treatment studies testing the effectiveness of strategy training. The second chapter describes the design of the study I conducted, and the third presents the results of that study. In the fourth chapter, I will discuss these results and their implications for classroom teaching. Within this final chapter, I will also propose some directions for future research.

1. Research on learning and listening strategies

1.1. Theoretical underpinnings of learning strategy research

Most literature in explicit listening strategy training is related to two overall developments in second language instruction. Most directly, it is related to cognitive and metacogntive learning models stemming from the three-phase model Anderson (1985, 1995) proposed, and to Flavell's (1979, p. 909) concept of metacognition, or "knowledge ... about cognitive phenomena". Indirectly, it is related to calls for a return to more explicit instruction, motivated by critiques of Krashen's (1985) input hypothesis.

In Anderson's framework, learning begins first in a "cognitive stage", in which learners are introduced to declarative knowledge about *how* to execute a task. After this, the learner goes through an "associative stage" in which "errors in the initial understanding are gradually detected and eliminated" and "the connections among the various elements required for successful performance are strengthened" (Anderson 1985; Anderson, 1995, p. 274). The learner begins to apply the declarative knowledge to real tasks, and this declarative knowledge gradually becomes more automatic "procedural knowledge". In the final "autonomous stage", learners may lose access to and no longer be able to verbalize the formerly declarative knowledge they began with.

Most cognitive theories of strategy training in language instruction are closely related to Anderson's concept of cognition because they view language learning – specifically listening, in this case – as a form of skill acquisition (O'Malley & Chamot, 1995, pp. 25-35) not unlike other forms of cognition and learning. As I will show later using examples of frameworks for listening

strategies training, the motivation for explicitly instructing students in strategy use is to provide them with declarative knowledge in the form of steps for managing and executing a task, in the hope that this knowledge will, with time and practice, become more automated and transformed into procedural knowledge.

This cognitive perspective on language learning is in sharp contrast to Krashen's (1981) input hypothesis, and this contrast forms a secondary motivation for strategy training. Sharwood Smith's (1981) notion of "consciousness raising" may be seen as important to the philosophy that instruction provides learners not only with practice in understanding meaning in an L2, but also increases their awareness of the system used to convey that meaning. For strategy theorists such as Mendelsohn (1994), this philosophy includes strategies for interpreting, managing and evaluating one's own use of that system. O'Malley and Chamot (1990, p. 80) provide a concrete illustration of the contrast between cognitive theory and Krashen:

> What cognitive theory indicates is that awareness and conscious control depend on the familiarity of the skill being applied and the nature of the information that is processed, not whether the information is learned in a classroom or in a supposedly natural language environment, as Krashen suggests. ...
>
> Thus, where Krashen's linguistic theory predicts unconscious learning, cognitive theory predicts awareness.

Specific to language comprehension, Anderson (1985) presents a three-stage comprehension process, referring to the stages as (a) perceptual processing; (b) parsing; and (c) utilization. In their application of Anderson's model, O'Malley and Chamot (1990, pp. 34-35) interpret *perceptual processing* as the process of focusing attention on an oral or written text and committing parts of it to short term memory. In *parsing*, the learner uses lexical and syntactic items in a text to "construct meaningful mental representations" of what they have heard or read.

Finally, in the *utilization* stage, learners relate these representations back to elements of declarative knowledge stored in long-term memory.

If we define the process of listening, then, in the context of Anderson's (1995) language comprehension process, we could view it as follows: The listener starts off with an awareness of which elements of spoken information to focus on and the ability to extract those elements from the speech stream (*perceptual processing*). The listener then decodes the phonological and syntactic information received through aural input into meaningful representations (*parsing*). Finally, comprehension necessitates relating what one has heard to what one already knows (*utilization*).

These last two stages may have a profound influence on the types of strategies learners use in aural comprehension: If they rely upon individual phonological segments or syntactic elements to understand the meaning of input, then they are relying on so-called *bottom-up* strategies whereas if they make use of their prior knowledge to help predict meaning or fill in gaps in what they heard, they are using *top-down* strategies. *Top-down*, according to Morley (2001, p. 74), refers to a listener's "ability to bring prior information to bear" when seeking to understand what was heard. This includes making predictions and inferences about a message's details within the context of its overall main idea the listener's existing knowledge about the subject. *Bottom-up* refers to tactics "in which the understanding of the 'heard' language is worked out proceeding from sounds to words to grammatical relationships to lexical meanings" (Morley, 2001, p. 74) This means the listener pieces his or her understanding together from the message's basic lexical, syntactic and phonological building blocks.

Thus, using a top-down listening strategy implies either starting with the *utilization* stage and using prior knowledge to assist one in building representations of meaning based on context or experience, or using prior knowledge to determine in advance which parts of the aural input received in the *perceptual processing* stage are important to building representations of meaning. Using a bottom-up strategy means the actual processing of meaning starts from the *parsing* stage and that representations are built from scratch before acting upon them.

1.2. Cognitive theory and 'goal directedness'

The notion of "goal-directedness" is central to the application of Anderson's model to language learning. Several second-language researchers who adopt cognitive theory as a basis for strategy research point out that goals are an important part of the process of choosing a strategy (Goh, 1998, 2002; Mendelsohn, 1995; Oxford, 1990). Flavel (1979, p. 907) operationalizes goals as the "objectives of a cognitive enterprise" and strategies as "the cognitions or other behaviors employed to achieve" those goals.

This idea of a goal-strategy relationship represents a weakness in the way a number of second language researchers have interpreted Anderson's cognitive theory. To begin with, it presumes that the listener's main goal in strategy use is to improve listening comprehension (Oxford, 1990; Mendelsohn, 1995). As Donato and McCormick (1994) point out, learners may have other sub-goals in mind that may actually be detrimental to what Oxford (1990, p. 9) describes as the ultimate goal of "communicative competence". For example, both the sub-goals of *contributing to a discussion of the main idea* and *satisfying the basic requirements of the course* might lead a learner to rely on a strategy of *directed attention.* The former sub-goal may be complementary to

the goal of "communicative competence." *Satisfying the basic requirements,* on the other hand, might represent a goal of avoiding communication rather than developing it. Thus, cognitive theory only addresses learner-internal variables and not the sociocultural variables that may exist within a language learning classroom (Donato, 1994; Donato & McCormick, 1994).

Sociocultural theories of learning seek in part to address these shortcomings in strategy theory. Lantolf and Appel (1994), applying elements of Vygotsky's (1978) activity theory, provide a sociocultural framework for second language research. Within this framework, classroom language learning is viewed from activity theory's three hierarchical levels: *activity,* at the highest level, represents the "social institutionally determined setting or context based on a set of assumptions about the roles, goals, and means to be used by the participants in that setting" (Lantolf & Appel, 1994, p. 17). *Actions*, at the next level, is where the "process is subordinated to a concrete goal" (Lantolf & Appel, 1994, p. 18-19). *Operations*, at the lowest level, determines "the means, physical or mental, through which an action is carried out" (Lantolf & Appel, 1994, p. 20). Important to Vygotsky's (1978) theory was the notion of *mediation* either in the form of symbols, which includes language, or of a physical tool. For language learning, Donato and McCormick (1994, p. 456) see the following implications for *mediation*:

> Mediation is, thus, the instrument of cognitive change. This mediation can take the form of the textbook, visual material, classroom discourse patterns, opportunities for second language interaction, types of direct instruction, or various kinds of teacher assistance.

In the present study, all data collection, recording, and analysis took place within the context of Anderson's cognitive model. However, in interpreting the results, I will refer to sociocultural

theory in order to propose possible explanations for the phenomena the study's cognitive framework cannot account for. This should reflect my belief that cognitive learning theory and sociocultural theory complement each other rather than compete with each other when it comes to analyzing learners' use of language learning strategies.

1.3. Frameworks for describing strategies

Cognitive theory proves quite useful for describing and categorizing strategies. Its systematicity lends itself well to forming typological frameworks to analyze the construction of various learner strategies, and for characterizing the strategies represented in language learning materials or curricula. As I will explain in more detail in Chapter 2, it is for these reasons that I chose cognitive theory as the methodological paradigm for the present study.

Based in part upon their observations of strategy use by second language learners, four researchers in particular have developed rather extensive taxonomies of strategies. I will discuss two of these, Rubin (1987) and Oxford (1990), briefly as background for some of the past studies I will describe. I will describe the third, by O'Malley and Chamot (1990), more in depth because it forms the basis for the observational methods and data analysis methodology I used in my own study.

Rubin's (1987, pp. 23-27) typology divides strategies into four main categories: cognitive learning strategies, metacognitive learning strategies, communication strategies and social strategies. In general, cognitive learning strategies are those the learner uses while a task is in progress, while metacognitive learning strategies are those the learner uses to "oversee, regulate or self-direct language learning". Rubin does not directly consider communication strategies to

be *learning strategies* because, although "they may lead to learning, the purpose for their use is better communication." Likewise, social strategies are those which may lead to opportunities to learn language through interaction with others, but are not necessarily *learning strategies* themselves.

These distinctions, designed more for syllabus writers than for researchers, seem problematic if this typology is to be used to observe learning strategies, because they beg the question of where one draws the line between a *learning strategy* and a strategy that leads to use of a learning strategy. Oxford's (1990, p. 1) definition of language learning strategies is much clearer. In her view, "Learning strategies are steps taken by students to enhance their own learning." In other words, if learners use them for the purpose of improving their language learning, then they are learning strategies.

Oxford's (1990, pp. 14-21) typology divides learning strategies into two main categories and six subcategories. Under direct strategies "for dealing with new language", we find the subcategories of memory strategies, cognitive strategies, and compensation strategies. Under indirect strategies "for general management of learning", we find metacognitive strategies, social strategies, and affective strategies. Mendelsohn (2003) proposes that writers use Oxford's inventory when designing strategy-oriented materials. For research purposes, however, Oxford's six subcategories are perhaps still too fine to be observable. Particularly in her main *direct strategies* category, it is difficult to distinguish between the subcategories. For example, what is the difference between "reviewing well", which Oxford considers a memory strategy, and "practicing", which Oxford classifies as a cognitive strategy? Why can't "guessing intelligently",

which Oxford calls a compensation strategy, simply be an example of "analyzing and reasoning", which is another cognitive strategy in Oxford's typology?

O'Malley's and Chamot's (1990) framework is most appropriate as a research model because it reduces all strategies to three main categories: cognitive, metacognitive, and social or affective strategies. What is more, they apply this paradigm to actual data they collected in various studies. This is not to say that their typology is without overlap or ambiguity, but it at least attempts to limit distinctions to where they are truly distinct, and it is far easier and therefore more useful for analyzing classroom research data. As I will explain in more detail in the *methodology* subsection, it is for these reasons that I chose their framework as a basis for evaluating my data.

O'Malley and Chamot (1990) create a three-category strategies framework – *metacognitive, cognitive* and *social / affective* – based on the framework developed by Brown and Palinscar (1982) and on Anderson's (1985, 1995) cognitive model. They view Anderson's model as a way of explaining the transfer of declarative knowledge into automated skill, which is their basis for explaining strategy use in language learning: "...the way in which declarative knowledge is organized in memory may have a substantial impact on the L2 learner's ability to transfer it effectively and accurately into the new language." (O'Malley and Chamot, 1990, p. 71). I have borrowed this three-category approach in order to explain and describe the use of strategies by learners in my study, classifying each tactic students report using according to these three categories.

Although there is some overlap in the categories O'Malley and Chamot create, these three main types of categories generally have different characteristics. In general, they define metacognitive strategies as those learners use to manage execution of a task. This may include:

- forming a plan of action for completing a task;
- monitoring one's attention to a task or making a conscious choice to only focus on specific aspects of it;
- and self-evaluation of one's performance or comprehension on a task.

Cognitive strategies, by contrast, are actual on-line, real-time tactics for executing a task. Among these, O'Malley and Chamot include:

- rehearsing or repeating items from the task;
- organizing or classifying information while the task is in progress;
- making inferences about the information;
- summarizing or synthesizing the information gained;
- deduction;
- making use of visual images to complement information gained through other modes;
- transferring linguistic knowledge gained through other linguistic tasks to the current one;
- and elaboration, either by linking information in the task to other points within the task or linking the information gained to prior background knowledge about the subject.

It seems that these *cognitive* and *metacognitive* strategies are generally top-down oriented, because they frequently either involve applying background knowledge or *schemata* as a starting point for building representations of meaning (Long, D., 1990) or they involve listening for larger chunks of language and relying on this background knowledge to fill in the gaps (O'Malley et al., 1989).

Under the heading of social and affective strategies, O'Malley and Chamot (1990) include the following:

- cooperation with others to solve a problem or find an answer;
- asking clarification questions or eliciting an explanation from an instructor or mentor;
- and self-talk to reassure oneself or offer oneself a reward or external purpose for completing the task.

Figure 1.1 on Page 16 contains an inventory of strategies I adapted from O'Malley and Chamot (1990, pp. 137-139) and consulted when analyzing the listening materials and data in my study. Figure 1.1 divides these strategies into the same three categories and provides a definition of each as it pertains to listening skills. I will explain the application of this inventory in the methodology subsection of Chapter 2.

Metacognitive Strategies	*Cognitive Strategies*	*Social / Affective Strategies*
planning: Previewing the organizing principle of a task or planning around the parts, sequence, main ideas, or language functions in a task	**Elaboration:** relating what one hears to prior knowledge, relating different parts of the task to each other; or relating personal experience to what one hears	**questioning for clarification:** asking for explanations or rephrasings of the materials; asking for clarification; posing questions to oneself
directed attention: Deciding in advance to focus on a main idea, ignoring irrelevancies; consciously keeping attention focused	**resourcing:** using resources available about the L2, including dictionaries, textbooks, or previous work	**cooperation:** working together with peers to solve problems, pool information, or model
selective attention: deciding in advance to focus on specific aspects of a task and attending to specific aspects of the text while listening	**deduction / induction:** in the course of a task, consciously applying rules one has learned or has independently developed	**self-talk**: reducing anxiety by using mental techniques to make one feel more confident
self-evaluation: self-checking of one's own ability to perform the task. May include: performance evaluation; ability evaluation; strategy evaluation; evaluation of one's own language repertoire	**note taking:** writing down key information in abbreviated form, including the use of symbols, graphics, or numerical information	**self-reinforcement:** providing personal motivation by arranging rewards for oneself when a task has been successfully completed
self-monitoring: checking, verifying, and self-correcting comprehension while listening. This may include comprehension monitoring; auditory monitoring (checking based on how something "sounds"); style monitoring; evaluating the effectiveness of strategy use; evaluating a plan's effectiveness; and double checking	**Inferencing:** using available information to guess the meaning of unfamiliar parts of the task, to make predictions about information expected to come later, or to fill in missing information	
problem identification: identifying the aspect of a task to be dealt with in order to improve comprehension	**Substitution:** selecting an alternative approach to a task	
self-management: consciously arranging for conditions thought to improve comprehension	**repetition:** repeating a "chunk of language" to oneself while listening	
	summarization: synthesizing what one hears in the form of a mental or written summary	
	Translation: translating input into a language one knows better than the target language	
	transfer: using linguistic knowledge – such as grammatical, lexical, or phonological information – to facilitate understanding	
	grouping: ordering or classifying the information heard while listening	

Figure 1.1: ***Inventory of language learning strategies, adapted from O'Malley & Chamot (1990, p. 137-139)***

1.4. Descriptions of strategies effective learners employ

Rubin (1975) laid the groundwork for future studies in learning strategy use by proposing seven qualities of good language learners. Rubin (1975, pp. 44-50) contended that there was "too much attention on the input to the learner and too little on what is going on in the learner himself" and that language pedagogy could explicitly promote the use of appropriate strategies. A summary of these proposed seven strategies of good language learners appears in Figure 1.2.

Good language learners...

1. ... are willing and accurate guessers;
2. ... are driven to communicate;
3. ... are uninhibited;
4. ... attend to form;
5. ... practice;
6. ... monitor their own speech and that of others;
7. ... attend to meaning.

Figure 1.2: ***Profile of the "Good Language Learner" according to Rubin (1975, p. 45-47)***

Rubin's inventory of *good language learner* strategies, along with a similar inventory by Stern (1975), was followed by studies to test her proposal and to systematically describe those strategies used. Naiman et al. (1978, 1996) compared the language learning strategies of adults who described themselves as "successful" language learners with those who described themselves as "unsuccessful". Naiman et al. declared Rubin's (1975) and Stern's (1975) inventories largely valid and added that a tolerance for ambiguity and "field independence" also

seemed to play a major role in effective language learning (Naiman et al., 1996, p. 218). Following these proposals, researchers began to systematically categorize the repertoire of strategies students use and the general approach of these strategies (e.g. *metacognitive*, *cognitive*, or *social/affective*).

Bialystok's (1981) study of 157 10th- and 12th-grade L2 French learners in Toronto compared learners' responses on strategy-use questionnaires to their performance on a standardized test. Out of eight possible factors, she found the strongest positive correlation between performance and the strategy of functional practice, with some positive relationship also observed between performance and monitoring. In other words, those learners who actively sought out opportunities to use their L2 in meaning-focused social interactions performed the best. In O'Malley and Chamot's (1990) terms, this would mean that learners who used strategies in the social or affective category were the most effective.

O'Malley, Chamot, Stewner-Manzanares, Kuepper and Russo (1985a), using the inventory later summarized by O'Malley and Chamot (1990), focused on learning strategies used by beginning and intermediate high school ESL learners, and found that the intermediate level students used more metacognitive strategies than lower level students. They also found that higher level students relied more on inferencing strategies – using contextualization cues to help place a word in context. Similarly, and specific to listening strategies, Goh (1998, 2002) found that higher ability listeners had a wider repertoire of strategies, and in particular, more frequently used metacognitive strategies such as planning, monitoring, and evaluating. Lower ability listeners, on the other hand, were "conspicuously lacking in metacognitive tactics", although many of them

had a few cognitive strategies that they reported employing frequently. These findings imply that the difference between higher ability listeners and lower may lie in the ability to manage their own learning; higher ability listeners not only have good on-line skills for processing a task in progress, but also are able to prepare for and evaluate their own success on the task.

Specific to listening strategies, O'Malley, Chamot and Küpper (1989, p. 427) found that more effective listeners seemed to be better at "self-monitoring, or checking one's comprehension or production while it is taking place" and that they depended more on top-down strategies, listening for sentence-, phrase-, or passage-level chunks rather than fixating on individual words or sounds. Taguchi's (2001) study of ESL listening test-taking strategies among L1 Japanese learners also suggested that the difference may lie in learners' use of top-down rather than bottom-up strategies. In addition, higher-proficiency listeners reported less nervousness about a listening task, and more higher- than lower- proficiency listeners used socio-affective strategies such as self-talk to help lower their test anxieties.

1.5. Sociocultural theory and language learning strategies

With the exception of Bialystok (1981), the studies mentioned so far make at best only cursory mention of the category of social and affective strategies. To review, Bialystok found a strong correlation between functional practice –seeking out opportunities to use the target language in natural, social contexts – and L2 performance. This finding is of particular interest in light of later studies that found that L2 learners, at least not immediately, do not recognize functional practice as a strategy that might help them with language learning (Nyikos & Oxford, 1993; Donato & McCormick, 1994).

In a qualitative study of a college-level French classroom, Donato and McCormick (1994) proposed that strategy training alone was not sufficient to promote learner application of effective strategies. In a curriculum that did not incorporate explicit strategy instruction, the study monitored students' strategy use by analyzing student self-assessment portfolios that were part of the course curriculum. A key finding of this study was that students did not immediately recognize natural interaction with others in the target language – "functional practice" in Bialystok's (1981) terms – as a strategy to improve their language learning. Over time, however, the L2 French learners began in their portfolios to reflect on social interaction as a technique they were using in order to aid their own learning. Donato and McCormick (1994, pp. 462-463) conclude that the portfolio assignment served as an important mediation device, which sociocultural theory views as essential to activating "higher psychological processes" (Vygotsky, 1978) and propose that such mediation devices are necessary in order to allow learners to "evaluate past knowledge for relevance through self assessment; 2) clarify and set goals, 3) select effective strategies to enhance task performance, and 4) provide concrete evidence of strategy use." Training in individual strategies alone, they claim, is not enough to promote strategy use. Rather, "the classroom culture itself" must be strategic. Rost and Ross (1991) also proposed this as one possible explanation for their finding that learners performed better on comprehension exercises when provided with explicit instruction in social and affective strategies rather than just cognitive and metacognitive strategies.

1.6. Strategy use and L1 Culture

Braxton (1999), in four recent qualitative case studies, proposed a link between L1 classroom culture and strategy use. However, Braxton's (1999, p. 285) specific proposals that Hispanics and Arabs have "extroverted" learning styles while Asians are more "introverted" seem to play

more on the common, superficial ESL classroom stereotypes than propose sound, research-based hypotheses as to how L1 classroom culture plays a role in the types of strategies learners might choose in an L2 context. This would seem to be a symptom of the problem Politzer and McGroarty (1985, p 119) proposed with research that had been conducted up to that point in language learning strategies:

> Some of the good language learning behaviors discussed in recent publications may indeed be ethnocentric, or at least lead to gratuitous advice that students, depending on personal characteristics and above all cultural background, may find difficult or impossible to follow.

On a similar note, recognizing the negative attitudes that the Japanese students in her study might hold toward explicit strategy instruction, Ozeki (2000) stresses that any syllabus that includes strategy training must also include an explanation for students of the *value* and *purpose* of strategy instruction.

In the context of sociocultural theory, this presents a fundamental problem for strategy instruction: If students have to be told of the value and purpose of explicit strategy training, will improving listening comprehension remain the goal behind using strategies, or will the goal become satisfying the instructor by doing something he or she has deemed important? If the latter is the case, will applying a strategy have any effect on performance? Here, a sociocultural *mediation* device becomes essential to keeping the cognitive *goal* focused on the task of language learning.

1.7. Structural perspectives

It should be noted that cognitive learning theory and sociocultural theory are not the only angles from which to investigate influences on language learning strategy use. In an early study of listening strategy use by effective and ineffective listeners, DeFillipis (1980, p. 142) proposed that strategy choice was due in part to knowledge of the L2 grammar, phonology, lexicon, and working memory. These early findings in strategy research lend support to studies such as Koda (1993) and Harley (2000), which also suggested that syntactic and phonological processing play a role in strategy choice. In a study of reading comprehension, Koda (1993) found that L1 English, Chinese and Korean learners tended to transfer syntactic knowledge from their L1 when learning to read Japanese, with English and Chinese relying more on their knowledge of canonical word order and Korean speakers using knowledge of particle case marking to help them process the text. In listening comprehension, however, Harley (2000) found that L1 did not play a significant role in strategy choice. Rather, Harley proposes that L2 learners in general, regardless of age and L1, are more likely to attend to prosody than to syntactic cues.

In the context of L2 listening, angles such as those investigated by Koda and Harley are highly underexplored. Furthermore, it should be noted that recent research suggests both instructors and students tend to overestimate the role *rate of speech* plays in contributing to a text's difficulty. Derwing and Monro (2001) find that even non-native speakers tend to prefer a natural rate of speech; *slower* apparently does not necessarily mean *easier,* which suggests that the structural perspectives described here play an important role in strategy use. Through the act of training learners in strategies for processing *meaning*, one presumes that they have the ability to segment and parse the speech stream sufficiently enough to extract that meaning. Though this thesis was

not designed to investigate this topic, in the discussion chapter I will suggest possible areas of future research from these perspectives based on the findings of the present study.

1.8. Studies of strategy training

Based on her results, Bialystok (1981, p. 34) proposed two questions for further investigation:

> First, it needs to be demonstrated that second language learners can be taught to use these strategies in systematic ways ... second, that such formal learning of the strategies has the desired effects on second language proficiency.

These questions, along with the recent proposals for explicit strategy instruction, formed the motivation for several later studies.

In the context of listening comprehension, the following are some studies that have attempted to answer these questions.

In a companion study to their earlier descriptive study, O'Malley et al. (1985b) found some improved performance associated with explicit strategy instruction, but their results left open the question of whether these effects were durable. Using two treatment groups and a control group, the study found that those students who received metacognitive or cognitive strategy training performed significantly better on daily tests of listening comprehension. However, on a delayed post test, the treatment groups were not significantly different from the control group.

Chamot and Küpper (1989) remind us that training *students* in strategy instruction also requires training *instructors* in strategy instruction. In this study, which provided students of L2 French

with explicit listening strategy instruction, students reported "feeling confused by being exposed to too many strategies at the same time" (Chamot, 1995, p. 20). In a later report, Chamot (1995, p. 21) attributed the study's weaknesses to "a lack of thorough grounding of the teachers in the how and why of strategy instruction." Rubin, Quinn & Enos (1988) also found instructor training to be a potential intervening variable in the effectiveness of strategy training. Berne (1998) in a study comparing L2 listening research with classroom pedagogy, confirmed that many instructors were not clear on the purpose of explicit strategy instruction, among other elements of listening research.

In a longitudinal study of L2 Russian listening comprehension, Thompson and Rubin (1996) found success in providing college-level students with explicit instruction in the metacogntive strategies of planning, defining goals, self-monitoring and self-evaluation, as well as the cognitive strategies of inferencing, linguistic transfer, repetition, and resourcing. (For specific definitions of these strategies, see Figure 1.1 on Page 16.) In this study, students in the treatment group performed significantly better than the control group in a chi-square test. However, it concerns me that Thompson and Rubin do not account for potential instructor effects arising out of the fact that the control and treatment groups were taught by two different instructors: It's possible, of course, that the treatment group instructor was simply a better language teacher – strategy training or no strategy training. O'Malley et al. (1985b), by contrast, were careful to mitigate this danger by having three instructors rotate teaching duties over both treatment groups and the control group.

In an unpublished doctoral dissertation, Ozeki (2000) conducted a two-phase study of strategy use by an all-female group of L1 Japanese EFL learners in Japan. In the descriptive phase of her study, Ozeki found that participants rarely used metacognitive strategies and relied heavily on the cognitive strategy of *translation*. She also found that listeners who scored higher on a listening comprehension pre-test were more likely to use strategies of directed attention, and that lower scorers rarely used socio-affective strategies at all – that they were very hesitant to ask peers or instructors clarification questions. Thus, the descriptive phase of Ozeki's study confirmed earlier results suggesting that more effective listeners used more top-down rather than bottom-up strategies, and, furthermore, that they were more likely to engage in strategies of interaction.

In the experimental phase, Ozeki provided one of the classes with training in the metacognitive strategies of directed attention, selective attention and self-evaluation; the cognitive strategies of note-taking, inferencing and summarization; and the social and affective strategies of questioning for clarification and cooperating with peers. Following strategy training, Ozeki found that the experimental group used a wider repertoire of strategies, and also claimed that the experimental group performed better on the post-test. However, it must be pointed out that this improved performance was only statistically significant at an alpha-confidence level of 0.08, as reported by the researcher. Common practice in second language research considers a result statistically reliable only at an alpha level of 0.05 or lower (Brown, 1988, p. 116).

In another multi-phase doctoral dissertation, a study of 284 L1 Korean listening students at a Korean university, Kim (2000) also found that an experimental group performed better than a

control group following a regimen of strategy training, and furthermore improved their "disposition" toward strategy use. A closer examination of Kim's data was not feasible because the holding library reported that the only bound copy of the dissertation was lost.

1.9. Proposals for strategies-focused curricula

Based in part on the research described above, researchers have proposed classroom procedures for explicitly training students in the use of strategies.

The most extensive and detailed proposals for a strategies-focused listening curriculum come from Mendelsohn (1994, 1995). Citing several of the studies already mentioned, Mendelsohn justifies his call for the explicit instruction of listening strategies primarily because (a) research suggests they can be taught, (b) research has shown that students are more effective when they use them, and (c) studies also suggest that conscious awareness facilitates the use of strategies. Mendelsohn also claims that students can learn to transfer instructed strategies to other tasks, though he does not link this to any specific research – and in fact, other researchers have suggested just the opposite to be true (Chamot, 1995). Based upon these justifications, Mendelsohn (1994) proposes a design for a strategies-focused curriculum that includes strategies for determining setting; determining interpersonal relationships among speakers; assessing the mood of speakers; determining main meaning of each utterance; forming hypotheses, predicting, and inferencing; learning to listen to different things in different ways; and determining the main idea.

In a recent conference presentation, Mendelsohn (2003) argued that many listening materials on the market currently are designed more to *test* listening ability, though they claim to be "strategy-

oriented"; that is, he said, these materials describe a few strategies but do not recommend strategies for completing specific tasks. For example, they may ask a comprehension question about a listening text without advising learners as to how they should go about finding the answer to that particular comprehension question – which makes the task more of an assessment task rather than a training task. The goal of listening instruction, he argued, should always be to teach learners *how* to listen by using appropriate strategies.

However, if we define "how to listen" in the context of Anderson's three-stage comprehension model, as I have done in Section 1.1, we see that Mendelsohn's (1994) proposed strategies only represent part of the listening process: Anderson's (1995) parsing phase for language comprehension is often neglected in the literature on L2 listening strategies. The strategies Mendelsohn (1994, p. 63) proposes as the "central organizing pattern" of a strategies-focused listening course, as described above, tend to focus on top-down strategies because they presume that learners have been able to develop mental representations for what they have heard in order to relate these to prior knowledge. In describing the strategies learners use, other researchers have provided another piece of the puzzle by describing strategies such as directed attention or selective attention, or of cognitive transfer in the form of lexically-based discourse cues: These and other strategies in O'Malley & Chamot's (1990) inventory represent the perceptual processing phase in that they center around strategies for focusing attention and committing parts of the aural text to short term memory. Missing from the proposals by Mendelsohn and others are suggestions as to how (or whether) instructors can explicitly provide students with strategies for coping with the difficulties they might have in developing meaning from the real-time, complex phonological and syntactic information they receive through aural input.

1.10. Listening strategies in the typical EAP course

Not all of design aspects Mendelsohn proposes will be applicable to a typical academic listening course. Chaudron (1995, pp. 76-79) points out that, in an English for Academic Purposes context, a listening course will center greatly around lecture listening, as the one in the present study does. This, he points out, entails being able to deal with the following aspects of lecture listening:

- discourse features – particularly lexical phrases and rhetorical markers
- rate of speech
- non-verbal factors "such as use of visual, paralanguage and gestures"
- cultural content and background knowledge.

Based on the work of various other researchers, Chaudron (1995, p. 80) concludes that following "listener behaviors" are typical in coping with these aspects of lecture listening:

- translation into the listener's L1;
- taking time to think or concentrate;
- decoding the lecture sentence by sentence;
- use of self-monitoring, elaboration and inferencing strategies;
- collaborating with classmates;
- asking the lecturer for clarification;
- taking notes

With the exception of translation and sentence-by-sentence decoding, all of these behaviors are represented in some way as explicitly taught strategies in the curriculum observed in the present study. In Chapter 2, I will describe how these strategies are represented in the course materials and course description, as well as how the course instructors interpret them and attempt to make L2 listeners consciously aware of them.

2. Description of the Present Study

2.1. Motivation and context

The primary motivation for this research is the need to test strategy theories in an actual classroom setting where strategy training forms part of the curriculum. Some researchers have already conducted studies in a classroom context, but in these cases, it was the researchers who proposed the treatment. Here, I have provided the teachers with no advice or instructions on how to conduct strategies, and my goal is to find out how learners in their courses report using the strategies that the teachers are supposed to train them in.

Several of the studies I discuss earlier already establish that good language learners use effective strategies. In order to answer the question of whether these strategies can be explicitly taught, other studies have provided strategy training using control and experimental groups in pre-test / post-test paradigm. These studies suggested that students who receive explicit strategy training might perform better than those who do not, although there are still too few statistically significant results to claim that for certain yet. In any case, before it is even possible to link any benefits of strategy use to strategy training, research must show that students *use* the strategies they learn about in a classroom. The curriculum I have studied here incorporates many of the theories of strategy training, making it an excellent setting to determine whether it is possible for the outcomes strategy theorists predict to occur in practice.

2.2. Setting

The study took place in a high-intermediate level listening course at the University of Pittsburgh's English Language Institute. In these courses, in addition to providing listening practice, the instructor trains students to use strategies to aid their comprehension. The course textbook (Lebauer, 2000) incorporates strategies, as does the course curriculum. In the methodology subsection, I analyze in detail which strategies are instructed in this curriculum. In addition, some students in the high intermediate listening class also had taken the low intermediate level class in a previous term, where they also received instruction in a strategies-focused curriculum. Because this course is considered an English for Academic Purposes course, most of the classroom listening practice exercises are in a unidirectional mode (Morely, 2001, p. 73) – that is, the learners hear taped sample lectures from Lebauer (2000) designed to simulate the types of lectures they might hear if they go on to study in an English-speaking country; alternatives are that they listen to news and other reports in audiotaped or videotaped format. This is typical of any listening course in an academic purposes context (Chaudron, 1995). Bidirectional listening – two-way communication where participants "take turns exchanging *speaker role* and *listener role*" (Morley, 2001, p. 73) also occurs in the course in the context of group discussions, but is not the primary focus of listening practice or the strategy training as represented in the course materials.

Direct strategy instruction in the course usually takes place in connection with the longer practice lectures that students hear. The instructor usually teaches strategies before a longer practice lecture either orally or through a written explanation from the textbook. Practice might include exercises with brief passages containing the target cues and cloze or multiple choice questions that elicit use of the target strategy. The book separates explicit strategy training and practice

exercises into different sections, but the curriculum in this case intersperses parts from both sections to juxtapose a practice exercise with strategy instruction that may be useful in completing the exercise. This constitutes what Mendelsohn (1994) and Ozeki (2000) refer to as an *integrated* or *embedded* approach. Mendelsohn (1994) proposes this as the preferred approach to teaching listening strategies, based upon past research findings (O'Malley & Chamot, 1990; Chamot & O'Malley, 1987; Wenden, 1987; Moulden, 1985) that suggest it is more effective than segregating strategy training from listening practice. A segregated approach would involve separating theoretical lessons on the process of listening from listening practice; in other words, not directly applying training to a specific exercise.

2.3. Methodology

2.3.1. Descriptive Methods

Cognitive learning theory, as proposed by Anderson (1985, 1995) and the theory of *metacognition*, as proposed by Flavell (1979), form the main theoretical foundation for the descriptive methodology in this study. Although the data analysis here is couched in cognitive learning theory, I will refer to other perspectives, such as sociocultural learning theory (Vygotsky, 1978; Lantolf, 1994; Donato, 1994; Donato & McCormick, 1994) and more structural theories of strategy use, such as those of syntax (Koda, 1993) and prosody (Harley, 2000), when discussing the results.

2.3.2. Research paradigm

In order to determine whether participants are actually using the strategies they are learning about in their regular course, this study relies on participants' retrospective reports of what they did during a listening task. By contrast, past studies have prescribed strategy treatments and then looked for a correlation between this training and listening performance.

This study does not test the effectiveness of strategy training in a controlled environment. Rather, we could describe the methodology used here as *quasiexperimental*, as Spada, Ranta and Lightbown (1996, p. 34) labeled their classroom studies. Like their research, this one does "not involve randomly assigning students to different treatment groups as is the case in experimental research." Like Spada et al.'s study, I chose the sample groups from intact classes that had been formed according to normal selection procedures determined by the institution that provided access for my research. However, unlike Spada et al's study, this study did not prescribe the treatment that the instructors were to use in the classroom. Instead, the treatment was prescribed by current research literature in strategy training to the extent that this was already incorporated into the course curriculum and materials.

Thus, this study's primary purpose was to see whether students would consciously report using those steps, plans, reflections and insights (O'Malley & Chamot, 1990) that the curriculum explicitly presents to them as techniques for aiding their listening comprehension. Whereas an experimental research paradigm would require setting up a control group and a treatment group and then observing whether there were significant differences between the two, here I hypothesized that two groups – those who use instructed strategies and those who don't – may already exist within the naturally occurring sample. In other words, I predicted that instruction would not necessarily lead to student strategy use, and that strategy use would not necessarily be the result of instruction.

I view this methodology as a form of survey research (Fontana & Frey, 1998). Ericsson and Simon (1993) validate the use of retrospective reports as a means of investigating participants' awareness of a cognitive process.

In addition, I have also used some of the qualitative interview methods Borg (1998) used to study teaching methodology in classroom research he conducted in Malta. This was necessary in order to have some idea of how the classroom instructors in this study applied the strategies-focused curriculum in their lessons. Similar to Donato and McCormick (1994), then, this study is intended to observe how students use strategies in an existing course. In their study, however, strategy training did not form a part of the course curriculum as it does here.

2.3.3. Research Questions

As stated in the introduction, the study aims to answer the following questions:

1. Will participants report that they applied the conscious strategies taught in a strategies-focused listening curriculum in an English for Academic Purposes context?
2. Will there be any difference in reported strategy use between "authentic" texts and "created" texts?
3. Will participants who report using strategies also report perceiving the listening texts to be easier than those who report no strategy use?
4. Will participants who report using strategies perform better than those who don't on a measure of their listening comprehension?

2.3.4. Participants

Participants included all high intermediate students in the course the institute calls "Listening 4". There were two class sections, one with 18 students and one with 19. Data was collected from all participants. Table 2.1, Table 2.2, Table 2.3 and Table 2.4 describe the demographics of the entire sample group. These statistics were reported by the participants in a five-question *participant information survey* conducted before data collection began. A copy of this survey appears in Appendix A.

Table 2.1: ***Number of participants by gender and L1.***

Sex			Class 100	Class 200	Total
male	L1	Arabic	1	1	2
		Chinese	1	2	3
		Korean	3	3	6
		Russian		1	1
		Spanish	3	1	4
		Turkish	1		1
		Turkmen		1	1
Total male participants			9	9	18
female	L1	Chinese	4	1	5
		French	1		1
		Bilingual German / Turkish	1		1
		Japanese	2	1	3
		Korean	1	5	6
		Spanish	1	1	2
		Thai		1	1
Total female participants			10	9	19

All of the participants were between the ages of 18 and 45. Table 2.2 breaks this range down according to three age groups: 18-25, 26-35, and 36-45.

Table 2.2: ***Number of participants by age group***

Age Group	Frequency	Percent
18-25	19	51.4
26-35	11	29.7
36-45	7	18.9
Total	37	100.0

Table 2.3 describes the amount of previous formal English instruction the participants reported. The entire group of 37 split into nearly two equal parts: 18, or 48.6 percent, reported 6 years or less of classroom English instruction, and 19, or 51.4 percent, reported 7 years or more.

Table 2.3: ***Number of participants by prior classroom English instruction***

Years of formal English instruction	Frequency	Percent
1-3	13	35.1
4-6	5	13.5
7-10	15	40.5
more than 10	4	10.8
Total	37	100.0

Finally, Table 2.4 indicates how many of the participants reported previously taking an English as a Foreign or Second language course that focused only on oral skills. Twenty-three reported

that this was the case; 12 of these had taken the previous level of listening in the English Language Institute. Instead of collecting data only on whether participants had previously taken a *listening* course, I chose to group listening and speaking together because some courses, which participants may have taken in other intensive English programs in the United States or abroad, teach strategies within the context of a combined listening and speaking course. Until recently, this was also the case in the English Language Institute's *advanced* level.

Table 2.4: ***Participants who previously took an ESL or EFL course that focused exclusively on oral skills***

		Previously taken a listening / speaking course in the ELI?		Total
		yes	**no**	
Previously taken a listening / speaking course?	**yes**	12	11	23
	no		14	14
Total		12	25	37

Both sections of the course shared a common syllabus, and the same curriculum supervisor advised both instructors. In addition, both instructors had received equivalent training in the Linguistics Department's TESOL certificate program. The institute determined participants' level through its placement procedures, which include the Michigan Test of English Language Proficiency as a placement test for new students and recommendations of previous instructors for returning students.

2.3.5. Variables, Measures and Data Collection Instruments

I have operationalized the constructs from the research questions as follows:

- **conscious listening strategy –** steps, plans, reflections, and insights learners use to help themselves understand an aural text (O'Malley & Chamot, 1990) *and* are able to describe in words;
- **instructed listening strategies –** strategies that a classroom instructor or written materials explicitly present to learners as techniques designed to help them improve their comprehension (Mendelsohn, 1994,1995);
- **authentic texts –** aural texts that were not specifically designed for the purpose of language instruction (Harmer, 1991, p. 185);
- **created texts –** aural texts that were designed specifically for the purpose of language instruction (Harmer, 1991, p. 185);
- **perceived difficulty –** learners' reports of how difficult they found an exercise;
- **listening comprehension performance –** learners' degree of accuracy on questions that test their understanding of an aural exercise.

Thus, for the purposes of this study, the independent variables are strategy instruction and text type. The dependent variables are learners' reported strategy use; learners' difficulty rating; and listening comprehension score. In order to measure these variables, I collected data over a four-week period from January 9, 2003 to February 10, 2003.

metacogntive strategies	*cognitive strategies*	*social / affective strategies*
planning	transfer	questioning
selective attention	inferencing	cooperation
directed attention	elaboration	
self-management	note-taking	
self-monitoring	resourcing	
	summary	

Figure 2.1: ***Inventory of strategies explicitly represented in the course curriculum as strategies for improved comprehension, either via course materials or instructor explanation***

2.3.5.1. Determining Independent Variables

Figure 2.1 shows those strategies which I determined were in the inventory of explicitly-trained listening strategies in this course. Thus, these are the strategies which formed the independent variable *strategy instruction* in this study. The definitions of these specific strategies appear in Figure 1.1 on Page 16. I arrived at this list through the following process:

I first assigned a 2-4 letter code to each of the strategies in the inventory proposed by O'Malley and Chamot (1990, pp. 137-139). These codes, which are similar to those Ozeki (2000) used, appear in Appendix B. Using these already established descriptions of language learning strategies, I then determined which strategies present in Lebauer (2000) and in the course curriculum (University of Pittsburgh English Language Institute, 2002) were assigned and should have been taught during the period of data instruction. I coded each of these using the same codes I assigned to the strategies in O'Malley and Chamot's inventory. In order to increase reliability of these coding judgments for independent variables, a colleague with a Ph.D. in education coded these *assigned strategies* independently. We then discussed our judgments in order to develop standards that we would use when coding for strategies use as a dependent

variable. Because this consultation was for the purpose of agreeing on independent variables, we did not test for intercoder or interrater reliability.

As a result of this consultation, we determined that the following inventory of strategies was represented in either the materials assigned to be taught during the data collection period or in the course curriculum:

METACOGNITIVE STRATEGIES

Planning – In one way, both the course textbook (Lebauer, 2000) and the course curriculum include this strategy by encouraging students to consider the possible organizational structure of the listening text before they listen. Beyond that, the course curriculum includes this strategy in the form of "pre-listening" skills, which may include previewing questions or vocabulary before listening in order to be prepared for the text's content or in order to know beforehand which aspects of the text might be the most important to consider.

Selective attention – Both the textbook and the curriculum train students to focus on specific aspects of the text in order to zero in on specific information. This strategy is closely linked to the strategy of planning, because the instructor may train students to engage in this strategy by using knowledge about the organization of the text. It is also closely linked with the *cognitive* strategy of *transfer*, described below, in that students may be trained to use specific lexical items as cues to know when an important section of the text is coming.

directed attention – Students learn this strategy in the form of techniques that help them to focus on the main idea of the text. Specifically, this strategy is represented in the course in the

form of techniques for guessing the main idea based on context; thinking about the possible main idea beforehand by discussing the topic; and techniques for sorting out which information is *not* important to the main idea by recognizing when the speaker is about to go off on a tangent or discuss detailed information not important to the big picture. In short, students learn this strategy as a way of keeping their attention focused on the most important information during the exercise, without being bombarded by a an overwhelming stream of information.

self-monitoring – O'Malley and Chamot (1990) break this strategy down into several potential types of monitoring. In the case of the curriculum in the present study, the strategy is present in the form of *auditory* self monitoring, in which students are taught to use what they know about how English sounds as a way of interpreting meaning. This might mean using tone or stress to interpret the speaker's intention, or the carefully-timed pauses that accompany appositive definitions. This strategy is also closely related to *selective attention*, because learners are taught to use this strategy as a way of focusing on one specific section of the text.

self-management – This strategy is represented in the course description in that self *improvement* in the understanding of "definitions, comparisons, and reasons" is listed as a concrete goal of the course. If learners are told that "improvement" is the goal, then this implies that they will have to track their own progress in order to know whether they are actually improving or not.

COGNITIVE STRATEGIES

transfer – This strategy is heavily represented in the curriculum and in the textbook in the form of discourse cues. Students are taught to use specific lexical items as *cues* to recognize topic

introductions, organization, conclusions, definitions, subtopics and details. This is an example of a top-down strategy, because learners are taught to reflect on these as clues to the overall meaning. Bottom-up transfer strategies, which would require learners to focus on specific phonological segmentation or syntactic elements in the text are not specifically trained in this curriculum. Transfer is also closely associated with the metacognitive strategy of *selective attention*, because students are taught to use it as a tool to help them focus on specific aspects of the text.

inferencing – This strategy is present in that (a) students are taught to use the organization of the text to predict what might be coming next *while* listening, and (b) students are encouraged to make educated guesses about the main idea and direction of the text based on context clues and background knowledge, even where they aren't entirely sure. This includes guessing at the meaning of new vocabulary items. Inferencing is also related to the metacognitive strategy of *self-monitoring*, in that students are encouraged to use their ear for the language as a basis for their inferences.

elaboration – Several potential applications of this strategy, as identified by O'Malley and Chamot (1990), are represented in the textbook and in the course description. These include: (a) *between-parts elaboration*, because learners are encouraged to consider the relationship between the different parts of the text; (b) *personal elaboration*, because students are taught to react personally to what they have heard; and (c) *world elaboration*, because students are encouraged to use their real-world knowledge to help them understand.

note-taking – As an academic purposes course, various techniques of note-taking form a major part of this course. This strategy is ever-present in both the course materials and curriculum. These note-taking strategies include developing methods of organizing notes in order to etter retrieve information later; jotting down only key words rather than trying to take notes on everything; and developing one's own system of symbols and short-hand in order to take notes more efficiently and effectively. Note that these note-taking methods can be closely associated with the strategies of planning, directed attention, and selective attention if the learner uses these techniques to decide what to take notes on.

summary – The course curriculum incorporates this strategy as a *post-listening* technique, where students seek to analyze and sort out the main idea after listening to a text.

SOCIAL / AFFECTIVE STRATEGIES

These strategies are noticeably absent from the materials and the course curriculum, at least to the extent that they are not *explicitly* mentioned here as a means of improving comprehension. (As I will explain below, however, the course instructors did feel that they had taught these strategies.) The only place where they could be interpreted as existing is in the course description, which lists "construct questions about a listening text" as one of the course objectives. This could be understood to be a social or affective strategy of *questioning*, if it is understood that these questions are to be posed to the instructor or to other classmates as a way of obtaining clarification about the exercise. However, this course objective could also be interpreted as a cognitive strategy of *elaboration* if it is understood to mean that learners should pose questions to *themselves* as a means of interacting to what they hear.

INSTRUCTOR EFFECTS ON STRATEGY INVENTORY

In order to control for the possibility that instructors provided explicit training in other strategies not included in the course materials, I conducted structured interviews with the two course instructors. These interviews consisted of an oral, recorded portion, in which I asked the instructors general questions about their experience as instructors of listening, and a written section, in which I asked them how they felt the strategies in the O'Malley and Chamot (1990) inventory were represented in the curriculum. In this written section, I provided the instructors with O'Malley's and Chamot's definition for each of the strategies in their inventory and asked them to either check a box marked "I never *explicitly* taught students anything about this", or to write in an explanation under the prompt "I explicitly made students aware of the value of this technique as a strategy by doing the following things:". Thus, I sought to confirm whether the strategy should be included in the course inventory by eliciting the instructors' operationalization of that strategy. Where instructors reported providing no explicit instruction in a strategy represented in the course materials, I did not exclude the strategy from the independent variable inventory because it is still possible that some students were exposed to the strategy through self-study of these materials. However, where instructors reported training students in a strategy not represented in the course materials, I added this to the inventory. The teachers' specific answers to this written survey appear in Appendix C. The oral interview questions appear in Appendix D.

I conducted these interviews only after I had collected classroom data, so as not to subconsciously influence instructors' motivations for classroom methodology[1].

[1] For their separate, one-hour interviews, I compensated the instructors, who both teach only part-time, $25 each, which is the going minimum rate for ESL tutoring and consulting in the Pittsburgh area. I felt that this compensation was necessary because the interview represented a service outside of the context of regular teaching duties, and beyond the time commitment one should reasonably expect a low-income professional to provide *pro bono*.

In general, the instructors operationalized only those strategies that my colleague and I had identified as being present in the course inventory, largely validating our initial interpretation of which of the O'Malley and Chamot (1990) inventory was represented in this course. Furthermore, their operationalizations were frequently either identical or similar to our interpretations. However, the instructor interviews resulted in some modifications to the above inventory of course strategies identified as possible dependent variables in this study:

- *cognitive resourcing strategy* – Both instructors felt that they had explicitly trained students to use this strategy by encouraging them to use a dictionary to look up unfamiliar words before listening, or to use the textbook as a resource for potential cue words they might hear in the lecture. They also reported encouraging students to use notes from previous exercises. For these reasons, I included this in the inventory of strategies, even though it was not explicitly mentioned in the course textbook or in the curriculum.
- *social / affective cooperation strategy* – Lastly, both instructors felt that they had explicitly trained students in the value of group work and group cooperation as a means for improving their comprehension. Therefore, this strategy is also included in my inventory as a potential dependent variable.

TEXT TYPE

To determine the other dependent variable, *text type*, I analyzed all listening texts for which data was collected according to the definitions provided by Harmer (1991, p. 185):

> Authentic texts ... are said to be those which are designed for native speakers: they are 'real' texts designed not for language students, but for the speakers of the language in question. ...
>
> A non-authentic text in language teaching terms is one that has been written especially for language students.

Where Harmer refers to "non-authentic texts", I have used the term "created" in order to illustrate that these aural texts were *made* for the specific purpose of language instruction.

All texts used were part of the normal classroom curriculum. The created texts were four simulated academic lectures from Lebauer (2000). The authentic texts included three audiotaped recordings of news broadcasts from National Public Radio and one video providing health care advice to international students produced by the University of Iowa (NAFSA: Association of International Educators, 1997). At first, I debated the classification of the health video as an authentic text. However, after viewing it myself and consulting briefly with the course curriculum supervisor, I was confident of its classification as an *authentic* text; although its target audience was indeed international students, it assumed a high-degree of proficiency in English and was not specifically created for language instruction. Furthermore, the interviews in the video were unscripted, like a regular documentary, according to comments by the video's executive producer (University of Iowa News Services, 1997). In fact, some of the actors in the video relate their experiences as native speakers of English from other English-speaking countries studying as international students in the United States.

2.3.5.2. Measuring Dependent Variables

In order to determine the dependent variables of *reported strategy use* and *perceived difficulty*, I created a three-question survey that was attached to classroom comprehension exercises given

with each listening text. An example illustration of the form I created appears in Appendix D. The survey portion took up the bottom third of this combined survey / exercise form and was separated from the listening exercise portion by a dotted line. In the page footer, I created fields to record the participants' study identification number and multiple choice answers from the listening comprehension portion of the form. Originally, I also created a field for coding of the participants' reported strategies, but later decided to record this on a different form in order to facilitate data verification if necessary without biasing my later coding judgment based on the first one. It also seemed to be a redundant step in data management.

I measured *reported strategy use* by asking students to answer the following question:

> Did you use any strategies – any special techniques you learned in class or knew about already – to help you understand what you heard? Please place an X in <u>one</u> box.
>
> yes ☐ no ☐

The next question asked participants who answered "yes" to explain what they did. I only considered participants to have used a strategy if they explained which strategies they used.

There is plenty of precedent for using such *retrospective reports* as data. Ericsson and Simon (1993, p. 16) validated the use of retrospective reports as a way of accessing participants' declarative knowledge about the immediately preceding activity. I relied on this type of report for the same reasons that Goh (2002, p. 188) used retrospective verbal reports to conduct her study: "No extra demands are made on processing capacities during listening because retrospective verbalisations do not interfere with processing of input." At the same time, I

recognize, as Goh also did, the limitations on this methodology: "What may be expected, however, are incomplete verbalizations because learners may have problem [*sic*] expressing some things in the target language."

It is conceivable, of course, that participants used strategies without realizing it. This methodology of only considering reported strategy use is valid nevertheless because its intent is to determine whether participants reflect upon and consciously apply what the curriculum explicitly teaches them. This is validated by Anderson's (1995) concept of *declarative knowledge* as well as by Ericsson's and Simon's (1993, p. 16) model for using verbal reports as data, in which they claim:

> Our model predicts that retrospective reports on the immediately preceding cognitive activity can be accessed and specified without the experimenter having to provide the subject with specific information about what to retrieve.

In order to measure *perceived difficulty,* I asked participants to check a box marking one of the following descriptions: 1) I understood everything; 2) I understood most of it, but not everything; 3) I understood some things, but less than half; 4) I understood nothing. It was necessary to measure this variable for two reasons:

1. This variable helps to control the validity of the exercise for the purposes of this study. Mendelsohn (1994) reminds us that proficiency level must be considered when designing any listening course. Furthermore, DeFillipis' (1980) results suggest that a learner's knowledge of the language's syntactic and phonological systems will play a role in

strategy use. Therefore, if a significant number of learners check "I understood nothing", then the exercise could be considered simply beyond their level and thus invalid for considering strategy use.

2. This variable helps to control the validity of past research and proposals on the teaching of listening strategies. Brown (1995), for example, proposes that instructors grade aural texts according to various degrees of *cognitive load*, and prepare learners to cope with a particular task accordingly. Meanwhile, Taguchi (2001) reports that more proficient listeners generally report using more strategies and report finding tasks easier. If such research is to be considered valid, then this study must either demonstrate a relationship between reported strategy use and perceived difficulty or demonstrate a lack of strategy use for more difficult texts, which would indicate a need for strategy instruction on these tasks.

In addition, I considered participants' performance on comprehension exercises. Although demonstrating a relationship between conscious strategy use and listening performance was not a motivation of the study, I conducted this measure in the hope that it would help verify the validity of only considering *conscious* strategy use to have occurred when participants are able to articulate them. In other words, the research question that this was based on was a no-lose proposition: If participants who generally report strategies also generally score better, then it adds hard, quantitative data as another angle of triangulation to an otherwise qualitative observation method (Adler & Adler, 1998, pp. 89-90). If this supplementary validity didn't materialize, then there would always be room to discuss the results in the context of the previous studies described in Chapter 1.

In keeping with the goal of not affecting the curriculum, I wrote questions typical of the type that course instructors normally use with the lectures – specifically, four-option multiple choice questions; other question types that instructors might use in this course include true-false questions, matching, complete-the-sentence, or open long-answer questions. It was necessary to write new questions because there was no standard form for listening comprehension questions used in the course; each instructor generally uses his or her own form of evaluation exercises in order to determine student listening performance. Therefore, it was necessary to standardize listening comprehension questions into a form that was quantifiable, consistent, easy to evaluate and score, and had a lower risk of students guessing correct answers the way they can on true-false tests. Multiple choice questions, though not ideal, seemed to best fill this need (Bailey, 1998).

2.3.6. Data collection instrument

Of the eight survey and comprehension tasks performed, only the data from the last six were used to directly answer the research questions. The first created and the first authentic texts were used as pilot exercises in order to (a) ensure that both instructors were clear on the procedures for administering the surveys and exercises in class; (b) to acclimate participants to the procedures to be used; (c) allow the institute time to finalize the class roster, which also determined the participant list and (d) get some kind of baseline idea of whether participants were using strategies prior to instruction. There was good opportunity to answer this fourth question, because the first pilot survey and exercise for a created task were performed on the first day of

class, January 9, 2003. The second pilot exercise, a recording of an authentic radio recording, was performed on the fourth day of class.

2.3.7. Data analysis

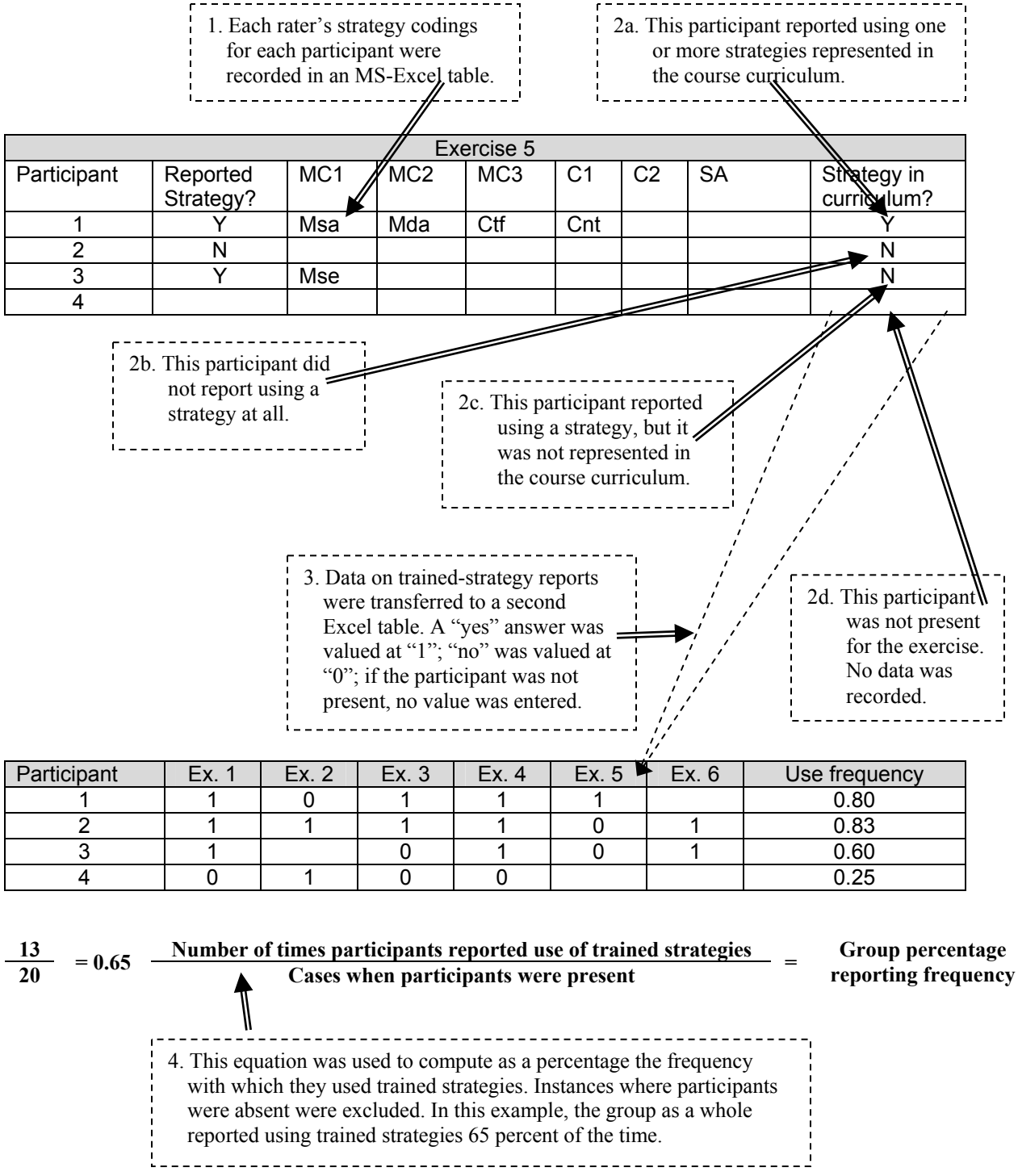
Data analysis methods are described below according to how they were used to answer each research question. Of the eight exercises used, the first authentic text and the first created text were used as pilot exercises in order to determine whether students used strategies prior to instruction. The data from these exercises were thus used for discussion purposes only and were not used to answer the research questions. I performed all statistical measures described below after consultation with a trained statistician from the University of Pittsburgh's Office of Measurement and Evaluation of Teaching.

2.3.7.1. Research Question 1

First, I coded each strategy students reported using according to the same rubric (O'Malley & Chamot, 1990) used to code strategies assigned in the curriculum. In order to improve reliability, the same colleague who helped code for independent variables also coded participant strategy reports independently from mine. However, instead of consulting to reach a consensus as we did when determining dependent variables, both coders' results were recorded separately, and intercoder or interrater reliability was determined by adapting the method described by Brown (1988).

In order to provide a basic answer for the research question, I analyzed the resulting data to determine whether for each text, a participant reported use of at least one strategy represented in the curriculum. Where this was the case, I assigned a value of "1"; where the learner did not use

a strategy represented in the curriculum or did not use a strategy at all, I assigned a value of "0". Using this data, I calculated a straight percentage frequency of how often the group as a whole reported using strategies represented in the curriculum. To do this, I added all of the "1"s together and divided by the total number of instances when students participated in order to account for absences. For an illustration of how I recorded and analyzed strategy codes, see Figure 2.2 on Page 16.



Exercise 5								
Participant	Reported Strategy?	MC1	MC2	MC3	C1	C2	SA	Strategy in curriculum?
1	Y	Msa	Mda	Ctf	Cnt			Y
2	N							N
3	Y	Mse						N
4								

Participant	Ex. 1	Ex. 2	Ex. 3	Ex. 4	Ex. 5	Ex. 6	Use frequency
1	1	0	1	1	1		0.80
2	1	1	1	1	0	1	0.83
3	1		0	1	0	1	0.60
4	0	1	0	0			0.25

$$\frac{13}{20} = 0.65 \quad \frac{\text{Number of times participants reported use of trained strategies}}{\text{Cases when participants were present}} = \text{Group percentage reporting frequency}$$

Figure 2.2: ***Process used to calculate percentage frequency of strategy use for entire sample group. Figure contains example data only – no actual results.***

In order to better analyze which participants were using strategies, I also performed this straight percentage frequency calculation for each individual participant. To better describe which instructed strategies participants favor, and to describe the strategy repertoire of each participant, I also counted the number of distinct strategies reported. This data was also used to analyze and discuss *Research Questions 3* and *4*.

2.3.7.2. Research Question 2

Using the data collected for *Question 1*, I calculated separate percentage frequencies for *authentic* texts and for *created* texts. I then performed a test of correlated proportions to determine whether any differences observed between the two text types were significant. I also computed separate strategy counts in order to determine whether participants favored particular strategies in one domain versus another.

2.3.7.3. Research Question 3

In order to compare reported strategy use to perceptions of task difficulty, I compared the data from *strategy-users* to *non-strategy users* for each text. In order to do this, I converted the four nominal choices given as possible answers to the third survey question into ordinal variables. For each individual text, I performed a Mann-Whitney U-test to determine whether strategy users found the text significantly easier than non-users because a relationship between these two variables could support suggestions that strategy use can help ease cognitive load (Brown, 1995).

2.3.7.4. Research Question 4

First, I calculated participants' overall scores on the listening comprehension exercises, grouping all exercises together as one exercise. Based on how frequently students reported using

strategies, I classified them into two groups: *high strategy users* and *low strategy users*. The threshold for *high strategy users* was 50 percent. Thus, I considered participants to be in this group if they reported using a valid strategy in at least half of the exercises in which they participated. Using an independent samples t-test, I then compared the mean scores of the *high strategy use group* with those of the *low strategy use* group to see if they differed significantly. For this measure, I only used the data of those participants who had been present for all exercises (n = 27).

2.3.8. Expected results

I predicted the following answers to the research questions:

2.3.8.1. Question 1

I anticipated that, overall, a majority of participants would report using the strategies present in the curriculum. However, I suspected that participants would not use all strategies represented in the curriculum and that there would be a wide range in the individual strategy report frequencies, which could question whether instruction alone is a factor in strategy use.

2.3.8.2. Question 2

I expected that participants would report using strategies significantly *less* often on authentic texts than on created texts. My prediction in this regard stemmed from my empirical observation as a language instructor that learners seem to have difficulty transferring what they learn to other tasks. Anderson (1995) also makes this prediction in the context of general learning processes. Furthermore, this is one of the reasons Mendelsohn (2003), in a recent conference presentation, called for extensive work with non-authentic texts as "training" materials before using authentic texts in listening classes.

2.3.8.3. Question 3

I did not expect to find any significant relationship between perceived difficulty and strategy use, in part because perceived difficulty is subjective and relative for every person. However, I also did not expect that I would find any exercises where a significant number of participants found the task so difficult that they marked the box labeled "I understood nothing." In other words, I felt that all exercises would prove to be appropriate to the proficiency level of this group.

2.3.8.4. Question 4

I did not expect to find a statistically significant relationship between *frequency* of strategy use in general and *overall* listening comprehension score.

3. Results

3.1. Research Question 1

The strategy report surveys found that students reported the use of strategies for which they had received training more frequently than those for which they had received no training, but that they weren't always reporting strategy use in the first place.

An inventory of those strategies that I determined to be present in the course appears in Figure 2.1 on Page 39. Definitions of these strategies, as adapted from O'Malley & Chamot (1990) appear in Figure 1.1 on Page 16.

3.1.1. Pilot exercises

The study comprised a total of eight exercises, four authentic and four created. The first two exercises were considered pilot exercises and their data was not directly used to answer the research questions. Instead, these two pilot texts – one using a created text from Lebauer (2000) and the other using an authentic news broadcast from national public radio – were used to get a baseline idea of whether participants would report using strategies prior to instruction. Pilot exercises were also necessary in order to be sure that the classroom instructors and the participants were familiar with the procedures and to give myself practice in compiling and recording the data.

For the pilot exercise using a created text, only 27 percent of participants present (n=29) reported using a strategy represented in the course curriculum. A chi square test did not find that

participants who had taken the previous level of the ELI course were significantly more likely to use strategies than those who hadn't.

For the pilot exercise using an authentic text, 37 percent of the participants present (n=35) reported using a strategy from the course. Again, there was no difference between ELI listening returnees and those in their first semester in the institute. Interestingly, as I will note, this frequency of strategy use was higher than two other authentic exercises that used authentic radio broadcasts.

3.1.2. Exercises after instruction

In the six exercises for which data was analyzed, participants reported using at least one strategy from the curriculum in 38 percent of all cases where they had the opportunity to report. There were 210 such opportunities where students were present in class and participated in the exercise and survey. Not included in the strategy report frequency calculations were the 12 cases when participants were absent and did not participate. Both Coder 1 and Coder 2 found the same overall frequency of strategy reporting. Interrater reliability was 0.97 when determining whether a participant had reported using a strategy from the course curriculum. Even though both coders found the same report frequency, they did not always agree that the participant had reported a strategy that was represented in the curriculum, which accounts for the slight discrepancy in interrater reliability despite identical frequencies.

The range and median statistics for this measure are particularly interesting: Both coders found that the participants ranged from using trained strategies in every exercise to never once

reporting use of any trained strategy. Furthermore, both coders found a median strategy report frequency of 33 percent – which means that half of the entire sample group reported using a trained strategy on only a third of the exercises or less.

Table 3.1 shows the strategy report frequencies found by both coders, as well as interrater reliability.

Table 3.1: ***Percentage of participants reporting use of a strategy from course inventory***

	Participants present	Coder 1	Coder 2	Interrater reliability
Ex. 1	35	49%	46%	0.97
Ex. 2	35	49%	49%	0.95
Ex. 3	36	53%	53%	1.00
Ex. 4	36	25%	28%	0.92
Ex. 5	31	45%	45%	1.00
Ex. 6	37	11%	8%	0.97
Mean		38%	38%	0.97

Coder 1 range: Min = 0%; Max = 100%; Median = 33%
Coder 2 range: Min = 0%; Max = 100%; Median = 33%

Both coders found that learners seemed to prefer some strategies over others and that, in general, participants reported using the metacognitive and cognitive strategies from the course inventory more frequently than strategies from O'Malley & Chamot's (1990) inventory that are not represented in the course inventory. The exceptions to this were the cognitive strategies of *resourcing* and *summary*, as well as the metacognitive strategy of *self-management.*

It is also important to note that no participant ever reported using a social or affective strategy to aid comprehension.

The frequency found for each strategy is displayed in Table 3.2 on Page 60. Although both coders found trained-strategies to generally occur more frequently, they did not always agree on which strategy had been used. Although the two coders agreed 97 percent of the time as to whether the participant reported a strategy from the course curriculum, interrater reliability was somewhat lower – 0.76 – when it came to putting a specific label on each strategy.

Table 3.2: ***Number of times each coder found that participants reported using strategy (all exercises)***

Metacognitive Strategies	**Coder 1**		**Coder 2**	
	Total	**Rank**	**Total**	**Rank**
Msa*	43	1	41	1
Mda*	16	4	13	6
Mpl*	15	5	22	2
Mse	4	9	4	9
Msma*	1	11	1	10
Msmo*	5	7	5	7
Mpi	0	13	0	12
Cognitive Strategies	**Coder 1**		**Coder 2**	
	Total	**Rank**	**Total**	**Rank**
Crep	3	10	1	10
Cres*	0	13	0	12
Cgr	0	13	0	12
Cnt*	18	3	18	4
Cdi	0	13	0	12
Csub	0	13	0	12
Cel*	5	7	5	7
Csum*	1	11	0	12
Ctl	0	13	0	12
Ctf*	26	2	19	3
Cinf*	16	5	16	5

* These strategies are represented in the course curriculum.
** A key to these strategy labels appears in Appendix B on Page 89.

3.2. Research Question 2

When I separated the strategy report data for authentic texts from the data for created texts, I found reliable differences in the frequency of strategy reports depending on text type. As I stated in the results for the first research question, participants reported using trained strategies in 38 percent of all cases. For created texts – those taken from the textbook – the frequency was 50.5 percent. For authentic texts – those not created specifically for language instruction – the strategy report frequency was far lower. On these three exercises, learners only reported using strategies from the curriculum in 27 percent of 108 cases. These results are summarized in Table 3.3. A paired samples t-test found that this was a reliable difference (Table 3.4). I should note, however, that this also includes strategy reports for the international student health video, for which participants actually reported use of strategies as frequently as they did on created exercises – 49 percent of 35 cases. When this exercise is excluded, reported strategy use for the NPR radio broadcasts alone was 18 percent – far lower than the 50.5 percent for created exercises.

Table 3.3: ***Frequency of strategy use by text type***

text type	Frequency*	Std. Deviation	Std. Error Mean
created	0.505	0.322	0.053
authentic	0.270	0.380	0.062

* 1 = used trained strategy; 0 = did not use trained strategy

Table 3.4: ***Paired samples t-test – group reporting frequency on created tests compared with authentic texts***

	Paired differences				
text type	**Mean**	**Std. deviation**	**Std. error mean**	***t***	**df**
created vs. authentic	-0.232	0.290	0.0477	-4.915*	36

* significant at $p < 0.001$.

3.3. Research Question 3

In investigating the relationship between perceived difficulty and strategy use, no reliable relationship was found within any individual exercise. However, overall, participants who reported use of trained strategies in at least half of the exercises rated the listening texts significantly easier than those who less frequently reported use of strategies. Mann-Whitney U-tests performed on each exercise did not reveal that participants who used a strategy in the curriculum inventory were more likely to report understanding more of the exercise than those who did not use a strategy (Table 3.5). However, overall, an independent samples t-test found that high-frequency strategy users (n=15) gave the texts a mean difficulty rating of 2.192, whereas low-frequency strategy users (n=22) gave the texts a mean difficulty rating of 2.429. To

review, participants rated the difficulty of each text on a four-point, ordinal scale, where "2" represented "I understood most things, but not everything" and "3" stood for "I understood some things, but less than half of it." An independent samples t-test found that this difference was reliable. (Table 3.6). The most probable explanation for the finding of reliable differences overall where none were found within each task lies in the amount of data in the t-test compared with the U-tests: As the number of exercises increased, the results became more robust.

Table 3.5: ***Mann-Whitney U-test comparing perceived difficulty of strategy-users vs. non-strategy users, each exercise***

	Used trained strategy?	n	mean rank	sum of ranks	Mann-Whitney U-test*
Ex. 1	no	17	18.441	313.5	128.50
	yes	17	16.559	281.5	
Ex. 2	no	18	19.028	342.5	134.50
	yes	17	16.912	287.5	
Ex. 3	no	17	18.559	315.5	143.50
	yes	18	17.472	314.5	
Ex. 4	no	27	18.463	498.5	95.50
	yes	8	16.438	131.5	
Ex. 5	no	17	13.471	229.0	76.00
	yes	13	18.154	236.0	
Ex. 6	no	33	18.924	624.5	35.50
	yes	3	13.833	41.5	

* yielded no significant results in any exercise

Table 3.6: ***T-test: Perceived difficulty of high-frequency strategy users vs. low-frequency strategy users***

	N	Mean[1]	Std. Deviation	Std. Error Mean	df	t
high frequency strategy users*	15	2.192	0.380	0.098	35	-2.081***
low frequency strategy users**	22	2.429	0.311	0.066		

* participants who reported using trained strategies on 50 percent or more of all exercises
** participants who reported using trained strategies on less than 50 percent of all exercises
*** significant at $p < 0.05$
[1] Key to participant-reported difficulty ratings:
1 = I understood everything
2 = I understood most of it, but not everything
3 = I understood some things, but less than half
4 = I understood nothing

3.4. Research Question 4

The final research question found no reliable difference between the listening performance of high frequency strategy users and low frequency strategy users. When testing for a relationship between strategy use and overall score on the six comprehension exercises used, I included only the total listening comprehension scores of those participants who had been present for all six exercises (n=27). When the scores of the high frequency strategy users in this group (n = 12) and the scores of the low frequency strategy users (n=15) were compared in an independent samples t-test, the difference approached significance, but was not reliable (Table 3.7).

Table 3.7: ***T-test: Mean score on all exercises, high frequency strategy users vs. low frequency strategy users***

	N	Mean	Std. Deviation	Std. Error Mean	df	t
high frequency strategy users*	12	75.56%	11.84%	3.42%	25	1.407***
low frequency strategy users**	15	70.22%	7.81%	2.02%		

* participants who reported using trained strategies on 50 percent or more of all exercises

** participants who reported using trained strategies on less than 50 percent of all exercises

*** not significant

When scores of strategy-users were compared with those of non-strategy users on each of the individual exercises using independent samples t-tests, strategy users were found to perform significantly better only on Exercise 5 – a lecture from the course textbook. The strategy users also performed quite a bit better on the authentic Exercise 6, but given that there were only 4 strategy users on this exercise, this is a meaningless result. For these tests, the participants who formed the groups "strategy-users" and "non-strategy users" varied from test to test, because some participants may have reported use of a strategy on one exercises but not on another. A summary of all t-tests performed on individual exercises appears in Table 3.8.

Table 3.8: ***T-tests: Strategy-users versus non-strategy users on individual exercises***

	Used trained strategy***	n	mean score	std. deviation	std. error mean	df	t
Ex. 1	no	18	3.06	1.26	0.30	33	-0.622
	yes	17	3.29	0.99	0.24		
Ex. 2	no	18	4.33	0.69	0.16	32	-0.384
	yes	16	4.44	0.89	0.22		
Ex. 3	no	17	4.24	0.97	0.24	33	-1.322
	yes	18	4.56	0.51	0.12		
Ex. 4	no	26	2.81	1.13	0.22	33	-1.391
	yes	9	3.44	1.33	0.44		
Ex. 5	no	17	3.88	1.22	0.30	29	-2.108*
	yes	14	4.64	0.63	0.17		
Ex. 6	no	32	2.41	1.13	0.20	34	-2.216**
	yes	4	3.75	1.26	0.63		

* significant at $p < 0.05$;

** significant, but groups / variances not equal

*** The groups "strategy users" and "non-strategy users" varied from test to test, because some participants reported use of a strategy on one exercise but not on another.

3.5. Summary of key findings

In summary, the four research questions yielded the following key findings:

1. In general, the participants reported using strategies for which they had received explicit training more frequently than strategies for which they had received no explicit training. However, there is a wide range of reported strategy use, with some participants always reporting that they used one of the techniques represented in the curriculum, and some participants never reporting the use of these strategies at all.
2. When prompted to report which strategies they used to help themselves understand, participants did not reflect on social or affective strategies as techniques that helped their

listening comprehension, although the instructors reported providing explicit instruction in these as strategies.

3. Participants in this study seem to have trouble transferring what they learned in relation to textbook-based exercises to more authentic tasks, at least when these contain no visual component.
4. When considering all exercises combined, participants who reported using strategies in at least half of the exercises reported the aural texts to be significantly easier than those who reported using them in less than half of all exercises.
5. The study observed no relationship between reported strategy use and performance on the classroom comprehension exercises used as a measure of listening performance.

I will discuss the implications of these findings in the next chapter.

4. Discussion and Implications

4.1. Key Finding 1 – Interpretations

The results of the first research question complement the results of Donato and McCormick (1994) in that they suggest that strategy training alone will not lead to strategy use. To review, Donato and McCormick, by analyzing learner portfolios in a university-level L2 French class, found that some students developed use of effective learning strategies even though these were not explicitly included as part of the course curriculum. In my study, some participants did not report using any strategies despite the explicit training they received, although overall, they reported that they used those strategies represented in the curriculum more than they reported using ones that weren't.

There are a few possible interpretations of these findings. A strong interpretation would be that instruction plays only a limited role in strategy use. Another interpretation, which I favor, is that social context determines the degree to which students consciously reflect on the use of learning strategies, such that the manner in which retrospective reports were elicited may actually themselves play, in Vygotsky's (1978) terms, a *mediation* role in encouraging strategy use. This, at least, is the claim made by Donato and McCormick (1994). In their study, learner portfolios – their primary data collection instrument – were also a regular classroom task that forced students to engage in strategic behavior. In my study, the data collection instrument remained something foreign – a novel procedure that was added to classroom instruction for the sole purpose of collecting data, despite my efforts to avoid changing the classroom environment. However, it was necessary to create the standardized survey and exercises in order to make my observations

because there was otherwise no regular classroom task that allowed me to collect this data on all activities. I could have analyzed participants' lecture notes, which are a regular part of the course, but this would have only provided data on *created* exercises. I wanted to be able to compare students' responses on these created exercises to their responses on the authentic exercises that were also used in the course. This procedure may have in effect pulled the concept of learning strategies outside of the context of their application, such that other goals – e.g. "*getting these odd surveys over with*" – may have influenced student responses.

4.1.1. Implications for instruction and research

This finding has important implications for classroom listening tasks, as well as for classroom research methodology. It suggests 1) a need for listening comprehension tasks that have a *mediating* function in facilitating the use of the target strategies, in accordance with claims by Donato and McCormick (1994); and 2) if strategy training is indeed the goal of the listening course, a need for tasks designed to evaluate students' understanding of the listening process rather than test their listening comprehension, in accordance with Mendelsohn's (2003) critiques.

Firstly, this finding requires us to strongly consider Donato and McCormick's (1994) claim that instruction in "encapsulated" strategies is not enough to foster strategy use. Although I asked participants to reflect on strategy use in the strategy surveys (example in Section 2.3.5), the comprehension questions that I wrote did not compel participants to use the strategies they were learning in order to complete the tasks. For example, they did not elicit answers that could only be extracted from the text if one paid attention to the specific discourse cues that were taught in the course, or only if one engaged in specific procedures for managing learning. Furthermore, although my goal in designing this data collection instrument was to create surveys and exercises

that were comparable with classroom exercises, they remained outside the regular classroom culture. In independent, qualitative interviews, the classroom instructors confirmed that participants also viewed them in this way. Unfortunately, this curriculum did not contain any standard tasks that would have allowed me to gather such data for both created and authentic exercises. This begs the question: If I lacked a basis for reliable evaluation of the effectiveness of strategy training, do the classroom instructors have the basis to make such evaluations? I suspect that evaluation in this course takes place in the manner in which Mendelsohn (2003) has cautioned against in that evaluation here assesses general comprehension rather than understanding of the listening process.

The implication of this is that this course needs a unifying task such as a diary or a listening journal – a task serving the same *mediation* function as the portfolio task in Donato and McCormick's (1994) study. Such a task, which students could complete in either written or oral-recorded form, should compel students to reflect on the listening process they underwent while listening to each text. The goal is to make strategy use part of the classroom culture in this course rather than just a novel activity that students engage in only temporarily for the purpose of research. Such a task could itself be evaluated on a criterion rubric that awards points not only for understanding but also for evidence of strategic behaviors and active, autonomous participation in the learning process. This task could entirely replace the practice of using multiple choice questions, true-false questions, matching exercises, and open-ended comprehension questions in order to evaluate listening ability.

Secondly, the study highlights Mendelsohn's (2003) recent call for listening tasks to always have the goal of classroom *training* strategy use rather than *testing* comprehension. The purpose of the listening comprehension exercises used in this study, of course, was to obtain some sort of measure of listening comprehension in order to test for a statistical correlation between performance an strategy use. However, it is worth investigating how frequently students would report using strategies if classroom comprehension tasks were specifically designed to facilitate strategy use rather than simply to evaluate whether students have understood. Ultimately, this is a question of construct validity in assessment: If the goal of a listening course is to teach the listening *process*, then it must also contain an instrument for evaluating the *process* and not only the *product*. This is another important function of a mediation *device*.

4.2. Key Finding 2 – interpretation

The second key finding – that learners never once reported using social or affective strategies as aids to comprehension – supports earlier findings that learners either do not use these strategies or do not immediately recognize them as methods for improving their understanding (Nyikos & Oxford, 1993; Donato & McCormick, 1994; Ozeki, 2000). This finding is of particular importance given other studies' findings that learners who actively use these strategies also exhibit better performance (Bialystok, 1981; Rost & Ross, 1991).

There are several possible interpretations for this result. It could simply be that the participants need to be convinced that their pre-listening collaborative discussions and classroom brainstorming activities were designed to help them to understand what they were about to hear. They may view these pre-listening activities as something the instructor does as part of the classroom as part of his teacher routine, and they may not be conscious of the active role they are

expected to play in this process towards the end of their own learning. Another possible explanation could be that learners have a negative opinion of these types of social strategies, because they may differ strongly from the classroom cultures they are used to.

4.2.1. Implications for instruction and research

Ozeki (2000) was concerned enough about this second possibility that she also included instruction on the rationale and justification for strategy training as part of her experimental treatment. Perhaps the instructors in the course I studied simply need to be more explicit, as Ozeki was, about the reasons they engage in these so-called *pre-listening* activities and about their intended role in helping students to understand. Though Politzer and McGroarty's (1985) showed great cultural sensitivity by proposing that our concepts of *learning strategy* may be "ethnocentric", I think it would do second language learners a disservice to excuse them from the responsibility they share for learning about the discourse culture of the target language. Strategy training is an important representation of the discourse practices of an English-speaking culture – a subject of particular value to English for Academic Purposes students who intend to study in such a culture, as many of the ones in the present study do.

Rather than avoiding the teaching of interactive strategies that might be foreign to the students, the course design here could possibly encourage greater use of these strategies by making more of the lectures bi-directional and interactive rather than simply recorded. The current course textbook (Lebauer, 2000) makes this possible by providing the instructor with lecture outlines so that the lectures can be presented by a live speaker, but few instructors make use of it. This was the approach Rost & Ross (1991) found success with, and also an approach that Mendelsohn (2003) has called for. There are many ways to incorporate such practice into this course, such as

by having instructors present the lectures themselves, or by inviting guest speakers to the class. Perhaps internship or practicum course credit could be offered to undergraduate students who have expressed an interest in TESOL or in cultural studies in exchange for presenting one or more of these lectures according to the pre-prepared outline.

4.3. Key Finding 3 – interpretation

The third finding suggests that the participants are having trouble transferring their explicit knowledge about listening strategies from the created texts that they use in conjunction with the textbook to authentic listening tasks. The fact that the mean strategy reporting frequency was much lower for authentic texts than for created texts certainly suggests, at the very least, that these learners have trouble seeing the application of what they are learning to a real task. This would support Anderson's (1985, 1995) claim – in general, and not specific to language learning – that this is an inherent difficulty learners have with declarative knowledge. Specific to language learning, Chamot (1995) reaches this as an overall conclusion to her earlier studies, and the evidence from this study certainly complements her findings.

However, there are two other findings in regards to this research question which should not be ignored. Firstly, it is difficult to explain why participants actually reported using strategies more frequently on the pilot authentic listening task than on the others despite having had only four days of instruction (one of them including many time-consuming first-day administrative tasks) at that point. Perhaps the broadcast was not as difficult on that day, or perhaps this was an example of a Hawthorne effect (Brown, 1988); fresh and still full of enthusiasm for what they had learned since the first day of class only three days before, many participants may have

simply written down what they learned in the first few days, whether they actually used those strategies or not.

Secondly, the high number of strategy reports arising from the only video task clearly shows that this exercise was not like the radio news tasks. It is possible that the text of the video was simply easier to understand in terms of the syntactic and lexical structures it contains, but without a detailed analysis of the two texts, this claim would be only speculative. It very likely, however, that the simple fact that it was a *video* instead of only *audio* played a role in how well students were able to relate strategies to it, because as Mendelsohn (2003) explains, listening in real life means not only interpreting linguistic cues, but also *paralinguistic* (body language and facial expressions) and *extralinguistic* (non-human visual aids) cues. This is one of the reasons Mendelsohn, in his recent comments on strategy training, advocated the use of more video and more live interaction in listening classrooms.

4.3.1. Implications for instruction and research

The findings in regards to transfer of strategies to authentic tasks indicate the following needs:

First, if authentic texts are to be used, then listening courses need to also incorporate strategy training in direct association with authentic tasks. Currently, all printed strategy training materials in this course occur in association with created texts. Any strategy training that students receive in direct association with authentic texts comes directly from the instructor in the classroom. In fact, Mendelsohn (2003) advocates using *only* created texts until students are sufficiently trained in the use of effective listening strategies. I do not necessarily agree with this

proposal in an ESL context: Students are already listening in an authentic context daily outside the classroom, and pedagogy can't ignore their need to cope with these contexts.

However, I agree with Mendelsohn's call for more interactive listening or more tasks with video components. Why do ESL listening courses such as the one I studied here practice listening to academic lectures using only audio when such lectures are *never* delivered in this way in real life? The answer, of course, lies in the cost of producing video to accompany ESL textbooks: Few publishers are willing to risk the production costs involved with such materials with no guarantee that they will sell. Nevertheless, some cost-effective way of incorporating these elements into second language listening courses must be found. Some examples may include the suggestions for interactive lectures I made in Section 4.2.1. Perhaps another possibility might be to obtain permission from instructors of undergraduate general education lecture courses on campus to tape a session or two of their classes with the stipulation that the materials would only be used in the second language classroom. Not seeking such a solution to this practical problem deprives learners of the *paralinguistic* and *extralinguistic* elements of input Mendelsohn (2003) was referring to. Some research has already been conducted in this area (Rost & Ross, 1991; Coll-Garcia, 2001). A replication of these studies would be welcome.

4.4. Key Finding 4 – interpretation

In hindsight, the question about whether there is a relationship between perceived difficulty and strategy use may not be valid in a non-controlled context, because everyone's perception of difficulty is different and may be influenced by such factors as culture, personality, or motivation.

Nevertheless, it is worth considering the possible reasons for the reliable differences in perceived difficulty between those who were "high-frequency" strategy users (used a strategy from the course curriculum in 50 percent or more of all exercises), and those who were "low frequency" users. To this end, DeFillipis' (1980) early proposal could provide a starting point for a direction that is underexplored. The claim in this early study was that the listeners' ability to decode the syntactic and phonological signal of the L2 would play a prominent role in the learner's choice of strategies. If learners are able to process these signals, then they will be free to focus on discourse-level meaning. Because the curriculum studied here focuses heavily on lexical items as discourse cues, we can interpret it as being dominated by top-down strategies. If learners' proficiency levels are so low that they aren't even able to parse these basic building-block signals, then we have to wonder if they have access to top-down strategies. We are faced with a dilemma: If we are to accept the results of the third research question as valid, we must ask ourselves whether strategy use led learners to find the texts easier, or whether greater proficiency *enabled* learners to use a strategy which in turn led them to find the texts easier. The former proposition presumes, as the research question and curriculum design do, that strategy use, perceived difficulty, and proficiency are all affected by the same independent variable – strategy training. In the latter proposition, proficiency is the independent variable affecting strategy use and perceived difficulty. In this regard, this thesis can only propose directions for future research, because proficiency was only controlled for to the degree that the institute was able to control for it during level placement. Anyone who has worked in an intensive English program knows that this is always a less-than-perfect process, so these results should not be considered generalizable.

4.4.1. Implications for instruction and research

This finding demonstrates the need for further investigation into the role of bottom-up strategies in L2 listening comprehension.

More than one study mentioned earlier (O'Malley, Chamot and Küpper, 1989; Ozeki, 2000; Taguchi, 2001) makes the claim that more proficient listeners tend to rely more on top-down than on bottom-up strategies. This may be the case, but what the present study calls into question is whether top down strategies lead to easier comprehension, or whether easier comprehension leads to the use of top-down strategies. If second language listeners in general most naturally focus on prosodic cues in their choice of listening strategies as Harley's (2000) study suggests – relying on phrase boundaries, stress and intonation as clues to overall meaning – then one must question how well they will be helped if the curriculum focuses on the *cognitive strategy* of *linguistic transfer* in the form of lexical items as discourse cues. Being able to locate and isolate these lexical cues in a stream of fast speech implies a syntactic processing ability that Harley (2000) claims only literate native speakers have access to. Harley's results are badly in need of replication in order to test their reliability, particularly because her claim that L1 does not make a difference is in conflict with the results Koda (1993) found in a study of L2 reading strategies.

4.5. Key Finding 5

The results of the fourth research question, which found no statistical relationship between the reporting of the trained strategies that participants learned and the listening comprehension exercises that they took, cannot be generalized because it was not possible to test for reliability all the questions that I wrote before the study. This in and of itself, however, is an important

finding of the study, for this is the way comprehension exercises are typically written for ESL courses: untested in advance for reliability.

Furthermore, the lack of a statistical relationship between performance and the *instructed* strategies would not necessarily mean that there is no relationship between conscious strategy use and performance. Students may have engaged in other techniques – even consciously – that either helped or hindered their performance. For example, I know for certain that the *cognitive* strategy of *translation* occurred, because I was able to observe this through learners' L1 margin notes providing themselves with translations of unfamiliar vocabulary. The fact that none of them reported using this strategy may be related to the fact that *translation* is frowned upon in the institute as an inefficient strategy that "slows you down". These L1 glosses also suggest that participants may have relied on the cognitive strategy of *resourcing* in the form of sneaking a quick peek at their bilingual dictionaries or handheld electronic translators – a strategy that most teachers in the institute recommend against and some (including myself) even explicitly ban during class time. How many students would admit to relying on a strategy that their teacher has explicitly cautioned them not to use or even explicitly forbidden them from using? It is very difficult to compare strategy use to performance because few measures of strategy use can account for *negative training:* how students react to being trained *not* to do something. It is only possible for the data collection instrument I used in this study to indicate whether there is a link between performance and the strategies that students *report* – when in fact participants may consciously *not* report something they were explicitly trained *not* to do.

4.5.1. Implications for instruction and research

A retrospective report in Ericsson and Simon's (1993) model is therefore not necessarily valid if one intends to test the relationship between strategy use and performance because it tells us little about negative training. We cannot know whether explicit negative training has had the intended impact (because the question was "what did you do" and not "what didn't you do"), nor can we know whether negative training has failed (because learners won't likely admit it).

The lack of reliability testing of comprehension questions demonstrates a fundamental problem with explicit strategy training in a real-life, non-experimental classroom: Without a reliable measure of assessment, it is difficult for the classroom instructor to evaluate whether his or her strategy instruction is having any effect. Because the types of exercises used here were similar to ones that might ordinarily be used in this course, this study should indicate a need for better assessment tools in ESL listening classrooms. Such devices might help to alleviate the skepticism Berne (1998) found that some listening instructors have towards strategy instruction by providing concrete evidence of the value of strategy instruction.

However, in this regard, we should also consider Mendelsohn's (2003) advice that testing and assessment are *not* valid goals of teaching listening to begin with – that listening courses should always be primarily focused on teaching learners the process of effective listening (e.g. "strategy training") rather than testing them. In the context of pedagogy, at least, this proposal may have merit. In the context of face validity, however, it is doubtful that learners will accept a course that does not constantly seek to assess their comprehension. Listening assessment must therefore find a way to do both.

4.6. Conclusion and overall recommendations

This thesis should not be understood as a claim that the notion of learning strategy use is entirely pointless. Ultimately, however, this study forces us to question the explicit teachability of learning strategies in a real-life classroom context. This is not to say that we should give up on strategy training, but rather that instructors and researchers ought not take for granted that simply telling students about top-down techniques for processing meaning will result in improved listening comprehension. Clearly, as Donato & McCormick (1994) said, there is more behind strategy use than training in "encapsulated" strategies.

Specifically, the most important accomplishments of this study have been (a) to affirm the need for research conducted in uncontrolled, classroom environments in order to account for the sociocultural variables that play a role in every non-experimental setting; (b) to demonstrate the absence of social and affective strategies from the strategy repertoires of students in this course; and (c) to confirm the difficulty that students have in transferring declarative knowledge about language learning strategies to new contexts, such as authentic listening tasks.

Furthermore, though the results on perceived difficulty and performance are not generalizable, the findings in these areas demonstrate the need for studies in underexplored areas of learning strategy research, such the role of syntax and phonology, and the need to consider the way listening is assessed in a classroom context. Rubin (1975) contended that there was a lack of attention to "what is going on in the learner himself". Perhaps this was true nearly 30 years ago, but now it seems as if we would do well to also consider the external constraints on strategy use, such as the complexity of the input and the sociocultural environment of the second language

classroom. Pursuing these paths will help to determine what role explicit strategy training can play in instructed language learning.

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Appendix A

Student information survey

1. What country are you from?

2. What is your native language?

3. Which of the following best describes your age?

a. 18 – 25 years old
b. 26 – 35
c. 36 – 45
d. 46 – 55
e. older than 55

4. How long have you learned English in a school, college or university?

a. I have never learned English in a school, college or university before.
b. 1-3 years
c. 4-6 years
d. 7-10 years
e. I have learned English in a school, college or university for more than 10 years.

5. Have you ever taken an English course where the focus was *only* listening and speaking? You may circle more than one answer if necessary.

a. Yes – in my home country.
b. Yes – here in the ELI.
c. Yes – at another language school in an English-speaking country.
d. No, never.

Appendix B

Inventory of strategies and corresponding codes
Adapted from O'Malley and Chamot (1990:137-139)

Specific definitions appear in Figure 1.1 on Page 16.

Strategy	Code
Metacognitive strategies	
planning	Mpf
directed attention	Mda
selective attention	Msa
self-management	Msma
self-monitoring	Msmo
problem identification	Mpi
self-evaluation	Mse
Cognitive strategies	
repetition	Crep
resourcing	Cres
grouping	Cgr
note taking	Cnt
deduction / induction	Cdi
substitution	Csub
elaboration	Cel
summarization	Csum
translation	Ctr
transfer	Ctf
inferencing	Cinf
social / affective strategies	
questioning for clarification	SAq
cooperation	Sac
self-talk	SAst
self-reinforcment	SAsr

Appendix C

Written survey – qualitative interview with instructors
Questions based on strategy inventory by O'Malley & Chamot (1990)

Procedure
I gave the instructors O'Malley and Chamot's (1990) definition of each strategy and asked them to explain how they had *explicitly* introduced this as a strategy in their own lessons, or whether they hadn't taught anything about it at all. Their responses appear below; "100" and "200" are the anonymous codes for the two different instructors.

Instructions
I gave the instructors the following written directions for this survey:

Section A: For each strategy, you will find one question. For each, please mark only one box; if you never explicitly taught the strategy, or do not feel it is *explicitly* represented in the curriculum as a strategy to improve understanding, place an X in the left-hand box. Otherwise, please explain what you did by writing a sentence or two (no more is necessary) in the right hand box.

If you need clarification on these instructions or the process of completing this survey, please contact me ASAP at [e-mail address].

Strategy	a) I never *explicitly* taught students anything about this.	b) I explicitly made students aware of the value of this technique as a strategy by doing the following things:
Planning		*Instructor 100*: "Explicitly teaching cues or org[anizational] patterns then practicing listening for them w/ short listening texts." *Instructor 200*: "Discussed 'organizational plans' for academic lectures, as presented in textbook; elicited organization & structure from Ss after first time listening (i.e. 'how many points?' 'How is this organized?'); asked Ss to listen for cue words specific to the organizational plan we had discussed"

Directed attention		*100*: "Student were presented w/ questions before listening so that they'd know what info to listen for." *200:* "asked Ss to give main idea of answer main idea question(s) after first time listening to news stories or a lecture. (Made Ss aware of these questions before listening)."
Selective attention		*100*: "1. telling students what they needed to listen to.; 2. remind students there is lot of extra info during the lecture that we don't care about." *200:* "created cloze activities for listening to the news, to draw attention to place names, large numbers, etc.; asked Ss to answer '5W' questions (who? where? etc.) about news stories."
self-management	*200:* X	*100*: "1. Being aware of the topic + relating ideas in the topic will help w/ understanding the lecture, news etc. ...; 2. Use grammatical knowledge of Eng. to eliminate obviously wrong answers."
self-monitoring	*100*: X *200:* X	
problem identification	*100*: X *200:* X	
self-evaluation	*100*: X *200:* X	
repetition	*100*: X *200:* X	
resourcing		*100*: "After 1 listening student were encouraged to think about the material + discuss it w/ each other to clarify confusing points: for this time they could use dictionaries, refer to each others' notes..." *200:* "used dictionaries in class for pre-listening vocab work; used textbook for lists of cue words related to various strategies; used previous notes as basis for quizzes toemphasize importance of good note-taking skills."

grouping		*100*: "practiced relating info within a lecture e.g. what goes with what." *200:* "gave textbook-based instructin concerning methods of organizing / classifying info, and associated cue words and phrases."
note-taking		*100*: "following the course syllabus – the entire class is focused on this" *200:* "required note-taking for every academic lecture; emphasized skills such as organization & use of symbols & abbreviations in instruction & grading; gave quizzes on context of notes, reuiring Ss to have complete & clear notes."
deduction /induction	*100*: X *200:* X	
substitution	*100*: X	*200:* "suggested ways to catch meaning even if Ss did not understand every word (i.e. intonation, emphasis, context)
elaboration		*100*: "1. relate world knowledge to listening; 2. relate topic knowledge to listening." *200:* "related concepts such as key words and organization to other classes / language skills (i.e. writing, speaking, grammar)."
summarization	*100*: X	*200:* "asked Ss for verbal summaries of main ideas after listening; assigned HWK requiring Ss to summarize main ideas of radio programs they listened to on their own."
translation	*100*: X *200:* X	
transfer		*100*: "use knowledge of grammar, sentence structure, etc. to help figure out difficult parts." *200:* "referred to knowledge acquired in speaking, reading, writing, & grammar classes (grammar rules such as negation, speaking, aspects such as emphasis, etc.)

inferencing		*100*: "Stopping a listening to predict what will come next; 2. discuss unfamiliar terms w/ classmates before asking T to explain." *200:* "encouraged Ss to infer meaning of unfamiliar vocabulary based on word structure / related words or on context; encourages Ss to read daily news in order to better comprehend radio news."
questioning for clarification	*200*: X	*100*: "Make students work at answering their own ?s before I would; 2. Ask questions before, during, after listneing to lead Ss to the things I want them to hear."
cooperation		*100*: "group (pair work every day)" *200*: "had Ss work in pairs / groups for pre-listening activities (vocab, schema-raising discussions).; encouraged Ss to ask each other for missing info in during / after-listening activities."
self-talk	*100*: X *200*: X	
self-reinforcement	*100*: X *200:* X	

Appendix D

Qualitative interview questions used to gain more data on classroom instruction

1. How many years of experience do you have as an ESL instructor?
2. Where did you get your training as an ESL instructor?
3. What kind of experience and training have you had specific to teaching listening skills?
4. What kind of guidance do you receive specific to this course?
5. What is your understanding of the concept of a "listening strategy"?
6. How do you make learners aware of the concept of strategy?
7. In general, how do you explicitly train students in the use of listening strategies that are included either in the course curriculum or course materials?
8. What is your perception of the effectiveness of the listening strategies that are taught in the curriculum here?
9. In your estimation as a language education professional, how did students react toward the eight strategies surveys that were conducted as part of this study?
10. How did you prepare students for new or unfamiliar vocabulary found either in the accompanying listening comprehension exercise or in the listening text?
11. How did you prepare students for the content of the exercises prior to listening?
12. Did students have access to the listening texts outside of classroom instruction? If so, to the best of your knowledge, to what degree did they make use of this access BEFORE the first time you listened in class?

Appendix E

Example of combined comprehension / survey form used to collect data for dependent variables *reported strategy use, perceived difficulty,* and *listening comprehension performance*

Top portion: *The top half of the form contained five multiple choice comprehension questions.*

LLLL – Lecture 1, Part 2 exercise *Name:*_____

Listen to the passage and answer the following 5 questions by circling the letter of the correct answer. (2 points each).

1. What was this lecture *mainly* about? Choose the best answer:

a. The way people communicate with language
b. How speakers change meaning by changing their tone
c. How to guess what a speaker is talking about
d. How to understand a lecture

2. According to the speaker, you should remember that:

a. all parts of language may be used to show meaning
b. only the words are important to understanding the meaning
c. only the speaker's intonation is important to understanding meaning
d. you won't understand the lecture if you don't know anything about the subject

3. When listening to a lecture, the speaker says, you should:

a. never use your own knowledge. The speaker's words should be respected.
b. use your own background knowledge to help you understand
c. leave if you don't understand.
d. always be an expert in the subject

4. The speaker believes the most important thing to do when listening to a lecture is:

a. listen carefully
b. take notes
c. make predictions about what is coming next
d. ignore noise in the room

5. The speaker says that the last thing listeners should do is:

a. evaluate the information to decide what is important and what isn't
b. thank the speaker and give him or her applause
c. re-write the notes they took
d. turn off their tape recorders

Bottom portion: *The bottom portion contained the three questions designed to elicit participants' retrospective reports on strategy use.*

In order to help us know more about how you completed this exercise, please take about 2 minutes to answer these questions. Your answers will not affect your grade in any way.

1. Did you use any strategies -- any special techniques you learned in class or knew about already -- to help you understand what you heard? Please place an X in <u>one</u> box.

yes ☐ no ☐

2. If you answered "yes" to question 1, please tell us what you did?

3. How difficult did you find this exercise? Please check <u>one</u> box.

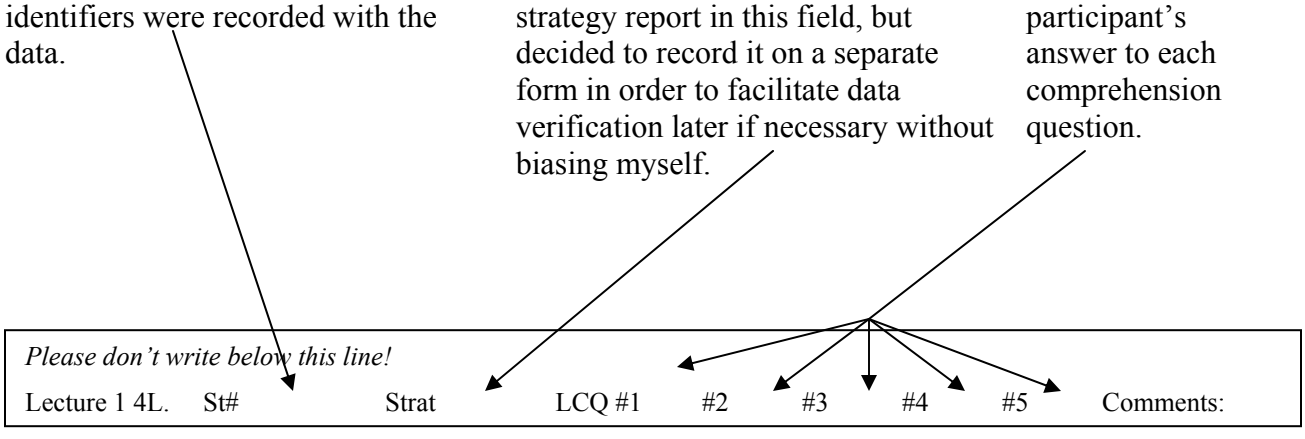
☐	☐	☐	☐
I understood nothing.	I understood some things, but less than half.	I understood most of it, but not everything.	I understood everything.

Footer: *After the classroom exercise was complete, the top portion containing the comprehension questions was cut apart from the bottom portion containing survey information. Before the comprehension questions were returned to the instructor, data from the top portion was recorded in the page footer in the following manner:*

The participant's anonymous I.D. number was recorded here. Thus, no identifiers were recorded with the data.

This field was not used. I originally intended to code the participant's strategy report in this field, but decided to record it on a separate form in order to facilitate data verification later if necessary without biasing myself.

In these fields, I recorded each participant's answer to each comprehension question.



Appendix F

Comprehension questions asked on survey forms

Question	Exercise
1. What was this lecture *mainly* about? Choose the best answer: a. American women. b. things women should consider when looking for a job c. the best jobs in the U.S. d. why men are so unhealthy	Exercise 1 – Lecture 2 from Lebauer (2000)
2. What does the speaker say about heart attacks? a. With more women working, more women are having heart attacks. b. Heart attacks are caused by stress. c. Working women DO NOT have more heart attacks than women who don't work. d. 50 percent of women have a heart attack at some time in their lives	Exercise 1 – Lecture 2 from Lebauer (2000)
3. What was the purpose of the study conducted by three universities? a. to see who was emotionally stronger – working women or housewives? b. to see whether women are emotionally stronger than men c. to study heart attacks d. to study emotional strength	Exercise 1 – Lecture 2 from Lebauer (2000)

Question	Exercise
4. What were the results of the study? a. Housewives experience fewer stressful events in their lives. b. Women who work experience less psychological distress than those who don't. c. Both a and b are true. d. None of these are true.	Exercise 1 – Lecture 2 from Lebauer (2000)
5. What is the speaker's conclusion? a. Jobs help women deal with stress. b. Women shouldn't work. c. Some women are very stressed. d. Women should work.	Exercise 1 – Lecture 2 from Lebauer (2000)
6. What was the *main* purpose of this video? a. to describe the stress international students sometimes feel b. to completely explain the U.S. health system c. to give international students some important health tips for studying in the U.S. d. to scare you	Exercise 2 – Student Health Video (NAFSA: Association of International Educators, 1997)
7. According to the video, what is the biggest cause of illness for international students? a. stress b. alcohol c. change of diet d. injuries	Exercise 2 – Student Health Video (NAFSA: Association of International Educators, 1997)
8. Why do the doctors and nurses seem to repeat things a lot? a. They are afraid that international students don't understand them. b. American doctors aren't trained well, and they have to ask more than once to understand. c. They often don't understand international students the first time they say something. d. They are trying to get as much information as possible to make the best decisions.	Exercise 2 – Student Health Video (NAFSA: Association of International Educators, 1997)

Question	Exercise
9. What do several people in the video say about health insurance? a. international students should get health insurance b. international students should take the time to read their health insurance information c. international students should understand at least some basic things about health insurance d. all of these things were said in the video	Exercise 2 – Student Health Video (NAFSA: Association of International Educators, 1997)
10. According to the video, which of these is the best place to get affordable health care? a. the emergency room b. the hospital c. your family doctor d. student health services	Exercise 2 – Student Health Video (NAFSA: Association of International Educators, 1997)
11. What was this lecture *mainly* about? Choose the best answer: a. the two different types of stress b. the negative consequences of stress c. ways to reduce stress d. the causes of stress	Exercise 3 – Lecture 6 from Lebauer (2000)
12. According to the speaker, stress: a. is always bad b. is neither positive or negative. Rather, it is one's reaction to stress that can be good or bad. c. is very dangerous d. is something you should avoid	Exercise 3 – Lecture 6 from Lebauer (2000)
13. What does the speaker say is an appropriate ways to deal with stress? a. recognize your own signs of stress b. understand your body's demands c. plan d. all of a, b and c	Exercise 3 – Lecture 6 from Lebauer (2000)

Question	Exercise
14. What does the speaker mean by "pace your activities"? a. break tasks up into smaller parts and do a little each day b. plan to do as much as you can at one time c. do everything as fast as possible so you can go and have fun d. use a stop watch or timer to see how fast you complete a task, and compete with yourself	Exercise 3 – Lecture 6 from Lebauer (2000)
15. What does the speaker say about how much stress a person can handle? a. There is no limit to stress – you can't imagine how bad it can possibly be. b. The limit is about the same for every human. c. There is a different limit for every person. d. Humans are actually quite weak and can't handle stress like other creatures can.	Exercise 3 – Lecture 6 from Lebauer (2000)
16. What was this first story *mainly* about? Choose the best answer: a. investigators have already found the cause of the space shuttle accident b. the memorial services for the space shuttle astronauts who were killed c. liquids leaking from the space shuttle d. the search for the space shuttle accident's cause	Exercise 4 – NPR News, February 3, 2003
17. What was this second story *mainly* about? Choose the best answer: a. the investigation about the cause of the space shuttle accident b. police officers in Texas arresting people who stole pieces of the space shuttle c. the search for wreckage from the space shuttle. d. the place where most of the space shuttle wreckage was found	Exercise 4 – NPR News, February 3, 2003

Question	Exercise
18. What was this third story *mainly* about? Choose the best answer: a. nuclear missiles b. the U.S.'s war of words with North Korea c. the space shuttle accident investigation d. the suffering of the North Korean people	Exercise 4 – NPR News, February 3, 2003
19. What was this fourth story *mainly* about? Choose the best answer: a. Colin Powell's upcoming speech about Iraq to the United Nations b. Colin Powell's upcoming speech about North Korea to the United Nations c. Iraq's denials that it has chemical weapons d. the possibility of war with Iraq	Exercise 4 – NPR News, February 3, 2003
20. What was the fifth story *mainly* about? Choose the best answer a. the U.S. budget for 2003 b. the proposed U.S. budget for the year 2004 c. the U.S. wants to spend more on the military d. the U.S. has no money	Exercise 4 – NPR News, February 3, 2003
21. What was this lecture *mainly* about? Choose the best answer: a. what Americans want from their jobs. b. how much money Americans earn c. the best jobs in the United States d. why Americans work so hard	Exercise 5 – Lecture 3 from Lebauer (2000)
22. The speaker got the information for this lecture from: a. a sign she saw on a light post somewhere b. conversations with American workers c. a survey taken in the 1990s d. two surveys taken in the 1990s	Exercise 5 – Lecture 3 from Lebauer (2000)

Question	Exercise
23. What was the design or format of the first survey? a. People wrote a paragraph about what they liked about their jobs b. People had five choices and had to say which of the five was most important to them. c. People read about 16 aspects of jobs and wrote whether each was important to them d. People answered questions from someone who called them on the telephone	Exercise 5 – Lecture 3 from Lebauer (2000)
24. What was the design or format of the second survey? a. None – there was only one survey. b. People read about 16 aspects of jobs and wrote whether each was important to them c. People had five choices and had to say which of the five was most important to them. d. The second survey was exactly the same as the first one.	Exercise 5 – Lecture 3 from Lebauer (2000)
25. In conclusion, what did *both* polls show? a. Job satisfaction is important to Americans. b. Americans like to have fun in their jobs. c. Americans don't like work. d. Money is not the most important thing for American workers.	Exercise 5 – Lecture 3 from Lebauer (2000)
26. What was the *first* story mainly about? Choose the best answer: a. weapons inspectors say Iraq still isn't cooperating at all b. weapons inspectors are leaving Iraq c. weapons inspectors say Iraq is cooperating a little more now d. a weapons inspector in Iraq had a heart transplant	Exercise 6 – NPR News, February 10, 2003

Question	Exercise
27. What was the *second* story mainly about? Choose the best answer: a. some NATO countries don't want to send defense help to Turkey yet b. Iraq is threatening Turkey c. Turkey is refusing help from NATO d. Turkey is protesting against a possible war	Exercise 6 – NPR News, February 10, 2003
28. What was the *third* story mainly about? Choose the best answer: a. an important Iraqi leader was murdered b. an important Turkish leader was murdered c. an important Kurdish leader was injured d. an important Kurdish leader was murdered	Exercise 6 – NPR News, February 10, 2003
29. What was the *fourth* story mainly about? Choose the best answer: a. lawyers are supporting anti-terrorism laws b. lawyers are protesting anti-terrorism laws c. lawyers are defending terrorists d. lawyers want more anti-terrorism laws	Exercise 6 – NPR News, February 10, 2003
30. What was the *fifth* story about? Choose the best answer: a. NASA is rebuilding the space shuttle to use it again b. NASA has found he cause of the space shuttle accident c. NASA will put the pieces of the Columbia together to try to find the cause d. They are still looking for pieces of the space shuttle	Exercise 6 – NPR News, February 10, 2003