

Improving High School English Language Learners' Second Language Listening Through Strategy Instruction

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Abstract

High school English language learners need strong oral comprehension skills for access to oral content in their academic classes. Unfortunately, instruction in effective listening strategies is often not part of their English as a Second Language (ESL) curriculum. This study tested the hypothesis that targeted listening strategy instruction in the ESL classroom results in improved listening comprehension that can be useful in English language learners' academic content classes. After receiving 15 listening strategy training sessions, participants showed a statistically significant improvement in discrete and video listening ability, as well as note-taking ability. This study suggests that targeted listening strategy instruction should be part of the ESL curriculum. Sources for designing and implementing effective listening strategy instruction are provided, and research needs and designs are suggested.

Introduction

Videotapes and audiotapes, cable television, and interactive computer software are becoming increasingly common methods of delivering academic content in the high school classroom. This puts a heavy burden on students who are English language learners (ELLs) and, thus, still in the process of developing their English language proficiency via instruction in their English as a Second Language (ESL) class. Unfortunately, instruction in effective listening strategies is often not part of the ESL curriculum. It is frequently assumed that because students have many opportunities to hear spoken English throughout the school day, this exposure will improve their ability to

comprehend oral English. However, for many students, this is not the case. Even when listening is the focus of lessons in the ESL classroom, it often consists of testing students' ability to listen to oral information and answer comprehension questions, without providing any specific instruction in the skills and strategies necessary to accomplish this task (Field, 1998). High school students who are ELLs need strong oral comprehension skills for access to oral content in their academic classes. This exploratory study sought to determine whether listening strategy instruction in an ESL classroom is effective in helping prepare ELLs for comprehending oral academic content material in their academic content classes.

Background to the Study

Theoretical Framework

The theoretical framework for this study was based on cognitive theory and strategy research. Cognitive theory posits the notion that the learner is actively involved in the learning process (Anderson, 1983, 1985; Bruner, 1990). It has also contributed notions about declarative knowledge (what we know about) and procedural knowledge (what we know how to do) to our view of learning (Anderson, 1983, 1985). Being an active participant in one's own learning, whether it involves declarative or procedural knowledge, requires metacognition, or thinking about your own thinking (Brown & Palincsar, 1982). As Howard (1983) notes, the "essence of the cognitive approach" is that "the individual is viewed as being active, constructive, and playful" (p. 6).

One of the ways learners become actively involved in controlling their own learning is by using strategies. Strategies are the thoughts and behaviors that learners use to help them comprehend, learn, or retain information (O'Malley & Chamot, 1990). Pressley, Forrest-Pressley, Elliott-Faust, and Miller (1985) link strategies to cognitive processes. They define strategies as "composed of cognitive operations over and above the processes that are a natural consequence of carrying out [a] task. . . . Strategies are used to achieve cognitive purposes (e.g., memorizing) and are potentially conscious and controllable activities" (p. 4). This definition points out that the active learner consciously chooses to use strategies in order to enhance performance of a task.

Listening, an important part of the second language learning process, has also been defined as an active process during which the listener constructs meaning from oral input (Bentley & Bacon, 1996). In Nagle and Sanders's (1986) model of listening comprehension processing, the listener utilizes both automatic and controlled processes to synthesize meaning from oral input. Similarly, in Vandergrift's Interactive-Constructivist model (1999), the listener is actively engaged in constructing meaning from a variety of contexts and input sources.

Strategies and the ability to use them effectively are particularly important in second language listening. Canale and Swain (1980) noted in their model of communicative competence for language learners that one must be strategically competent; that is, the learner must know how and when to use strategies to engage in, carry out, and repair communication. The “good language learner” studies of Naiman, Frohlich, Stern, and Todesco (1978) and Rubin (1975) demonstrated that successful learners employ strategies while learning and using a second language. Being communicatively competent in a language must, of course, include the ability to comprehend oral input. Consequently, second language listeners need to actively choose, use, and continually evaluate the effectiveness of their listening strategies in order to successfully construct meaning from second language oral input.

Listening Strategy Research

There have been a number of studies focusing on the kinds of listening strategies that learners use (e.g., Fujita, 1985; Laviosa, 1992; Murphy, 1987; O’Malley, Chamot, & Kupper, 1989; O’Malley, Chamot, Stewner-Manzanares, Kupper, & Russo, 1985; Peters, 1999; Vandergrift, 1997a, 1997b, 1998) and the ways in which they use them (Bacon, 1992; Flowerdew & Miller, 1992; O’Malley, Chamot, Stewner-Manzanares, Russo, & Kupper, 1985; Vogely, 1995). Vandergrift (1997a) provides a very useful and thorough chart of these listening strategies and their definitions, categorized according to O’Malley and Chamot’s model (1990) of metacognitive, cognitive, and socioaffective strategies. While we have progressed in our understanding of the strategies that listeners use, research on the teaching of listening strategies has been limited. Nevertheless, the few studies that have been done provide encouraging evidence that: (a) Students can learn to use listening strategies and (b) the use of strategies can improve listening comprehension.

The earliest listening strategy instruction studies were done on foreign-language learners. In a study conducted by Rubin, Quinn, and Enos (1988), high school Spanish teachers used listening strategies to aid in video comprehension. They also varied the amount of information that students were given about the usefulness and transferability of the strategies. Although Rubin, Quinn, and Enos (1988) found no significant differences between the treatment groups that were given different amounts of strategy information, they found video listening comprehension improved significantly for the treatment groups as compared to the control group that received no strategy training. Thompson and Rubin’s (1996) classroom-based, longitudinal study of foreign-language learners also provides strong evidence that both strategy training and use are effective in helping language learners comprehend oral input. Thompson and Rubin taught university students, who were learning Russian as a foreign language, to use metacognitive and cognitive listening strategies. Students in the experimental group showed a significant

improvement in the ability to comprehend video text as compared to the group that was not given instruction on listening strategies. Anecdotal evidence in this study showed that the use of metacognitive strategies helped students manage how they were listening. Thompson and Rubin concluded that systematic listening strategy instruction improves the learner's ability to comprehend oral input. In another foreign-language setting, Ross and Rost (1991) conducted an informative two-phase listening strategy study with Japanese college students learning English as a foreign language. They first identified listening strategies that high-proficiency students used in successful video listening, and then taught those strategies to low-proficiency students. Their results showed that "specific listening strategies can be taught to learners of all proficiency levels" (Ross & Rost, 1991, p. 266).

These studies, while very important, focused on listening strategy instruction for foreign-language learners. Typically, foreign-language learners study language as a subject area. It is not often that they are required to use the language outside the classroom for authentic communicative purposes, and even less common that they will be required to study other academic subjects in that foreign language. Thus, the penalty for failure to comprehend oral input in the foreign language is limited to poor grades in the foreign-language course. This is not the case for high school students in the United States who are learning ESL. When they leave the ESL classroom, they usually go to academic content courses that are taught in English. The penalty for failure to comprehend the oral input in their academic content courses is low academic achievement that may lead to failing courses or dropping out of school. Given these serious ramifications, more information is needed on the effectiveness of listening strategy instruction in the ESL classroom.

O'Malley, Chamot, Stewner-Manzanares, Russo, and Kupper (1985) started the process of providing this much-needed information in their study that included video listening strategy instruction with 75 high school ESL students. Two experimental groups were given listening strategy training in 50-minute class periods for 8 days over a 2-week period. One experimental group was instructed in using selective attention (a metacognitive strategy), using a T-list to take notes (a cognitive strategy), and encouragement and cooperation with partners (a social-affective strategy), while a second experimental group only received instruction in note-taking and cooperation, and a third group, the control group, received no strategy instruction at all. Pretest and posttest measures were done using 5-minute videos similar to what students might encounter in academic content classes. Although both experimental groups performed significantly better than the control group on some of the daily tests, the results of the posttest did not reach significance. O'Malley and his colleagues pointed out that despite the lack of a statistically significant result in the posttest, the daily tests did show that strategy training was successful in this classroom setting. They concluded that a more extended period of

instruction time would have helped the students learn and practice listening strategies and transfer them to other tasks. In a later discussion of the study, O'Malley (1987) noted that "transfer of strategies to new tasks may be extremely sensitive, requiring continued prompts and structured directions until the strategies become autonomous" (p. 143). His comments suggest that teachers need to provide listening strategy training on a regular and repeated basis, if students are to develop proficiency in the use and the transfer of these strategies beyond the ESL classroom.

The Need for Explicit Strategy Instruction

These research studies have been helpful in demonstrating the potential of listening strategy instruction to help second language listeners comprehend oral input. Equally important is Rubin et al.'s (1988) finding that teachers' training and commitment to teaching strategies is critical in helping students learn how to manage their own second language listening. As teachers accept the challenge of providing listening strategy instruction to their students, one very important question is how this instruction should be provided. Chamot (1990) referred to the methodological issue of whether strategy instruction should be embedded or direct. In embedded instruction, the teacher guides the students through activities that require the use of a particular strategy, but does not inform the students that they are utilizing the strategy to practice it and generalize it to other uses outside that particular lesson. In direct instruction, however, the teacher informs the students about the anticipated benefits of using the strategy and then gives explicit instruction on how to apply and also transfer the strategy. Chamot notes "research indicates that embedded strategy instruction does not lead to transfer, but that direct instruction is linked to the maintenance of strategies over time and their transfer to new tasks" (p. 499).

The case for direct or explicit instruction of strategies also has support from research on explicit instruction in first language reading conducted in the late 1980s by Duffy and his colleagues. These studies (Duffy et al., 1986; Duffy et al., 1987) found that explicit instruction of strategies helped readers become more aware of strategies and how to use those strategies in their reading. Duffy (2002) defines "explicit teaching" from a viewpoint that is particularly important for teachers to consider. He states, "explicit teaching uses 'strategy' to mean a technique that *readers* learn to control as a means to better comprehend" (p. 30). In contrast, he points out that "other approaches use 'strategy' to mean a technique the *teacher* controls to guide student reading" (p. 30). Duffy also notes that "explicit teaching is intentional and direct about teaching individual strategies on the assumption that clear and unambivalent information about how strategies work will put struggling readers in a better position to control their own comprehension" (p. 30).

For strategy instruction to be effective, learners need to maintain and to transfer their strategic knowledge to other tasks. Learners are said to maintain a strategy when they can use it in situations that are very similar to the one in which they learned that strategy. Learners are said to transfer a strategy when they are able to apply it to new situations and tasks that are similar to, but not identical to, the one in which they first learned the strategy (McCormick & Pressley, 1997). The maintenance and transfer of strategies to tasks within the ESL classroom is important for ELLs, but it is even more important for their academic content classes.

Early strategy research studies did not show promising results for the maintenance and transfer of strategy use to other tasks outside the immediate teaching situation (e.g., Brown, Armbruster, & Baker, 1986). As Chamot and O'Malley (1994) commented, "Individuals can have declarative knowledge about a complex mental procedure such as a learning strategy but not be able to apply the strategy effectively without conscious effort and deliberation" (p. 18). One reason for this inability to maintain and transfer strategies is that the learner may not have developed the necessary metacognitive knowledge about the strategy.

Metacognitive knowledge about strategies is defined as "understanding when and where to apply strategies and the gains produced by strategies when used" (McCormick & Pressley, 1997, p. 95). Brown and Palincsar (1982) referred to the situation in which learners are not provided with the metacognitive knowledge about strategy use and effectiveness as "blind training. . . . Such limited instruction is sufficient for some children, who can infer the significance of the strategy for themselves; however, for many children, it is not" (p. 5). They also noted that blind training procedures do not result in the maintenance and transfer of strategies. When students are given strategy instruction that includes information on the usefulness of the strategy for accomplishing the task or moving toward their goal, they are more likely to maintain the strategy than students who are simply told to use the strategy without specific information about its value (Pressley, Borkowski, & O'Sullivan, 1984). Explicit strategy instruction includes metacognitive knowledge about what the strategy is and what it does and, thus, is more likely to result in the maintenance and transfer of strategies to other contexts and tasks.

Rationale for the Study

Positive results have been found in studies of listening strategy instruction for foreign-language learners and for high school ELLs. Clearly, more information is needed on the effectiveness of strategy instruction in developing and improving listening for high school ELLs because they have a tremendous amount of content information to learn in their short time in school. Consequently, the research question guiding this study was: Does

listening strategy instruction in the ESL classroom improve students' listening comprehension of oral academic content material of the type that they encounter in their academic content classes?

Methodology

Participants

This study took place in an intermediate ESL class in a midwestern U.S. rural high school. The participants were seven high school students who attended this ESL class once a day, in addition to their various academic content classes (e.g., English literature, earth science, biology, etc.). Six of the participants were native Spanish speakers, and the seventh participant was a native Albanian speaker. Three of the participants were female, and four were male. Their ages ranged from 14 to 17 years old.

Procedure

Pretests

The participants were given two pretests at the beginning of the study. The first pretest measured their discrete or bottom-up listening skills. This was necessary because, as both Mendelsohn (1994, 1995) and Buck (1995) have pointed out, learners need a certain level of linguistic proficiency in order to be competent listeners. To measure their ability to discriminate sounds, syllable number, syllable stress, contractions and reductions, word stress, sentence meaning, and thought groups, the participants were given a test from *Clear Speech: Pronunciation and Listening Comprehension in North American English* (Gilbert, 1993). The test was administered using an audiotape, and participants checked off or wrote their responses to the questions on the answer sheet provided. (See Appendix A.)

The second pretest measured the participants' video listening or top-down listening skills. This was necessary because students must comprehend the oral information presented in videos in order to access new information, or to clarify and broaden their existing knowledge base. To measure their ability to selectively attend to, comprehend, and record information from oral input supported by visual cues, the participants watched and listened to a short video on an important scientist.

Before taking the video pretest, participants were given an advance organizer with instructions to listen for the following information: Who is the scientist? What are some important facts about him? Where did he do his work? What did he discover? Why was it important? An advance organizer was provided so that the participants would know what kind of listening that they needed to do during the video; in this case, they needed to listen for

specific information. They were allowed to take notes during the video to ensure it was their listening comprehension that was being tested rather than their memory retention.

After the advance organizer was explained, the participants watched and listened to a 2-minute video segment on the life and contributions of an important scientist. This segment was excerpted from an educational videotape on *Tracing the Path: African American Contributions to Chemistry in the Life Sciences* (McGinty, Kessler, & Miller, 1991) and is typical of the kinds of videos used in high school social studies or science classrooms. However, the participants confirmed that they had not seen this video previously. Participants wrote their notes on the advance organizer that the researcher later collected. (See Appendix B for a transcript of the pretest video segment.)

Listening strategy instruction

After the pretests, the participants participated in 15 class sessions of targeted listening strategy instruction conducted by the researcher over a 6-week period. The sessions focused on strategies for developing discrete listening skills and video listening skills as well as effective note taking, an important academic skill associated with effective listening. The material for the 15 strategy instruction sessions was taken from several different listening instruction texts, in order to find materials of interest to high school students, and also because no single text covered all of the strategies taught during this study. The strategy instruction sessions were conducted in the ESL classroom during the participants' regularly scheduled ESL class and were 20 to 30 minutes long. The method of strategy instruction was guided by the recommendations of Chamot and O'Malley (1994) regarding explicit strategy instruction. In particular, the instruction was made explicit by defining the strategy for the students, explaining specifically how it would help them comprehend the oral input, and modeling the use of the strategy by doing a think-aloud while listening to an oral text. At the beginning of each of the training sessions, the strategies taught previously were written on the blackboard and discussed again as strategies that participants could use for effective listening. Participants were given opportunities to practice the strategy on different kinds of oral text and encouraged to try the strategy out in their academic classes.

The choice of what kinds of listening instruction to provide for the participants was based on Vandergrift's Interactive-Constructivist model of listening (1999). Vandergrift supports a multidimensional view of listening that involves both bottom-up and top-down processing. His view is supported by the research of El-Koumy (2000), who found that neither instruction in bottom-up nor top-down listening processing was effective when used alone. He concluded that the two kinds of processing complement each other and should be balanced in listening instruction. Accordingly, both bottom-up and top-down listening instruction was provided in the training sessions. It is

important to note, however, that although these two kinds of processing are usually discussed as though they were separate categories, there is often overlap between them. Peterson (1991) refers to this overlap as interactive processing, a combination of form- and meaning-driven processing in which the listener uses information from one level of processing to assist processing at the other level.

Effective listeners need a certain level of linguistic proficiency to be able to manage bottom-up processing, which, according to Peterson (1991), is “triggered by the sounds, words, and phrases which listeners hear as they attempt to decode speech and assign meaning” (p. 109). In other words, bottom-up processing focuses on the structural system of English. To prepare the participants for bottom-up listening, the first three lessons were adapted from Gilbert’s *Clear Speech: Pronunciation and Listening Comprehension in North American English* (1993). They included explanations of concepts and practice on the rhythm and sounds of English syllable length (e.g., noticing the difference between *ease* and *easy*), dropped syllables (e.g., *chocòlate*), stops and syllable length (e.g., *bite* and *buy*), syllable length and word meaning (e.g., the noun *use* and the verb *use*), and clear versus unclear vowels (e.g., *can’t* and *can*).

Lessons 4 and 5 were based on Gilbert’s *Clear Speech* unit on emphasis of content words in utterances, and pitch patterns. Instruction and practice were devoted to identifying the most important words by their stress, and then inferring and constructing meaning from them. These lessons could be classified as interactive processing because participants focused on the bottom-up processing of words and pitch patterns combined with a top-down processing strategy and prior knowledge in order to construct meaning.

Lessons 6 and 7 provided opportunities to practice using the strategies learned thus far on tasks that required listening for specific information. Participants listened to recorded telephone messages and an audiotape of students being interviewed about making friends on the Internet (Kozyrev, 2000). They practiced listening for stressed words and intonation patterns and then guessed at the meaning.

According to Peterson (1991), top-down processes “are driven by listeners’ expectations and understandings of the nature of text and the nature of the world” (p. 109). Thus, the focus is on the meaning of the oral input and the listener uses strategies such as guessing from context, prior knowledge, and inferencing. To prepare the participants for top-down listening, Lessons 8 and 9 were based on LeBauer’s recommendations (2000) for developing note-taking strategies (e.g., abbreviations, symbols, visually representing relationships, and listening for discourse markers). Participants practiced using the strategies while listening to two audiotaped lectures about how the moon affects behavior (Tanka & Baker, 1996). The final lesson focused on top-down video listening strategies of how to determine setting, interpersonal

relationships, mood, topic, and how to use visual cues to enhance their comprehension of the oral text based on Mendelsohn's (1994) model of listening strategies. Participants practiced using the strategies while watching a variety of 2- to 3-minute video clips, beginning with popular movies and ending with a video on the American Revolution. The strategy instruction sessions, their focus, and the materials used are listed in Table 1.

Table 1
Listening Strategy Instruction Sessions

Session	Focus	Specific elements	Sources
1	Rhythm and sounds	Syllable length, dropped syllables	Gilbert (1993)
2	Rhythm and sounds	Stops and syllable length, voicing	Gilbert (1993)
3	Rhythm and sounds	Clear and unclear vowels and word meaning	Gilbert (1993)
4	Selective attention to stress patterns	Content words, inferring meaning	Gilbert (1993)
5	Selective attention to pitch	Focus words, inferring meaning	Gilbert (1993)
6	Listening for specific information	Listening to recorded telephone messages	Kozyrev (2000)
7	Listening for specific information	Using an advance organizer, note taking, inferring meaning from interviews	Kozyrev (2000)
8	Note taking	Abbreviations, symbols, visual representations	LeBauer (2000); Tanka & Baker (1996)
9	Note taking	Constructing meaning	LeBauer (2000); Tanka & Baker (1996)
10	Video listening	Setting, interpersonal relationships, mood, topic, visual cues	Mendelsohn (1994)

Posttests

Following the strategy training sessions, two posttests were administered. The first posttest remeasured the participants' discrete listening skills. The posttest followed the format and focus of the pretest, but the information in the questions was different, to avoid a training effect. (See Appendix C.) The second posttest remeasured the participants' video listening and note-taking skills. The posttest followed the same format as the pretest. Participants used an advance organizer and listened and took notes on a 2-minute video segment taken from the same video used in the pretest but about a different scientist's achievements. (See Appendix D for a transcript of the posttest video segment.)

Data Analysis

The researcher and a research assistant analyzed the pretest and posttest data. Both read and rated all the tests independently. For the discrete skills test, the number of correct responses to the questions was used as a measure of the participants' discrete or bottom-up listening ability. For the video listening test, the number of correct facts written about the video was used as a measure of the participants' top-down listening ability. A correct fact was defined as an item of information that was mentioned by the video narrator or that could have been inferred from the video. Interrater reliability was 94% for the discrete listening pretest and 92% for the discrete listening posttest. For the video listening, interrater reliability was 96% for the pretest and 92% for the posttest. The nonparametric Wilcoxon Signed-Rank test was used to examine the data for significance because of the small sample size.

Results

A comparison of participants' pretest and posttest scores on the discrete listening tests showed that there was a statistically significant difference, in a positive direction, in the discrete listening of the participants following the listening strategy instruction. The test statistic computed from the pretest and posttest data was 1, which is less than the critical T of 2 for an n of 7 ($p = .025$, one-tailed), indicating a statistically significant difference between the pretest and posttest scores. (See Table 2 for the individual scores.)

A comparison of the participants' pretest and posttest scores on the video listening test showed that there was a statistically significant difference, in a positive direction, in the video listening and note taking of the participants following the listening strategy instruction. The test statistic computed from the pretest and posttest data was 0, equal to the critical T of 0 for an n of 7 ($p = .01$, one-tailed), indicating a statistically significant difference between the pretest and posttest scores. (See Table 3 for the individual scores.)

Table 2

Discrete Listening Pretest and Posttest Scores, n = 7

	Pretest score Discrete listening	Posttest score Discrete listening
Participant	<i>M</i> = 34.71 <i>SD</i> = 5.34	<i>M</i> = 40.43 <i>SD</i> = 3.95
Student 1	26	37
Student 2	35	40
Student 3	44	42
Student 4	33	39
Student 5	36	41
Student 6	36	48
Student 7	33	36

Table 3

Video Listening Pretest and Posttest Scores, n = 7

	Pretest score Video listening	Posttest score Video listening
Participant	<i>M</i> = 3.43 <i>SD</i> = 1.72	<i>M</i> = 7.00 <i>SD</i> = 1.15
Student 1	3	5
Student 2	1	7
Student 3	2	6
Student 4	4	7
Student 5	3	8
Student 6	6	8
Student 7	5	8

Discussion

The results of this study showed that explicit listening strategy instruction helped this group of high school ESL students improve their discrete listening ability and their video listening and note-taking abilities. This study, though exploratory in nature, suggests a promising direction for research on the potential for explicit listening strategy instruction to help students improve their academic listening ability.

An illustrative example of how bottom-up listening instruction benefits students is teaching students to distinguish the difference in sound between *can* and *can't*. Being able to distinguish between the two is critically important, for example, in understanding the difference between “The magnesium can burn you” and “The magnesium can’t burn you.” While the difference between the two words appears to be in the addition of the final “T” sound, in some colloquial spoken American English dialects, the difference is actually in the vowel sounds; that is, *kin* or *ken* as opposed to *can't*. After specific strategy instruction, the participants in this study improved their ability to distinguish the difference between what previously had been a very difficult combination for them to decipher.

It is unusual these days to find a classroom without a television and videocassette recorder in it. Teachers have access to videos for just about every subject. Videos both support and add to the information that students glean from reading textbooks. An illustrative example of how top-down listening instruction benefits students is teaching strategies for selective attention to word stress. When the participants realized that the important information in an English utterance is stressed, they were able to focus their listening on the stressed words and phrases.

Closely linked to participants’ success in improving their video listening was their improvement in taking notes and constructing meaning from those notes. Effective note taking can help students guess at meaning in a post-listening review of notes, especially when comprehension is limited during the listening event. An illustrative example of how note-taking strategy instruction benefits students is that it helps them to develop their own abbreviations and symbols for faster note taking and to realize that meaning can be constructed from key word notes rather than entire sentences. Having more confidence in their ability to construct meaning from their notes made it easier for the participants in this study to selectively listen for the information needed to answer the advance organizer questions.

Implications and Resources for Teachers

While ESL teachers are becoming more aware of the need to provide specific listening instruction to their students, many are unsure about what constitutes effective academic listening instruction (Berne, 1998). They often

turn to commercial ESL/English as a Foreign Language listening texts for help. These generic texts, however, do not provide the kind of instruction or context that students need, such as comprehending specialized vocabulary that is both abstract and low frequency in subject areas that are specific to secondary curricula (e.g., tsunamis, storm surges, species, phylum).

Generic publishers' texts situate listening instruction in contexts and tasks that are unrelated or, at best, only generally related to the academic contexts in which students must perform. For example, *Basic Tactics for Listening* (Richards, 1996) contains units on "Describing People," "Sports and Exercise," "Shopping," "Directions," and "Airports." *Active Listening: Expanding Understanding Through Content* (Helgesen, Brown, & Smith, 1996) has similar units such as "Sights and Sounds," "People's Best Friends," and "Your Type of Personality." *Listen In* (Nunan, 2003) is somewhat better in that it has very specific goals for learning and improving listening strategies, but, as with the other texts, it is meant for a very wide audience of listeners and, thus, uses very generic topics in which to situate the instruction. While useful, these are not the kinds of topics, vocabulary, and input that students will be listening to in their academic content classes.

There are guidelines that teachers can use to construct an appropriate and effective listening curriculum that is relevant to their students' immediate needs. For example, Vandergrift (1997a) presents an extensive list of listening strategy groups, their definitions, and examples of how they are utilized by the learner in actual situations. Peterson (1991) gives examples of listening exercises for students at different proficiency levels that include bottom-up, top-down, and interactive processing. Gilbert (1993, 2001) provides lessons and exercises for developing discrete listening skills in sound discrimination and English stress patterns. LeBauer (2000) offers an excellent text on academic listening and note taking, covering symbols, abbreviations, discourse markers, paraphrase and redundancies, cues that signal topic shifts, prediction strategies, and many more of the kinds of listening strategies that students use in academic settings. Finally, Mendelsohn (1994) presents an overall structure for teaching listening in *Learning to Listen: A Strategy-Based Approach for the Second-Language Learner*. His approach provides a good balance of bottom-up and top-down listening strategies and is flexible enough for teachers to use as a framework for designing listening instruction that is relevant for the different kinds and contexts of academic listening that students do.

Teachers must take care that listening instruction is balanced in both bottom-up, top-down, and interactive listening strategies, skills, and opportunities for practice. Buck (2001) notes that:

Both research and daily experience indicate that . . . different types of processing may occur simultaneously, or in any convenient order. Thus syntactic knowledge might be used to help identify a word, ideas about the topic of conversation might influence processing of the syntax, or knowledge of the context will help interpret the meaning. (p. 2)

Instruction in either bottom-up or top-down listening processing alone will not be effective (El-Koumy, 2000). By providing a balanced listening program, teachers can help their students learn to use all the sources of information available to them in order to construct meaning from oral input.

Guidelines for Explicit Instruction

In addition to being relevant, strategy instruction needs to be explicit (Chamot & O'Malley, 1994; Duffy, 2002; Mendelsohn, 1994). In many instances, teachers guide their students through the use of strategies but fail to name them, define them, or provide opportunities for students to practice or analyze them. Chamot and O'Malley (1994) recommend that strategy instruction should include preparation (raising participants' awareness of listening strategies and their usefulness in comprehending oral text), presentation (explicit teaching of the strategy), practice (opportunities to practice the strategies in a variety of contexts), evaluation (encouraging participants to evaluate the effectiveness of their strategy use), and expansion (encouraging participants to apply the strategies in their other classes). Similarly, Mendelsohn's (1994) advice for explicit strategy instruction is that teachers: (a) define the strategy, (b) model how the strategy is used, (c) guide students in practicing the strategy, (d) give appropriate feedback, (e) provide opportunities for practice, (f) help students assess the effectiveness of their strategy use, and (g) have students use the strategy in an authentic task. Following either of these instructional models allows students to understand the strategy and how it is used, and provides opportunities to try out strategies in practice situations before using them on authentic tasks.

Limitations of the Study and Directions for Future Research

There are aspects of this study that limit its generalizability, but they also provide focus for future research needs. In regard to the sample, the participants were volunteers so they might have been more motivated to do well than randomly selected participants. In addition, the sample was very small, as is often the case in classroom-based research where it is difficult to find large populations of ESL students willing to participate in research studies. Nevertheless, larger and perhaps cumulative groups of students are needed, especially those from different first language backgrounds, so that findings are more robust.

While strategy instruction improved participants' listening ability in this study, it is not known to what extent and in what ways the different kinds of strategy instruction contributed to the listening improvement. Future designs need to separate the different types of strategies so that their relative contributions to effective listening can be determined.

In addition, although the video listening and note-taking test showed an improvement in participants' ability to comprehend factual information from an educational video, comprehending factual information does not, by itself, mean that the participants could use the information productively. Future research should test the ability of participants to use the information for higher order cognitive tasks.

Research designs need to include opportunities to observe participants as they attempt to use listening strategies on authentic listening tasks in their academic content classrooms. Although determining when students are engaging in internal cognitive processing is difficult, it is still necessary to operationalize these activities in order to know whether students maintain and transfer their strategy instruction to authentic listening tasks in their academic content classrooms.

Finally, this study showed an improvement in the participants' ability to listen to and extract important facts from an educational video, but this ability cannot be generalized to all academic listening in the content classroom. Oral academic information comes from a variety of different sources, such as the teacher, other students, guest lecturers, computers, etc. Research that examines the listening demands of these different sources is needed in order to determine what kinds of strategies are most effective for these tasks.

Conclusion

The wide variety of activities and tasks in high school classrooms that involve oral information means that ELLs need to have strong listening skills and strategies to access that information. While many students are confident of their listening ability in the comfort of their ESL classroom and in social settings, they are less confident when it comes to comprehending oral information in their academic content classrooms.

This study suggests that targeted listening strategy instruction in discrete listening, video listening, and note taking can improve students' listening comprehension of oral academic content material that they will most likely encounter in their academic content classes. The results of this study serve as a starting point for research into the kinds of listening students do in different academic content classrooms, and the strategies that they need to be effective listeners. Continuing research in this area will help teachers more appropriately prepare their students for high academic achievement.

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Appendix A

Discrete listening pretest

Selected examples

Part 1, Sounds (10 pairs of sentences)

The following pairs of sentences are exactly the same except for one word. You will hear either sentence (a) or (b). Circle the letter of the sentence you hear.

- a. They save old bottles.
b. They saved old bottles.

Part 2, Syllable Number (10 words)

How many syllables do you hear? Write the number.

- closet _____
- sport _____

Part 3, Word Stress (10 words)

Draw a line under the syllable with the most stress (the strongest syllable). Mark only one syllable for each word.

- participating
- photograph

Part 4, Contractions, Reductions (7 questions, 3 statements)

You will hear a sentence. It will be read twice. Write the missing words.

- (*“Izziz” or Is his*) work good?
- (*“He duzzen wanna” or He doesn’t want to study this morning*).

Part 5, Focus: Identification (10 items)

You will hear a dialogue with ten sentences. In each sentence, underline the word with the most emphasis (the strongest word).

- A: Do you think food in this country is *expensive*?
- B: Not *really*.

Part 6, Focus: Meaning (5 pairs of sentences)

The following pairs of sentences are exactly the same, except a different word is stressed (stronger) in each sentence. You will hear sentence (a) or (b) twice. Circle the correct response.

Before I start the tape, [students] read these sentences.

- a. We want to buy a lot of apples. Not oranges?
- b. We want to buy a lot of apples. How many?

Part 7, Thought Groups

You will hear sentence (a) or (b) twice. Answer the question that follows the sentence you hear.

- 1. a. He sold his houseboat and car.
- b. He sold his house, boat, and car.

Question: How many things did he sell? _____

Note: From Clear Speech: Pronunciation and Listening Comprehension in North American English: Students Book (2nd ed., pp.viii-xi), by J. B. Gilbert, 1993, New York: Cambridge University Press. Copyright 1993 by Cambridge University Press. Reprinted with permission.

Appendix B

Transcript of video listening pretest

In the United States, despite a history of slavery, discrimination, and hardship, dedicated and committed African Americans have made major contributions to our knowledge of the chemistry of living things. One scientist who added a tremendous amount to our understanding of living organisms at the chemical level was Ernest Everett Just. Just was born in 1883 in Charleston, South Carolina. These were years after which slavery in the United States had been abolished. Just's father was a dockworker and his mother a schoolteacher. Just was an excellent student and finished first in his high school class and graduated with the highest honors from Dartmouth College. During his college years, Just became fascinated by the mysteries of life hidden in the cell. Every living thing, including your own body, is composed of cells. These are blood cells, human nerve cells, and these are bone cells. Just did his research at the marine biological laboratories in Woods Hole, Massachusetts. There, Just used marine animals to try to figure out how a single fertilized egg cell could multiply and change to become all the different parts of a whole organism. Just challenged the traditional theories of cell development and showed that chemicals outside the egg cell nucleus played an important role in cell multiplication and development. Just's theories, discoveries, and laboratory techniques revolutionized the study of egg cell development and helped pave the way for today's research in this important scientific area. Just won many honors and awards as a scientist and as a professor, and generations to come will benefit from his important work.

Appendix C

Discrete listening posttest

Selected examples

Part 1, Sounds (10 pairs of sentences)

The following pairs of sentences are exactly the same except for one word. You will hear either sentence (a) or (b). Circle the letter of the sentence you hear.

1. a. I live in a beautiful town.
b. I lived in a beautiful town.

Part 2, Syllable Number (10 words)

How many syllables do you hear? Write the number.

1. walked _____
2. chocolate _____

Part 3, Word Stress (10 words)

Draw a line under the syllable with the most stress (the strongest syllable). Mark only one syllable for each word.

1. requirement
2. institute

Part 4, Contractions, Reductions (7 questions, 3 statements)

You will hear a sentence. It will be read twice. Write the missing words.

2. ("Izziz" or Is his) friend coming?
10. ("She duzzen wanna or She doesn't want to take off her coat").

Part 5, Focus: Identification (10 items)

You will hear a dialogue with ten sentences. In each sentence, underline the word with the most emphasis (the strongest word).

- A: What's that buzzing noise?
B: It sounds like bees.

Part 6, Focus: Meaning (5 pairs of sentences)

The following pairs of sentences are exactly the same, except a different word is stressed (stronger) in each sentence. You will hear sentence (a) or (b) twice. Circle the correct response.

Before I start the tape, [students] read these sentences.

2. a. But we asked for two Cokes! Oh, I thought you wanted tea.
b. But we asked for two Cokes! Oh, I thought you wanted one.

Part 7, Thought Groups (5 pairs of sentences)

You will hear sentence (a) or (b) twice. Answer the question that follows the sentence you hear.

4. a. The teacher said, "That student is outstanding."
b. "The teacher," said that student, "is outstanding."

Question: Who was outstanding? _____

Note. From *Clear Speech: Pronunciation and Listening Comprehension in North American English: Students Book* (2nd ed., pp.viii-xi), by J. B. Gilbert, 1993, New York: Cambridge University Press. Copyright 1993 by Cambridge University Press. Reprinted with permission.

Appendix D

Transcript of video listening posttest

Another scientist who made significant achievements related to chemistry and the life sciences was a chemist named Percy Julian. Julian was born in 1899. His father was a postal clerk and his mother a schoolteacher. Julian did well in high school and received a degree in chemistry from DePaul University with the highest grade point average in his class. Among his many accomplishments, Julian successfully produced the chemical compound in the laboratory to treat the damaging eye condition glaucoma. Julian later became chief chemist and director of research at a large chemical company where he worked with the chemistry of soybeans. Julian developed a foam from the protein in soybeans which could be used to put out fires. This invention, called Aerofoam, saved the lives of many soldiers in World War II. Another of Julian's major breakthroughs was his making of the drug cortisone, also from the chemicals found in soybeans. Cortisone has many uses, one of the most important of which is to relieve the swelling and pain from certain forms of arthritis. Percy Julian's scientific achievements have helped countless people lead healthier and happier lives.

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