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Corbin Kalanikiakahi Rivera
Brigham Young University

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The Effects of Metacognitive Listening Strategy Instruction on ESL

Learners' Listening Motivation

Corbin Kalanikiakahi Rivera

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Grant Taylor Eckstein, Chair
David S. Eddington
Benjamin L. McMurry

Department of Linguistics and English Language

Brigham Young University

ABSTRACT

The Effects of Metacognitive Listening Strategy Instruction on ESL
Learners' Listening Motivation

Corbin Kalanikiakahi Rivera
Department of Linguistics and English Language, BYU
Master of Arts

Prior studies looking at the effects of listening strategy instruction on motivation have shown there to be a positive correlation between the two. However, the participants of these studies all shared a first language (L1) and were not enrolled in an intensive English program (IEP). This study aims to investigate the correlation between listening strategy instruction and listening motivation in an IEP classroom for students from different L1s. Listening motivation was recorded utilizing the English Listening Comprehension Motivation Scale (ELCMS) and strategy use was tracked with the Metacognitive Awareness Listening Questionnaire (MALQ). Pre- and post-test scores of 56 participants (control group, n=30; experiment group, n=26) were analyzed using a mixed-effects regression and paired t-test to determine differences after a 7-week treatment period. Results revealed that study participant motivation levels in both groups decreased over the treatment period, with the experiment group seeing a smaller decrease than the control group.

ACKNOWLEDGEMENTS

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Introduction

Although listening is an important skill in English language teaching, it is nevertheless an often overlooked area of instruction compared to the other core skills of reading, writing, and speaking (Flowerdew & Miller, 2013). Those who have studied and taught listening instruction have historically viewed it from one of two paradigms. According to Hinkel (2006), listening was taught with a bottom-up focus on phonological, lexical, and sentential units prior to the 1980s and subsequently with a top-down focus on "listeners' abilities to activate their knowledge-based schemata, such as cultural constructs, topic familiarity, discourse clues, and pragmatics" (p. 117). Only more recently has listening instruction shifted to a third focus which emphasizes metacognitive instruction, or a student's reflection on his or her cognitive strategy usage before, during, and after listening to a text in the target language (Hinkel, 2006).

In 2006, Vandergrift, Goh, Mareschal & Tafaghodtari developed the Metacognitive Awareness Listening Questionnaire (MALQ), which allowed them to quantify students' metacognitive strategy usage. Since then, a relatively large number of researchers have examined the utility of a metacognitive focus on listening instruction (Birjandi & Hossein, 2012; Bozorgian, 2014; Goh, 2008; Rahimi & Abedi, 2014; Rahimirad, 2014; Rahimirad & Shams, 2014; Vandergrift, 2005; Vandergrift & Tafaghodtari, 2010). Nearly all of this research has revealed a positive correlation between metacognitive awareness and listening proficiency.

In addition to metacognitive awareness, listening researchers have also been interested in the intersection of motivation and listening proficiency with the expectation that "motivation plays a significant role in improving communicative ability" (Motlhaka, 2012, p. 60). Although definitions of motivation vary from researcher to researcher (Brown, 1986; Dörnyei, 1998; Keller, 1983)—some say it is a choice consciously made, others say it is in an impulse—

researchers have nevertheless developed measurement tools which demonstrate a positive correlation between motivation and listening proficiency (H. Hsu, 2006; Mohammad, 2010).

Following from the evidence that metacognitive strategy awareness and motivation both contribute to listening development, additional research has explored the relationship between these constructs. Vandergrift (2005), for instance, measured both metacognition and motivation among French learners and found that motivational indices correlated with listening strategies. Other researchers have found similar results in EFL settings (Harputlu & Ceylan, 2014; Kassaian & Ghadiri, 2011; Nezhad, Behzadi, & Azimi, 2013), suggesting a consistent relationship in which higher metacognitive strategy usage relates to higher motivation.

While metacognition and motivation both appear to be useful in developing listening ability and are positively correlated with each other, researchers have failed to demonstrate whether the positive relationship is in fact causal. This is partly because previous research designs have made one-time measures of both metacognition and motivation rather than following students' progress over an instructional period. Additionally, prior research has largely examined listening metacognition and motivation in EFL settings rather than ESL environments that are rich with opportunities for target language exposure. These considerations are important since evidence of listening strategy instruction affecting motivation in ESL settings could lead to better listening instruction through metacognitive strategy training. Therefore, the research in this study aims to determine whether metacognitive instruction leads to gains in listening motivation over the course of several instructional units. It is expected that students will self-report higher listening motivation over several weeks of listening strategy instruction.

Literature Review

Vandergrift & Goh (2012) made the observation that many classroom listening activities seem to focus on learners' outcome of listening as opposed to the process they go through in order to comprehend an oral text. They further commented that, unlike reading, listening does not easily allow for instructors to direct attention to certain segments of text or adequately scaffold thinking and comprehension. Unlike with a written text, instructors cannot physically direct listeners to specific parts of an aural passage, and although repeating and/or pausing a text is an option, doing so can detract from the authenticity of the listening practice. Vandergrift & Goh (2012) nevertheless emphasized the importance of listening as a language tool because "it enables language learners to receive and interact with language input and facilitates the emergence of other language skills" (p. 4).

Instructors have relied on different approaches over the years in order to facilitate listening development. Hinkel (2006) explained that the bottom-up focus of the 1970s pedagogy emphasized the ability to "identify words, sentences boundaries, contractions, individual sounds, and sound combinations" while the focus shifted in the 1980s towards top-down skills which emphasized "listeners' abilities to activate their knowledge-based schemata, such as cultural constructs, topic familiarity, discourse clues, and pragmatic conventions". However, neither of these foci proved to be especially effective alone, as "learners who rely on linguistic processing often fail[ed] to activate higher order L2 schemata, and those who correctly apply schema-based knowledge tend[ed] to neglect the linguistic input" (p. 117).

A more recent approach to listening pedagogy is that of metacognitive listening instruction (Hinkel, 2006). Metacognition is commonly defined as "our ability to think about our own thinking or 'cognition', and, by extension, to think about how we process information for a

range of purposes and manage the way we do it" (Vandergrift & Goh, 2012, p. 83).

Metacognitive listening, therefore, can be viewed as thinking about how individuals listen and

the processes they go through to comprehend aural input. Cross (2011) described metacognitive

instruction in the listening class as "teaching that focuses on actively eliciting and promoting

learners' knowledge of themselves as L2 listeners…and which provides them with direction

about ways to discover how to manage their listening comprehension" (p. 408). One of the ways

that L2 listeners can discover how to manage their listening comprehension is through strategy

usage. Yang (2009) categorized metacognitive strategies into seven types: planning, monitoring,

evaluation, selective attention, directed attention, functional planning, and self-management.

While some strategy types are more frequently used than others, Yang asserted that listeners'

metacognitive awareness should be cultivated and strategy instruction should be integrated into

the teaching of listening (p. 134). Rahimirad (2014) also mentioned that the role of

metacognitive strategy instruction is one that assists students in regulating their learning and

awareness to consciously control their listening processes.

Metacognition and Listening

The intersection of listening and metacognition has only recently been explored. In his

2004 study, Vandergrift reviewed two approaches to listening, which were 1) developing lexical

segmentation and word recognition skills and 2) raising metacognitive awareness. He then

proposed an integrated model in which he encouraged the usage of metacognitive strategies such

as planning, directed attention, monitoring, problem solving, selective attention, and evaluation

as well as allowing learners to analyze a text after listening to ensure vocabulary comprehension.

Many subsequent studies have utilized this integrated model in their own research of listening

development (Bozorgian, 2014; Goh & Taib, 2006; Vandergrift & Tafaghodtari, 2010).

Alongside this integrated listening instruction model, Vandergrift et. al. (2006) developed their metacognitive awareness scale for listening instruction, the MALQ, to measure self-reported levels of metacognitive awareness. The MALQ allows users to reflect on their usage of and attitudes towards metacognitive strategies (in this case, listening strategies that require certain amounts of metacognition). Vandergrift et. al.'s (2006) creation and validation of the MALQ is a 21-item questionnaire that uses a 6-point Likert scale, the scoring of which makes an individual's metacognitive awareness quantifiable (see Appendix A). The creation of the MALQ led to an increased number of studies which measured language learners' self-perception of metacognitive listening awareness. Vandergrift & Tafaghodtari (2010) repeatedly administered the MALQ to two groups of learners of French as a second language (FSL). The experimental group ($n = 59$) listened to and was guided through texts using the aforementioned integrated model. The control group ($n = 47$) listened to the same texts but without any guidance via the integrated model. In order to measure listening comprehension gains, the listening section of the university's FSL Placement Test was administered to both groups at the beginning and end of the study. The results showed that not only did the experimental group outperform the control group in terms of listening scores, but that the less-skilled listeners in the experimental group significantly improved their listening in comparison to those of the control group and had greater listening gains than the more-skilled participants in their group.

In Bozorgian's (2014) study, 30 native Persian speakers received metacognitive instruction in an EFL class over an eight-week semester. During those eight weeks, participants practiced listening in five stages: planning/predating, first verification, second verification, final verification, and reflective. Each of these stages was related to one or more metacognitive strategies. These strategies were emphasized as part of a treatment, resulting in increases in

listening proficiency and a strong correlation between metacognition and listening ability. Goh & Taib (2006) conducted a small-scale study with 10 young learners, ages 11 and 12, in Singapore. These participants received eight listening lessons, each following a three-stage sequence of listen and answer, reflect, and report and discuss. This study showed similar results regarding the correlation between metacognition and listening proficiency. Vandergrift & Tafaghodtari's (2010) study consisted of 106 French as a second language students at the university level. The experimental group ($n = 59$) for this study was taught metacognitive strategies to increase their French listening ability once a week over a 13-week term, with each exercise divided into the same five pedagogical stages as mentioned in Bozorgian's study. This study also garnered the same results as the two previously studies.

Several other studies have been conducted utilizing the MALQ alongside a battery of listening strategies, but with different instruments used to measure listening comprehension gains. Bozorgian's (2014) previously mentioned study looked at the effects of metacognitive strategy instruction on listening proficiency by utilizing the International English Language Testing System (IELTS) listening tests alongside the MALQ during an eight-week program of metacognitive instruction with 30 high-intermediate EFL male listeners. Rahimi & Abedi (2014) utilized the MALQ, the Preliminary English Test (PET), and the English Listening Self-efficacy Questionnaire (ELSEQ). With these three instruments, they analyzed the listening proficiency (PET), self-efficacy beliefs of performing different listening tasks (ELSEQ), and metacognitive awareness of 371 Iranian EFL learners in high school grades three and four. Similar to Bozorgian's study, Rahimirad & Shams (2014) implemented the listening module of the IELTS alongside the MALQ for their study on 50 female Iranian university students. In all of these studies, the same procedure of administering a metacognitive strategy instruction treatment to an

experimental group, using some form of pre- and post-listening comprehension assessment to measure differences in gains between the experimental and control groups was repeated. Results showed that each experimental group, which received metacognitive strategy instruction, outperformed their respective control group counterparts.

Using a slightly different approach to listening and metacognition, Birjandi & Hossein (2012), Cross (2010), and Rahimirad (2014) took the same strategy-instruction model from Vandergrift & Tafaghodtari's (2010) study and applied it to their respective studies, but without using the MALQ to track metacognitive awareness. Birjandi & Hossein taught male and female Iranian university freshmen ($n = 32$) using Vandergrift and Tafaghodtari's five-stage model for listening instruction: planning/predicting, first verification, second verification, final verification, and reflective. Listening items from the Test of English as a Foreign Language (TOEFL) were used to measure listening proficiency. Cross used the same five-stage model of instruction to teach 20 Japanese females attending an advanced-level English language course. In place of any pre-formulated test items such as those from the IELTS and TOEFL, news items from the British Broadcasting Corporation (BBC TV) were selected to develop the listening comprehension tests for this study. Rahimirad, similar to Birjandi & Hossein, opted to utilize the listening module from the Cambridge TOEFL as their listening proficiency test after their experimental group (consisting of 25 female English literature university students) received eight sessions strategy instruction and metacognitive discussion over the course of four weeks.

Despite each of these studies' differences from each other and the previously mentioned studies in which the MALQ was implemented, all of the described studies revealed the same results. In each study, participants from the experimental group outperformed those of the

control group. Thus, based on the results of this and the previously cited studies, it can be seen that exposure to strategy instruction strongly correlates with improved listening proficiency.

Motivation and Listening

Like strategy instruction, motivation in general has historically been investigated as a moderator to language learning (Gardner & Smythe, 1975). The hypothesis is that individuals who seek to integrate into a language community will demonstrate high motivation to learn the language and thus will achieve high levels of proficiency (see Gardner, 1985, 2000). Indeed, a meta-analysis of Gardner's motivation research revealed a strong and consistent positive correlation between motivation and language achievement (Masgoret & Gardner, 2003).

Researchers have defined motivation in various ways over the last several decades (Brown, 1986; Dörnyei, 1998; Keller, 1983). For instance, Keller (1983) described motivation as "the choices people make as to what experiences or goals they will approach or avoid, and the degree of effort they will exert in that respect." Brown (1986) stated that motivation is "commonly thought of as an inner drive, impulse, emotion, or desire that moves one toward a particular action," mainly differing from Keller's view of motivation as a choice. According to Dörnyei (1998), however, motivation is "a process whereby a certain amount of instigation force arises, initiates action, and persists as long as no other force comes into play to weaken it and thereby terminate action, or until the planned outcome has been reached." This third definition more clearly encapsulates the concept of motivation, taking into account not only what motivation does, but also when it ends or becomes diminished.

Only a few studies have specifically been conducted to analyze the relationship between listening and motivation. In 2006, H. Hsu surveyed 480 Taiwanese university students in order to determine how motivated they felt towards practicing listening in English before comparing

those participants' listening comprehension test scores. Hsu measured participant listening motivation utilizing the English Listening Comprehension Motivation Questionnaire, an instrument composed of two sections: the ELCMS, a 24-item, 5-point Likert scale survey designed to assess student motivation levels for practicing English listening comprehension (see Appendix B), and the English Listening Comprehension Practice Survey, a questionnaire that solicits self-reported average English listening comprehension scores and information regarding the environments and circumstances in which participants practice English listening. Analysis of participant responses to this instrument garnered a number of results: 1) a high correlation between English listening comprehension scores and general English scores, 2) gender and major—area of study—significantly affected motivation individually, but not together, 3) highly motivated respondents spent more time on extracurricular English practice and had higher self-confidence, higher personal expectations, and lower anxiety in practicing English listening, and 4) a strong correlation between motivation for practicing English listening and English listening comprehension scores.

  S. Hsu (2004) and Mohammad (2010) conducted similar studies in which they also looked at the relationship between English listening motivation and listening proficiency scores. Both studies shared one same result as H. Hsu's study, that there was a high correlation between learner English listening motivation and proficiency scores. H. Hsu's other results regarding the general English scores, gender and major area of study, and extracurricular practice were not shared. S. Hsu conducted her study with 112 Taiwanese college students without the ELCMS, but with listening motivation questions based on Chang's Intrinsic Motivation Orientation Scale—the same source from which the ELCMS was derived. Mohammad's study consisted of 64 Iranian EFL students majoring in TEFL with the ELCMS being used as the main instrument

of measure. The shared result of these three studies corroborates Motlhaka's (2012) claim that "…motivation plays a significant role in improving communicative ability…" (p. 60). Despite this corroboration, all of these studies took place in EFL, non-IEP contexts, and focused on the correlation between listening motivation and listening comprehension scores, not at changes in motivation over a period of time.

To further expound on his study, Motlhaka analyzed 45 scholarly articles and books related to the research topic of motivation and learning ESL through listening in order to determine how current literature approaches the intersection of motivation and listening comprehension. From the analyses conducted in this study, the main result directly related to developing ESL listening is that teachers can better facilitate learner motivation—specifically related to listening—by first gaining a solid understanding of comprehensive listening strategies themselves before helping language learners develop those listening strategies. With a strong understanding, Motlhaka asserted that instructors can better design listening tasks that promote student choice and motivation.

Metacognition and Motivation

Today, motivation and metacognition are recognized as key factors in the fields of second and foreign language learning; both are complex, multi-faceted constructs. Moreover, Ziahosseini & Salehi (2008) asserted that there is a correlation between high levels of motivation and language learning strategy use—namely, the higher the language learner's level of motivation, the more likely they will use a language learning strategy. This is perhaps because both motivation and metacognition share some common factors, such as value, expectancy, self-efficacy, and attributions. Because of these commonalities, Vandergrift (2005) began exploring the relationship between these two areas. In his study, participants were given a French listening

comprehension test, immediately following which they were administered an early version of the MALQ and the Language Learning Orientations Scale (LLOS), a motivation questionnaire validated by Noels, Pelletier, Clément, & Vallerand (2000) and derived from Vallerand, Pelletier, Blaise, Briere, Senecal, & Vallieres' (1992) research regarding motivation assessment. The Language Learning Orientations Scale measures levels of intrinsic motivation, extrinsic motivation, and amotivation, with intrinsic and extrinsic motivation broken down into 3 subscales each. Participants consisted of 57 Canadian FSL students ranged from 13 to 14 years old, 60% of which were male. One of the major results of the study revealed that participants who "reported a greater use of metacognitive strategies also reported more motivational intensity," or, more specifically, those participants who were more extrinsically motivated reported a greater use of six specific listening strategies as defined by the MALQ, and that participants with higher intrinsic motivation reported a greater use of 10 specific listening strategies. Finally, an overall analysis of the data showed that all correlations between strategy use and motivations were significant (negative with amotivation, and positive with intrinsic and extrinsic motivation). These correlations culminate in the determination that the more internalized the level of motivation, the more language learners report using metacognitive listening strategies. Despite these significant findings, such results cannot be generalized to any other context, such as that of adult ESL learners.

In a similar study, Kassaian & Ghadiri (2011) also used the MALQ alongside Vallerand's Academic Motivation Scale—the instrument from which the previously mentioned LLOS was derived—in order to investigate the relationship between motivation and L2 listeners' metacognitive awareness and perceived use of strategies. The participant sample consisted of 30 Iranian undergraduate EFL learners at English Institutes, ages ranging from 18 to 28. Results

from the study showed that 1) problem-solving strategies are used more frequently than others by high-intermediate EFL learners, while planning and evaluation strategies are used least frequently, and 2) there is a positive relationship between metacognitive strategies and both types of motivation (extrinsic and intrinsic). The study ends with the recommendation that student metacognitive awareness be cultivated and that strategy instruction be integrated into listening instruction. Similarly, Harputlu & Ceylan (2014)'s study utilizing the MALQ, LLOS, and TOEFL listening section with 33 Turkish English major students aged 20 to 24 revealed positive, though not statistically significant, correlations between the same metacognitive strategies and both extrinsic and intrinsic motivation.

Nezhad, Behzadi, & Azimi Amoli (2013) utilized a different metacognitive strategy questionnaire with the ELCMS in order to conduct a similar study. This study surveyed 60 Iranian university students, ages ranging from 21 to 31, all of whom were studying English translation. Results showed that participants given a narrative text to listen to had significantly higher motivation than those given expository text. The text types also affected listening comprehension differently, with the narrative being more positive. Finally, the narrative text group reported utilizing more top-down strategies, whereas the expository text group applied more bottom-up strategies.

Even though metacognition and motivation have been investigated as moderating variables to language proficiency and have likewise been demonstrated in listening studies to be correlated with each other, research has not yet indicated whether metacognitive strategy usage leads to increased motivation. Given the existing study designs which take a single measurement of metacognition and motivation at a certain point in time, it is not possible to determine whether metacognitive strategies actually affect listening motivation. Yet this is an important

consideration in listening instruction research since a causal relationship could indicate that teaching metacognitive strategies could result in increased motivation, which in turn could lead to improved listening proficiency. Furthermore, existing research studies of metacognition and motivation have only examined foreign language learning where students have limited exposure to the target language outside of class. No research has investigated metacognition and motivation in an ESL setting in which learners are exposed to the target language constantly in the environment, not just in school classes. Thus, this research attempts to fill an important gap in listening instruction research by measuring ESL students' self-reported metacognition and motivation scores over the course of several listening-based strategy instruction units. The expectation of the research, conducted within the theoretical framework of metacognitive listening instruction, is that students' motivation to participate in ESL listening will increase as their awareness and use of metacognitive listening strategies increases.

The Current Study

This study seeks to investigate the relationship between motivation specifically towards listening and metacognitive strategy use. Unlike previously conducted studies, this one takes place with adult English as a second language (ESL) learners enrolled in an intensive English program (IEP) setting. This context was selected due to the lack of studies that have been conducted in it. With the assumption that IEP students are more acutely aware of their language learning strategy usage, as compared to non-IEP students—especially if the students are at a high level of proficiency—it would be interesting to know if these students' motivation levels are affected by explicit strategy instruction in the same way that non-IEP students' motivation levels are. This study will also utilize two instruments that have, thus far, not been used together, the ELCMS and MALQ. Utilizing the ELCMS instead of another motivation scale, such as the

LLOS, will allow us to look directly at study participants' self-reported motivation and attitude towards listening, instead of the general areas of amotivation, extrinsic motivation, and intrinsic motivation. The MALQ gives us a way to track participants' self-reported metacognitive strategy use. With these instruments, and using a similar strategy treatment, we hope to answer the following questions:

1) How do scores change on a pre- to post-test assessment of listening motivation?

   a. What, if any, is the difference between the control and experiment groups?

   b. What is the change for participants with strategy instruction as a treatment?

   c. What is the change for participants without strategy instruction as a treatment?

2) How do scores change on a pre- to post-test assessment of listening strategy use over a 7-week strategy course?

3) Which strategies on the MALQ do students most commonly report using before and after the strategy treatment?

Methodology

The purpose of this study was to determine whether metacognitive listening strategy instruction, administered over a period of time, would increase IEP-enrolled ESL learners' self-reported motivation towards improving their English listening comprehension.

Participants

The criteria for participation in this study required that participants 1) be current students at Brigham Young University's English Language Center (ELC), 2) take courses at the ELC's highest proficiency level offered, meant for advanced-low to advanced-mid level learners, and 3) complete their respective surveys during their assigned Listening & Speaking course. The participant sample consisted of 56 ELC students who met these criteria, 32 females and 24

males. Their native languages included the following: Spanish (43), Portuguese (3), Mandarin (2), Albanian (1), Bahasa (1), French (1), Hungarian (1), Japanese (1), Korean (1), Mongolian (1), and Russian (1). The experiment group consisted of 26 participants, 16 females and 10 males. Their native languages included the following: Spanish (23), Albanian (1), Japanese (1), and Portuguese (1).

Instruments

There were two instruments used in this study: the English Listening Comprehension Motivational Scale (ELCMS) and the Metacognitive Awareness Listening Questionnaire (MALQ). Both instruments were administered online via Qualtrics, with seven identifier and demographic-related items added to the ELCMS (participant ID number, instructor name, age, native language, native country, years spent in the United States, and reason for learning English), and one identifier and one diagnostic item added to the MALQ (participant ID number and list of strategies). The ELCMS was administered to both control and experiment groups twice—as pre- and post-tests—whereas the MALQ was administered twice and only to the experiment group. The control group did not take the MALQ as it was an integral part of the treatment. See the appendices section for original copies of the ELCMS and MALQ, as well as a detailed description of the strategy treatment used for this study.

English Listening Comprehension Motivational Scale. Developed by H. Hsu (2006) from Chang's Intrinsic Motivation Orientation Scale (2001), the ELCMS consists of 24 items which are scored on a five-point Likert Scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The ELCMS was designed to assess student motivation levels regarding practicing English listening comprehension. The 24 items on the ELCMS can be arranged into two groups—items 1, 3, 5, 7, 8, 10, 12, 13, 14, 15, 17, 18, 19, 21, 22, and 24 consist of positive

statements used to examine motivation for practicing English listening; whereas items 2, 4, 6, 9, 11, 16, 20, and 23 are negative statements meant to examine student' lack of motivation for practicing English listening. Items from the first group are assigned point scores based on student responses, ranging from one point for strongly disagree to five points for strongly agree. Point values are inversed for the second item group, ranging from five points for strongly disagree to one point for strongly agree. Upon completion, all point values are added for a single respondent, with higher totals indicating higher self-reported levels of motivation towards English listening practice.

The ELCMS questionnaire used in this study revealed the differences between students' and class' motivation for learning and practicing English listening. As previously mentioned, slight adjustments were made in administering the ELCMS online as to allow for participant identifier and demographic questions. This survey was administered to all research participants.

Metacognitive Awareness Listening Questionnaire. The MALQ is a questionnaire developed and validated by Vandergrift et. al. (2006). It consists of 21 items which are scored on a 6-point Likert scale, with options of frequency being 1 (*never*), 2 (*rarely*), 3 (*occasionally*), 4 (*sometimes*), 5 (*frequently*), and 6 (*normally*). The MALQ was designed to assess self-reported levels of student metacognitive awareness in regard to their understanding of their own listening processes, attitudes, and strategy usage. The items of the MALQ can be separated into five categories based on the content of each respective item: 1) problem-solving (items 5, 7, 9, 13, 17, and 19), 2) planning-evaluation (1, 10, 14, 20, and 21), 3) mental translation (4, 11, and 18), 4) person knowledge (3, 8, and 15), and 5) directed attention (2, 6, 12, and 16). All items were given point values ranging from one point for rarely to six points for normally, with the exception of items 3, 4, 8, 11, 15, 16, and 18, which were given inverse scores. Upon

completion, all point values are added together to create a score for each student, with higher scores indicating higher perceived levels of metacognitive awareness regarding a student's listening ability.

The MALQ used in this study revealed gains and losses in students' perceived levels of metacognitive awareness regarding their listening processes, attitudes, and strategy usage. Two items were added to the original MALQ for online administration, the first for matching participant pre- and post-test responses, and the second as an evaluation item to determine which of the listed strategies participants claim to already use prior to implementing the planned strategy treatment. This survey was administered solely to the participants in the experiment group, this was a conscious decision made in order to avoid potentially exposing control group participants to metacognition outside of their instructors' lesson plans.

Procedure

The procedure, depicted in Figure 1, involved the following steps: 1) prospective participants were invited to take their respective survey(s); 2) participants in the experimental group received a treatment of listening strategies coupled with metacognitive discussion over a duration of seven weeks; 3) participants took their respective survey(s) a second time; 4) a mixed-effects regression was conducted in order see if the treatment influenced their scores over time. The strategy treatment was administered to experiment group participants by the researcher in order to ensure uniformity of instruction. The control group participants had no interactions with the researcher apart from ELCMS administration. All participants were taught by their normally-appointed course instructors.
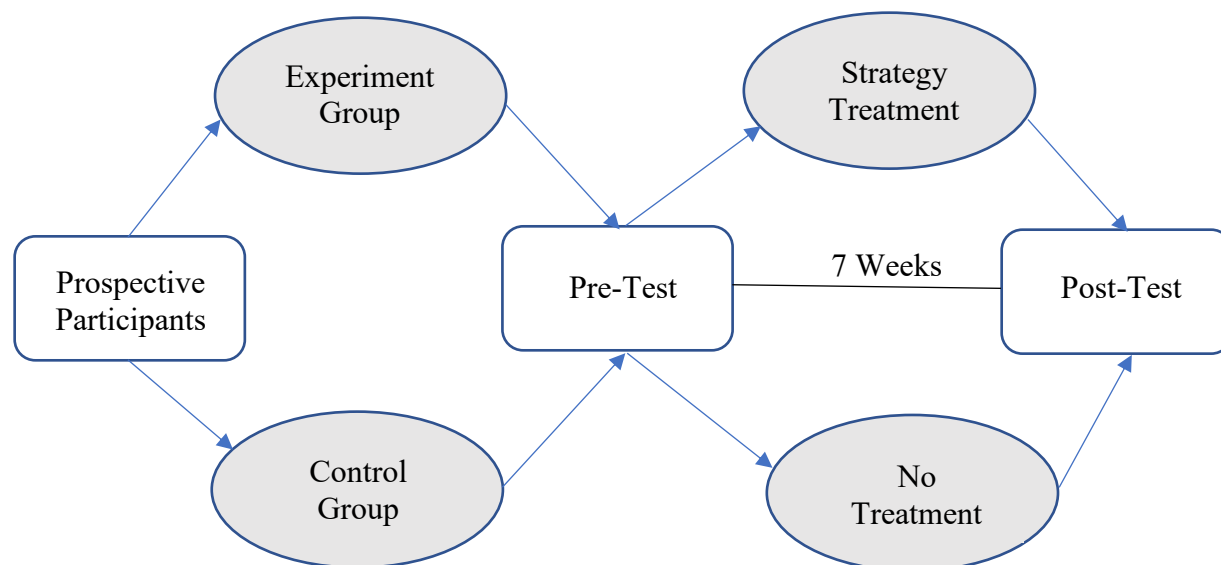
Figure 1. Experiment Outline

Strategy Treatment

The strategy treatment was implemented following the same integrated model used by previously described studies (Birjandi & Hossein, 2012; Bozorgian, 2014; Cross, 2010; Goh & Taib, 2006; Rahimi & Abedi, 2014; Rahimirad, 2014; Rahimirad & Shams, 2014; Vandergrift, 2004; Vandergrift & Tafaghodtari, 2010). The treatment period began with an introduction to the topic of metacognition, what it means, and how it can be applied to listening, and the first administering of the MALQ. During each week of the study, the regular course curriculum was supplemented with additional listening and note-taking practice for which participants followed a three-stage process: planning/prediction, verification, and reflection. The listening strategies taught during the treatment period, in chronological order, were 1) listening for organizational cues, 2) predicting content and lecture direction, 3) recognizing digressions, 4) recognizing paraphrase, repetition, and exemplification, 5) listening for key terms and definitions, 6) listening for causal relationships and comparisons, and 7) listening for lists and classification. The lecture audio for these strategies came from Lebauer's (2010) textbook "Learn to Listen, Listen to Learn: Academic Listening and Note-taking". Each lecture averaged 10-15 minutes in length,

and were on topics from the fields of linguistics, psychology, biology, anthropology, astronomy, food science, and chemistry. Non-lecture listening exercises consisted of audio files 1-3 minutes long. These exercises placed more focus on strategy practice and less on adhering to any one specific subject. See Appendix C for a general lesson plan outline used each week with changes to strategy focus and listening materials.

Data Analysis

In order to answer our first research question, the data gathered from the ELCMS pre- and post-tests was analyzed using a mixed-effects regression. By using a mixed-effects analysis, we were able to account for the repeated measures and the fact that participants gave multiple responses. We were also able to control for extraneous variables such as age, gender, and native language, none of which were the focus of this study, but could potentially have a substantial effect on our results. With that same analysis, we were also able to compare data between and within our participant groups. Had we opted to use a factorial or repeated measures regression, we would not have been able to get all of that information with a single analysis. Thus, using the statistics program IBM SPSS Statistics 25, we ran our analysis with *scores* as the dependent variable, with *group*, *pre/post*, *gender*, and *native language* as factors, and *age* as a covariate. For our fixed effects input on SPSS, we looked at all of these factors and covariates as main effects, while also looking at an all 2-way interaction of the *group* and *pre/post* factors. *Participants* was our random effect.

For our second research question, the MALQ results were analyzed using a paired t-test, also using IBM SPSS Statistics 25. Because only participants in the experiment group took this survey, and because we already analyzed their demographic data in the previous mixed-effects

regression, only a t-test was needed to look at the difference in pre- and post-test scores of the MALQ.

Results

The primary aim of this research was to examine and compare the self-reported levels of English learner motivation towards improving listening ability, with a secondary aim of looking at the effects of listening strategy instruction and metacognitive discourse on the experiment group's listening motivation. It was hypothesized that the experiment group would, as a result of the strategy treatment they received, see a significantly larger increase in listening motivation when compared with the control group. This section presents the quantitative results of the mixed-effects regression performed on the pre- and post-test results of the ELCMS, and the paired t-test performed on the pre- and post-test results of the MALQ.

Research Question 1

The first research question asked how listening motivation scores changed over a 7-week treatment period. We further wanted to know if there was a difference between participant groups and within participant groups. A mixed-effects regression was conducted in order to look at differences in pre- and post-test scores between groups as well as within each respective group. There was no significant difference in the pre- to post-test scores among the control group (p = .223), nor the scores of the experiment group (p = .639). However, the interaction between pre/post-test scores and group yielded a significant difference with an F ratio of F (1, 54) = 6.535, p = .013. As can be seen in Figure 2, the mean scores of both groups' post-tests were lower than those of their pre-tests, but the experiment group's mean dropped by 1.38 points compared to the control group's 2.8 points.
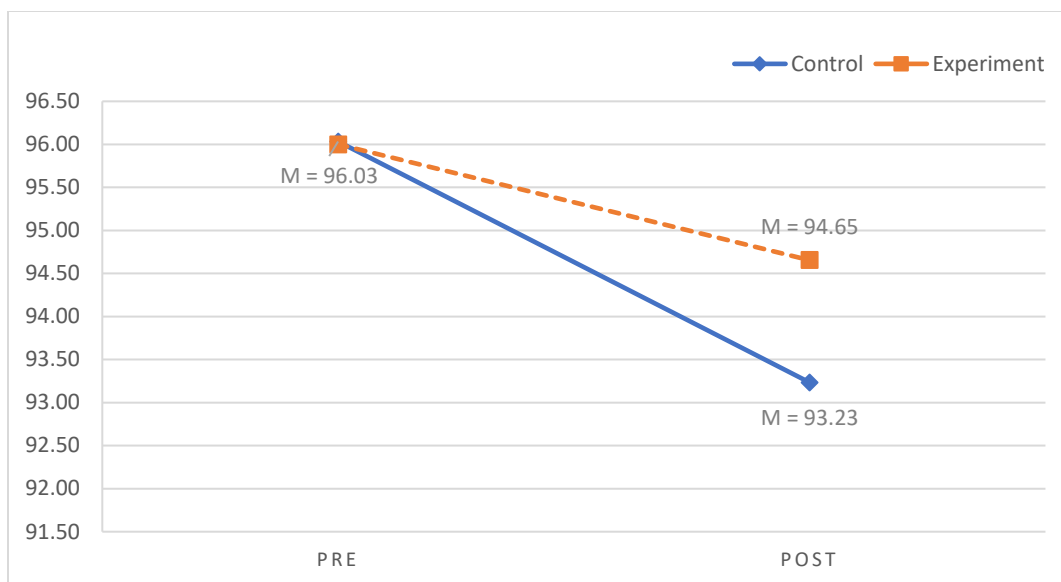
Figure 2. Plot of pre- and post-test score means for the experiment and control groups.

The same regression analysis also controlled for the possible effects of age, native language, and gender on test scores.

Research Question 2

The second research question asked how awareness of listening strategy usage changed over a 7-week treatment period. A paired t-test was conducted in order to determine changes on pre- and post-test scores on the MALQ. Although self-perceived levels of metacognitive awareness increased, there was no significant difference in the scores for the pre- (M=87.15, SD=9.5) and post-test (M=90.31, SD = 11.1) assessments of the experiment group's self-reported strategy use; t(25)=-1.722, p = .097.
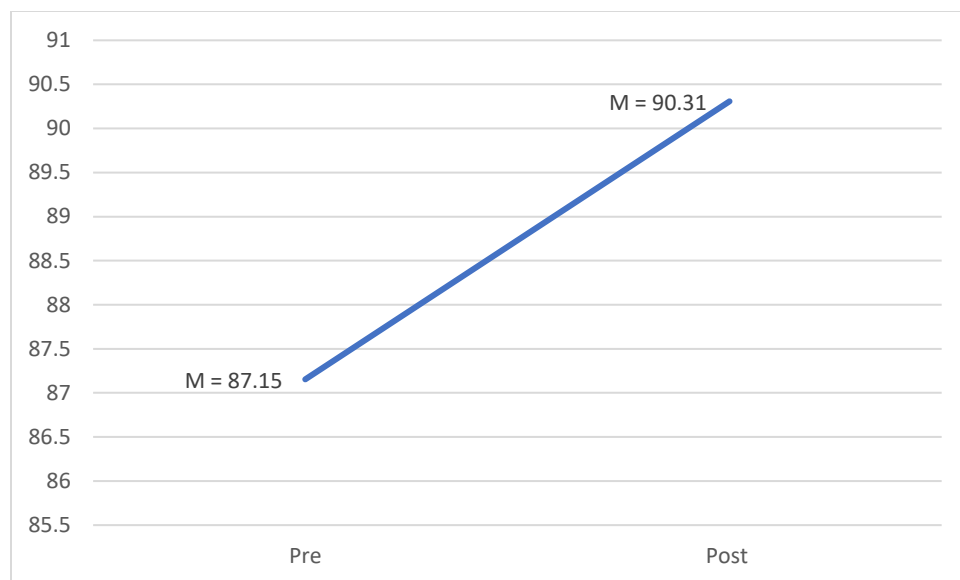
Figure 3. Plot of pre- and post-test MALQ score means.

Research Question 3

The third, and final, research question asked which listening strategies research participants used at the time of data collection. Upon completion of the MALQ, participants were presented with a list of 12 strategies taken directly from the MALQ. Participants indicated whether or not they used each of the listed strategies by either checking each strategy's accompanying box to indicate that they used it, or leaving the box unchecked if they did not. Table 1 shows that the three most commonly known/used strategies before strategy treatment, with their respective user amounts, were: "I use the words I understand to guess the meaning of words I don't understand." (81%), "When I guess the meaning of a word, I think back to everything else that I have heard to see if my guess makes sense." (77%), and "I focus harder when I have trouble understanding." (73%).

Given the same survey following the strategy instruction treatment, the most commonly used/known strategies were a little different. "I use the words I understand to guess the meaning

of words I don't understand." (96%) remained the most reported known strategy. "I use the general idea of the text to help me guess the meaning of what I don't understand." (81%) rose up to become the second-most reported known strategy. "I focus harder when I have trouble understanding." (77%) remained the third-most reported known strategy. One other strategy worth noting is "As I listen, I compare what I understand with what I know about the topic." This strategy saw the highest increase in reported usage, from 10 to 19 participants.

The "Agreement Score" column in Table 1 shows the average score selected on the actual MALQ. The response to each item on the MALQ was a Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). Therefore, any score ranging from 1-3 would be on the disagree side, and the inverse for scores ranging from 4-6. Ideally, a strategy that is reported to be widely used would have a higher Agreement Score. This is shown to be true for all the previously mentioned items; the strategies with highest reported usage have higher Agreement Scores. One item, "I use the general idea of the text to help me guess the meaning of what I don't understand.", had the highest Agreement Score (5.0) for both the pre- and post-test despite having large differences in reported usage, with the pre-test showing 58% and the post-test showing 81%, respectively.

Table 1
Reported Listening Strategy Usage

Strategy	Pre-test (N = 26)			Post-test (N = 26)		
	n	%	Agreement Score	n	%	Agreement Score

I use the words I understand to guess the meaning of words I don't understand. (PS)	21	81%	4.6	25	96%	4.9
When I guess the meaning of a word, I think back to everything else that I have heard to see if my guess makes sense. (PS)	20	77%	4.3	18	69%	4.5
I focus harder when I have trouble understanding. (DA)	19	73%	4.7	20	77%	5.0
I use the general idea of the text to help me guess the meaning of what I don't understand. (PS)	15	58%	5.0	21	81%	5.0
After listening, I think about what I might do better next time. (PE)	12	46%	3.7	13	50%	3.9
I have a plan in my head before I start to listen. (PE)	10	38%	3.5	9	35%	3.5
As I listen, I compare what I understand with what I know about the topic. (PS)	10	38%	4.4	19	73%	4.8
Before listening, I think of similar texts that I may have listened to. (PE)	10	38%	3.5	11	42%	3.8
As I listen, I quickly adjust my interpretation if I realize that it is not correct. (PS)	10	38%	4.3	10	38%	4.7
I translate key words as I listen. (MT)	7	27%	3.2	9	35%	3.3
I translate in my head as I listen. (MT)	6	23%	2.7	2	8%	2.5
I translate word by word as I listen. (MT)	1	4%	2.0	0	0%	1.8

N = number of participants who use the strategy; PS = problem-solving; DA = directed attention; PE = planning-evaluation; MT = mental translation

Discussion

The purpose of this study was to measure the extent of which a treatment of listening strategies changed the self-reported listening motivation of adult ESL learners enrolled in advanced levels of ESL courses at an IEP. From Vandergrift's (2005) study, we saw that students who reported a greater use of metacognitive strategies also reported more motivational intensity. Therefore, we anticipated from this study that, in a side-by-side comparison, the

experiment group would report larger gains in listening motivation than the control group when looking at ELCMS results. We had also anticipated a significantly higher level of listening strategy usage from the experiment group. The results of our statistical analyses were mixed.

Changes in Listening Motivation Levels

As previously reported, the results of the mixed effects ANOVA we ran showed that both the control and experiment groups' self-reported levels of listening motivation became lower by the end of the study. Both groups started at nearly the same exact level of motivation towards listening (see Figure 1). This is notable considering that the control group consisted of participants at the same level of proficiency but enrolled in different class sections during different semesters.

Looking at each groups' scores separately, the changes over time were too small to be statistically significant, so while motivation levels decreased, it was only by a negligible amount. It is worth noting that, although both groups' pre-test scores had nearly the same mean, the experiment group's post-test mean score was higher than that of the control group. Looking at the groups' combined scores, the difference was found to be statistically significant, with a $p = .013$. These results contradict Vandergrift's observation that increased strategy usage is correlated with increased motivation. A possible interpretation of these results is that the strategy treatment employed in this study does not have much of an effect on IEP-enrolled ESL learners of a higher proficiency, which corroborates the findings of previous studies that lower proficiency learners benefit the most from strategy instruction (Cross, 2011; Harputlu & Ceylan, 2014; Vandergrift & Tafaghodtari, 2010).

Increased Usage of Listening Strategies

The MALQ was administered to the experiment group in order to measure their self-reported levels of listening strategy usage. A paired t-test showed that there was a slight increase in reported strategy usage, but this increase was not statistically significant. As previously stated, we predicted that study participants would report an increased usage in listening strategies. This expectation derives from studies conducted by Rahimirad (2014), Rahimirad & Shams (2014), Vandergrift (2006), and Thompson & Rubin (1996), all of which examined the effects of listening strategy instruction on learners and showed improved listening comprehension scores, self-regulation, and confidence. Although our prediction was correct that the participants' strategy use would increase, the increase was not statistically significant. This is likely due to the short duration of this study and the limited amount of practice participants had with each strategy, especially the ones taught towards the end of the treatment period. Had the post-test been delayed, or even administered again at a later time, allowing participants more time to practice the strategies taught, the resulting increase might have been greater.

Despite this increase in strategy usage, the experimental group's motivation level still decreased, albeit not as much as the control group's motivation level.

Strategies Already Used

For our final research question, we predicted that the problem-solving strategies would be reportedly used more than the other types of strategies, based on previously conducted studies (Harputlu & Ceylan, 2014; Kassaian & Ghadiri, 2011; Vandergrift, 2005). Along those same lines, and based on previous literature, it was expected that the mental translation strategies would have the least-reported amount of usage. In this subsection, we looked at the changes that took place in the reported usage of several selected strategies.

The problem-solving strategy "I use the words I understand to guess the meaning of words I don't understand." was one of the most used strategies reported in both the pre- and post-test results. A cursory number comparison showed that a small increase in reported usage, starting with 81% participants using it before the strategy instruction, and 96% afterwards. This could be attributed to explicit strategy instruction and in-class discussions, but this is also a result that should be a natural outcome of regular listening practice over a period of time.

Second on the list is the problem-solving strategy, "When I guess the meaning of a word, I think back to everything else that I have heard to see if my guess makes sense." On the pre-test, this was the second most used strategy, with 77% participants reporting using it and an agreement score of 4.3. The post-test results revealed a slight 8% decrease in usage, however the agreement score rose to a 4.5, which tells us that although there were a few less participants who reported using this strategy, its frequency of usage actually increased. It is likely that less participants used this strategy because they found another one that worked better for them.

Another strategy, this time directed attention, with high reported usage was, "I focus harder when I have trouble understanding.", which remained as the third most used strategy on both the pre- and post-test, with 73% and 77% participants using it, respectively. Again, the change in agreement scores, from 4.7 to 5.0, tells us that participants reported using this strategy more frequently by the end of the study. Similar to the first reported strategy, this is a result that should be expected as a natural outcome to regular extended listening practice.

The problem-solving strategy, "I use the general idea of the text to help me guess the meaning of what I don't understand." saw one of the largest increases, going from 58% participant usage to 81% usage on the respective tests. This strategy saw the second-largest increase in usage—the strategy with the largest increase is discussed in the next paragraph—and

became the second most used strategy by the end of the study. It also has the highest and most

consistent agreement score of all the strategies listed, a 5.0 for both pre- and post-test results.

These results can be interpreted to mean that this is an important strategy for English learners,

because, no matter the number of participants who used it, the agreement score shows it was

considered to be used at the highest frequency possible.

One last strategy's pre- and post-test scores will be interpreted. The problem-solving

strategy, "As I listen, I compare what I understand with what I know about the topic." saw the

largest increase in reported usage, going from 38% to 73% usage. Interestingly enough, the

agreement scores for this strategy remained fairly consistent, seeing only a slight increase from

4.4 to 4.8. This indicates that the participants who reported using this strategy on the pre-test,

used it fairly frequently, and more or less maintained that frequency when taking the post-test.

The slight increase in agreement score tells us that the participants who reported using this

strategy on the post-test also utilize it frequently. This increase in reported usage could be

attributed to frequent discussion on the lesson's topics, the introduction of extracurricular

materials, and regular pauses during listening practice to prompt participants to make

connections to the material with what has already been heard/viewed in the class on the topic.

Finally, we looked at the three least-used strategies on the list, all of which are related to

translating while listening. While the strategy involving translating keywords saw a slight

increase in reported usage, the other two, translating mentally and translating word by word,

decreased; the former going from 23% to 8% usage, and the latter from 4% to 0%. The

agreement scores for these respective strategies are also the lowest out of all the listed strategies.

These results corroborate Vandergrift et. al. (2006) and Kassaian & Ghadiri's (2011) studies that

revealed that higher proficiency learners generally use translation strategies less than lower proficiency learners.

Although previous research has found the correlation between self-reported listening strategy use and self-reported listening motivation to be positive, this study found no such relationships but instead identified that increased strategy training had no positive impact on self-reported listening motivation. These divergent results may be explained by the fact that previous research has studied strategy-motivation effects within EFL contexts and among low-level learners. The present research examined high-level IEP students in an ESL context. These groups of learners are likely to have very different motivational and strategic profiles. For instance, ESL learner motivation is likely to be much more integrative (in order to survive in an ESL setting by navigating public services, attending school in English, socializing and problem-solving in the target language, etc.), and their strategy usage may be much more sophisticated because of their advanced language ability, longer language experience, and greater exposure to listening strategies prior to the study. Thus, the combined results of previous research along with the present study seem to indicate that listening strategy instruction is likely to be more motivating among beginning language listeners in EFL settings than for advanced listeners in ESL settings.

Conclusion

The principle objective of this study was to look at how high proficiency ESL learners' levels of motivation towards listening in English changed over a 7-week period of time, with and without explicit listening strategy treatment, in an ESL and IEP setting. The English Listening Comprehension Motivation Scale and Metacognitive Awareness Listening Questionnaire were the instruments used in order to determine participants' self-reported levels of listening motivation and metacognitive strategy usage and awareness, respectively. Upon analyzing data

gathered from 56 participants, overall motivation was found to have decreased over the course of the study, with the experiment group's levels being slightly higher than those of the control group. Based on the literature, there is a strong argument for a positive correlation between metacognition and motivation in the listening classroom. However, the results of the present study tell us that this correlation may not hold true outside of the context of non-IEP EFL students.

One of the biggest limitations to this study was the small sample size. 30 of the participants composed the control group for this study, with the remaining 26 composing the experiment group. The duration of the study was also fairly short: seven weeks, approximately half of a semester at the institution where the study took place; and the study took place in the middle of the semester. Finally, similar studies have shown that the students who gain the most from strategy instruction are low proficiency language learners, not high proficiency ones (Harputlu & Ceylan, 2014; Cross, 2011; Vandergrift & Tafaghodtari, 2010). The proficiency of the participants in this study were placed in classes meant for English learners at the advanced-low to advanced-mid level. This small increase would appear to reflect this idea of lower proficiency students gaining more benefits from strategy instruction, because, ideally, higher proficiency learners would already be at least somewhat familiar with such strategies.

For future research, it is recommended that a much larger sample size be utilized, as well as conducting the study over a longer period of time. Seven weeks of instruction with immediate testing before and after yields a bare minimum of information. Administering follow-up surveys a month or two after the study's conclusion would allow to see if the strategy instruction had any longer-lasting effects. It also would be ideal to have participants be at a lower level of English proficiency, as studies have shown that lower-level learners benefit more from receiving explicit

strategy instruction. Qualitative data regarding preferred strategy usage could also contribute greatly to the results of future research.

Due to the results of this study showing nothing of statistical significance, it could be argued that strategy instruction does not have much effect on the listening motivation of higher proficiency ESL learners in an IEP setting. However, we have yet to see the extent and prolongated effects of strategy instruction in this context. Would language learners who have been given an arsenal of listening strategies start a new semester with higher motivation than the semester prior? Would they continue to use certain strategies and discontinue other ones? I anticipate that future studies will answer these questions in the affirmative, which results will contribute to the improvement of listening instruction in language teaching. For now, the present research suggests that listening instruction should continue to emphasize strategy instruction, particularly in low-proficiency level classes, but also among students at high-proficiency who may benefit from learning more strategies. While this cannot guarantee motivation increases, it is likely that strategy instruction alone can have beneficial proficiency effects in ESL listening classes.

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Appendix A

English Listening Comprehension Motivation Scale

The following statements are about your own attitudes, concepts, or situations of learning English listening comprehension. Please circle the scale in terms of how well the statements reflect your actual experience, thoughts, and feelings when you are learning listening comprehension.

Directions: Please respond to the following questions using the scale provided:

(1) strongly disagree (2) disagree (3) neutral (4) agree (5) strongly agree

1. I like English listening materials that can arouse my interest in learning.

    1   2   3   4   5

2. I don't like to develop English listening comprehension because it takes me too much time.

    1   2   3   4   5

3. I think that the person who has great ability in English listening can find a well-paid job more easily.

    1   2   3   4   5

4. I often feel bored when learning English listening comprehension.

    1   2   3   4   5

5. In order to improve my English listening comprehension, I will try to do the homework well and often spend time practicing it.

    1   2   3   4   5

6. I often feel nervous and uncomfortable when learning English listening comprehension.

    1   2   3   4   5

7. I often notice the materials and activities concerning English listening comprehension; for example, English programs on the radio, English listening materials and tapes, CDs, and various English listening comprehension examinations.

    1   2   3   4   5

8. I like to learn English listening comprehension because it is very important, and I feel confident of learning it well.

<div align="center">1   2   3   4   5</div>

9. I think that English listening comprehension will not be helpful to me in the future.

<div align="center">1   2   3   4   5</div>

10. I like to know the culture and customs of other countries, and often feel excited about getting new knowledge and information in English listening comprehension class.

<div align="center">1   2   3   4   5</div>

11. I am often unable to concentrate on the content of the materials when practicing English listening.

<div align="center">1   2   3   4   5</div>

12. I attend English comprehension classes in earnest because I want to develop my listening skills and ability in order that I can use it in the future.

<div align="center">1   2   3   4   5</div>

13. I often actively show my ability in English listening and speaking in class, and I know I can perform very well.

<div align="center">1   2   3   4   5</div>

14. I believe that I can learn English listening comprehension very well as long as I make a great effort.

<div align="center">1   2   3   4   5</div>

15. I have a sense of achievement when I perform better than others in English listening comprehension class.

<div align="center">1   2   3   4   5</div>

16. Because my English is poor, I don't like to attend English listening comprehension classes.

<div align="center">1   2   3   4   5</div>

17. My purpose of developing the ability in English listening comprehension is to get good grades in tests and to receive compliments of my teachers and my parents.

<div align="center">1   2   3   4   5</div>

18. If I am the only person that can answer the teacher's question, I feel excited.

<div align="center">

1   2   3   4   5

</div>

19. I hope I can perform better in English listening comprehension than others.

<div align="center">

1   2   3   4   5

</div>

20. After finishing taking English listening comprehension courses, I will not listen to the relevant materials anymore.

<div align="center">

1   2   3   4   5

</div>

21. I hope the teachers and the classmates can notice that my English listening comprehension is better than other students.

<div align="center">

1   2   3   4   5

</div>

22. When I can easily and smoothly understand English by listening, I feel satisfied and have great confidence.

<div align="center">

1   2   3   4   5

</div>

23. I don't like hard English listening materials because those make me feel anxious.

<div align="center">

1   2   3   4   5

</div>

24. I would like to learn English listening comprehension well because I want to make friends with English speakers and hope to be able to go abroad for advanced study in the future.

<div align="center">

1   2   3   4   5

</div>

Appendix B

Metacognitive Awareness Listening Questionaire (MALQ)

Strategy or belief/perception	Strongly Disagree					Strongly Agree
1 Before I start to listen, I have a plan in my head for how I am going to listen.	1	2	3	4	5	6
2 I focus harder on the text when I have trouble understanding.	1	2	3	4	5	6
3 I find that listening in English is more difficult than reading, speaking, or writing in English.	1	2	3	4	5	6
4 I translate in my head as I listen.	1	2	3	4	5	6
5 I use the words I understand to guess the meaning of words I don't understand.	1	2	3	4	5	6
6 When my mind wanders, I recover my concentration right away.	1	2	3	4	5	6
7 As I listen, I compare what I understand with what I know about the topic.	1	2	3	4	5	6
8 I feel that listening comprehension in English is a challenge for me.	1	2	3	4	5	6
9 I use my experience and knowledge to help me understand.	1	2	3	4	5	6
10 Before listening, I think of similar texts that I may have listened to.	1	2	3	4	5	6
11 I translate key words as I listen.	1	2	3	4	5	6
12 I try to get back on track when I lose concentration.	1	2	3	4	5	6
13 As I listen, I quickly adjust my interpretation if I realize that it is not correct.	1	2	3	4	5	6
14 After listening, I think back to how I listened, and about what I might do differently next time.	1	2	3	4	5	6
15 I don't feel nervous when I listen to English	1	2	3	4	5	6
16 When I have difficulty understanding what I hear, I give up and stop listening.	1	2	3	4	5	6
17 I use the general idea of the text to help me guess the meaning of words I don't understand.	1	2	3	4	5	6
18 I translate word by word as I listen.	1	2	3	4	5	6
19 When I guess the meaning of a word, I think back to everything else that I have heard to see if my guess makes sense.	1	2	3	4	5	6
20 As I listen, I periodically ask myself if I am satified with my level of comprehension.	1	2	3	4	5	6
21 I have a goal in mind as I listen.	1	2	3	4	5	6

Appendix C

General Outline of Strategy Instruction

- Introduce selected strategy (Keywords, lecture content, lecture direction, lecture organization, digressions, compare/contrast, cause/effect, classifications)

- Activate background knowledge

  o Commonly used cues, phrases, transition signals ("What are some phrases used to make a comparison?")

- Prepare for the listening practice/lecture

  o Introduce topic-specific vocabulary

  o Give lecture title

- Plan/predict

  o Have students make predictions (lecture direction, main points, etc.) using known information (focused strategy, lecture title)

- Verification (repeat as necessary)

  o Pause the lecture in an appropriate spot (e.g. after the introduction, before the next major point)

  o Have students check and adjust predictions (if necessary)

  o Discuss/summarize what has been stated so far (if necessary)

- Reflective

  o Have students compare notes in pairs/small groups

  o Have students summarize lecture (outline)

  o Pose questions ("What went well?"; "Where did you struggle?"; "How could you improve?")