

1. LISTENING TO LEARN OR LEARNING TO LISTEN?

Larry Vandergrift

Listening is probably the least explicit of the four language skills, making it the most difficult skill to learn. This chapter begins with a brief overview of cognitive processes involved in listening and their implications for L2 listening instruction. Recent research (1998–2003) on a variety of instructional techniques to help L2 listeners process linguistic input is then reviewed, noting insights that can inform listening instruction, particularly techniques that can teach students how to listen. Two approaches to listening instruction are presented: an approach to raise metacognitive awareness about listening (favoring top-down processes) and an approach to develop lexical segmentation and word recognition skills (favoring bottom-up processes). An integrated model for L2 listening instruction is proposed. Finally, recent research on different types of listening (e.g., academic listening, bidirectional listening) and the sociolinguistic dimension of listening are reviewed. The chapter concludes with recommendations for future research. The basic premise underlying this chapter is that, given the critical role of listening in language learning, students need to “learn to listen” so that they can better “listen to learn.”

The image of L2 listening instruction is changing. At one time, listening was assumed to be a passive activity, meriting little classroom attention. Now listening is recognized as an active process, critical to L2 acquisition and deserving of systematic development as a skill in its own right (Morley, 1999). The utility of listening instruction has been underscored by language learners who want to learn to understand spoken texts in the target language and to interact with native speakers (e.g., Kim, 2002).

The approach to listening instruction has also evolved. First was the “listening to repeat” approach of the audio-lingual period, followed by the “question–answer” comprehension approach. More recently, a common approach is real-life listening in real time, involving communicative tasks and/or interaction with native speakers (Morley, 1999). Furthermore, listening instruction is expanding from a focus on the product of listening (listening to learn) to include a focus on the process (learning to listen). Although research in L2 listening instruction remains limited, recent findings provide some useful insights for language teachers, textbook writers,

and curriculum developers. Many questions still remain, however, to be explored by teachers and researchers.

This chapter will review the recent research in listening instruction. The first section will provide a brief overview of the cognitive processes involved in listening and their implications for L2 listeners. The next section will review recent research on a variety of instructional techniques to help L2 listeners process linguistic input, noting insights that can inform listening instruction. The third section will examine two approaches to listening instruction and consider an integrated model that might encompass both approaches. The next two sections will review recent research on different types of listening and research on the sociolinguistic dimension of listening. The final section proposes future research directions for listening instruction.

Cognitive Processes in Listening Comprehension

Listening is probably the least explicit of the four language skills, making it the most difficult skill to learn. It involves physiological and cognitive processes at different levels (Field, 2002; Lynch, 2002; Rost, 2002), as well as attention to contextual and “socially coded acoustic clues” (Swaffar & Bacon, 1993). Research on instruction in L2 listening must take into account the complex cognitive processes that underlie the listening construct.

Earlier reviews of research in L2 listening instruction (Lynch, 1998, 2002; Mendelsohn, 1998; Oxford, 1993; Rost, 2002; Rubin, 1994) call attention to the critical role of both bottom-up and top-down processes in comprehension. Listeners use top-down processes when they use context and prior knowledge (topic, genre, culture, and other schema knowledge in long-term memory) to build a conceptual framework for comprehension. Listeners use bottom-up processes when they construct meaning by accretion, gradually combining increasingly larger units of meaning from the phoneme-level up to discourse-level features. While these processes interact in some form of parallel distributed processing, the degree to which listeners may use one process more than another will depend on the purpose for listening. Admittedly simplistic and somewhat mechanistic in orientation, this description is nevertheless helpful for understanding how different types of knowledge interact in parallel fashion as listeners create a mental representation of what they have heard. Research on these cognitive processes suggest that L2 listeners need to learn how to use both processes to their advantage, depending on their purpose for listening. As pointed out by Mendelsohn (2001), in real-life listening we listen in different ways, depending on our purpose for listening.

The speed and effectiveness at which listeners carry out these processes, however, depends on the degree to which the listener can efficiently process what is heard. Native language listeners do this automatically, with little conscious attention to individual words. Beginning-level L2 listeners, however, have limited language knowledge; therefore, little of what they hear can be automatically processed. They need to consciously focus on details of what they hear, and given the limitations of

working memory and the speed of speech, comprehension suffers. Either comprehension breaks down or listeners may use compensatory strategies, contextual factors, and any other relevant information available to them to guess at what was not understood.

An awareness of each of these processes and their relative contribution to comprehension in different contexts and at different levels of language proficiency is fundamental to a theoretically grounded pedagogy of L2 listening comprehension. Presently, there appears to be a general consensus in the literature that listening instruction has favored the development of top-down processes at the expense of developing bottom-up processes (e.g., Field, 2001; Hulstijn, 2003; Rost, 2002).

Empirical Studies on Listening Instruction

Much of recent research pays attention to teaching strategies that provide support to the listener for processing linguistic input to enhance comprehension. These studies examine the effect of advance organizers, visual support, captions, vocabulary knowledge, and listening strategy instruction.

Research on Advance Organizers

The importance of advance organizers to facilitate comprehension was affirmed by Herron, Cole, York, and Linden (1998) with beginning-level learners of French. One group, the declarative group, heard a six-sentence summary of the video clip, while a second group, the interrogative group, heard the same sentences transformed as questions, followed by three possible answers. As expected, both treatment groups outperformed the group with no advance organizer; however, the interrogative group did not outperform the declarative group. It was expected that the interrogative mode would foster a more active engagement with the text, thereby enhancing comprehension and retention. However, the mismatch between the questions of the advance organizers and the questions on the final comprehension measure likely encouraged the listeners to focus on the wrong parts of the video text. While this research demonstrates the value of advance organizers, the relative benefits of questions as advance organizers, particularly questions related to an authentic purpose for listening, need further research.

Visuals are another aid to listening. Ginther (2002) investigated the relative effect of two kinds of visuals on listening performance on the computerized TOEFL test. Context visuals (pictures that set the scene for the upcoming verbal exchange) prepare listeners for the text or verbal exchanges, whereas content visuals (pictures related to the actual content of the verbal exchange) support the text. Results indicated that content visuals slightly enhanced the comprehension of mini-talks, but context visuals decreased comprehension. It appears that advance organizers that provide no directly related information (e.g., context visuals) are not helpful to the listener. These visuals still require processing themselves, thereby consuming attentional resources and limiting the amount of working memory available to the

listener for attending to the required information. This interpretation also provides theoretical support for the results obtained by Herron et al. (1998).

The important relationship between schema activation and comprehension has been established (e.g., Long, 1990). However, “mismatch” conditions between schema and text can occur when the schema activated by the first lines of a text is not completely congruent with the remainder of the text. In such conditions, listeners will need to resort to more bottom-up processing to reconcile the details with the schema. This prompted Tsui and Fullilove (1998) to investigate whether bottom-up processing might be the discriminating factor in listening test performance. They found that when schema met expectations, there were no differences between more skilled and less skilled listeners. However, when the schema did not meet expectations, the more skilled listeners performed better. It appears that when schema and input are consistent, less skilled listeners can rely on top-down processing; however, their bottom-up processing skills are inadequate for finding the answer in the “mismatch condition” in real time, or for answering global questions where they must draw conclusions and inferences. Tsui and Fullilove conclude that, while less-skilled listeners may initially benefit from a great deal of contextual support, they will need to develop rapid and accurate bottom-up processes to become skilled listeners.

Listeners with more language knowledge (and more automated processes) have more room in working memory to retain all information and make necessary revisions or inferences as they listen. These differences between native and nonnative speakers in use of working memory during listening comprehension were examined by Tyler (2001). When listeners had access to topic (as an advance organizer), differences in working memory consumption (assessed by a working memory index score) between the groups were not statistically significant. However, when the topic was not available, working memory consumption for nonnative speakers was much higher. This is likely due to inappropriate or inefficient bottom-up processing, because word recognition skills of nonnative speakers are not yet fully automatized. Tyler concludes that topic-familiar texts may inhibit development of bottom-up skills and recommends a differentiated approach for teaching listening: an emphasis on bottom-up work for long-term language retention but top-down training for quick acquisition by learners such as travelers. This recommendation is not consistent with Tsui and Fullilove’s recommendation that less skilled listeners initially be provided with a great deal of contextual support since topic-familiar texts provide listeners with contextual information useful for compensatory strategy development. Furthermore, travelers, for example, also need to develop bottom-up skills for understanding the details they are likely to request (e.g., directions, information).

In sum, beginning-level listeners are limited by working memory constraints. Advance organizers that help listeners focus directly on the desired information are most useful for efficient processing. They free attentional capacity for focusing on desired details, which requires bottom-up processing skills. How

best to teach bottom-up skills at beginning levels without encouraging online translation is another area for further research.

Research Using DVD with Captions

Widespread availability of DVD video with multilingual soundtracks and captions provides opportunities for written support to enhance listening comprehension. Markham, Peter, and McCarthy (2001) compared the effects of different captions on the listening performance of intermediate-level students of Spanish. They found that the English captions group outperformed the Spanish captions group who, in turn, outperformed the no-captions group. The researchers argue that students would benefit from a cycle of repeated viewing, progressing from L1 captions to L2 captions and finally to no captions, particularly when using challenging video material.

The effect of pictorial support and written annotations on comprehension of aural texts in multimedia environments was investigated by Jones and Plass (2002) with beginning-level French classes. Final comprehension measures showed that students acquired more vocabulary and recalled the passage better with the help of both pictorial and written annotations instead of pictures only or written annotations only. Delayed posttests revealed that the pictorial annotations had a stronger and longer-lasting effect than written annotations, both for vocabulary retention and for listening comprehension.

The differences between pictorially assisted or captions-assisted listening and authentic listening raises questions about the transferability of skills from a learning context to a real-life context, an area for further research. While the listening supports provided in the above studies may be helpful for developing word recognition skills and learning vocabulary, they do not foster the development of compensatory strategies where listeners take advantage of real-life contextual information and limited word recognition skills to fill gaps in comprehension.

Research in Teaching Bottom-Up Skills

Segalowitz and Segalowitz (1993) maintain that automatization of word recognition skills, i.e., fluent bottom-up processing, is critical for successful listening comprehension. Motivated by this theoretical premise, Poelmans (2003) investigated the effects of training in top-down comprehension skills (“traditional listening”) over against bottom-up recognition training. Contrary to expectations, she found no significant differences between the two groups in the final comprehension measure. Poelmans attributes this finding to a discrepancy between the contents and exercises of the training and testing conditions, as well as insufficient training. The decontextualized nature of the stimulus materials may also explain the finding. Training in word recognition skills that acknowledges the contextual nature of listening is another area for further research.

However, Osada (2001) attributes lack of success in listening to an overemphasis on bottom-up skills. Based on his analysis of answers to questions and idea unit analysis, he found that low-proficiency Japanese students of English tended to adopt a mental translation approach to listening. He argues for more emphasis on a top-down approach because, given the constraints of working memory, beginner-level listeners cannot construct meaning when they process connected speech on a word-by-word basis only.

The computer can be used to slow down speech to allow listeners some control over linguistic input for purposes of word recognition. Zhao (1997) investigated the effects of modifying speech rate using four different conditions: (1) no repetition of the passage or adjustment of speech rate; (2) no repetition, with the option of adjusting speech rate; (3) option of both speech rate adjustment and repetition of any part of the passage; and (4) no adjustment of the speech rate with the option of repetition. Comprehension was overwhelmingly higher when students were permitted to adjust the speech rate. In general, listeners slowed down the speech rate; however, individual variations were noted in the degree to which each listener slowed the rate. While this technique is helpful for recognizing words not initially distinguishable in connected speech, listeners may choose to listen at a speech rate slower than necessary. This will not help them develop strategies to cope with speech in real time.

Efficient and effective use of bottom-up skills in comprehension appears to be related to the degree to which word recognition skills are automatized. Meccarty (2000) found that both L2 grammatical knowledge and vocabulary were significantly correlated with listening comprehension, although only vocabulary knowledge could explain the variance. The variance for listening, however, is less than for reading. Mecarty concludes that, although comprehension processes in listening and reading share similar characteristics, vocabulary knowledge was less important for listening. Determining the remaining factors accounting for the variance in listening performance, some likely related to the acoustic trait, is another area for future research.

Research in Raising Metacognitive Awareness of Listening

The literature base in listening strategy instruction has grown very little in recent years. However, studies on the differences between more skilled and less skilled listeners by Goh (2000, 2002a), Hasan (2000), Mareschal (2002), Peters (1999), and Vandergrift (2003b) have produced some useful insights. Grounding their research in earlier work by O'Malley and Chamot (1990), the findings of Goh, Mareschal, Peters, and Vandergrift highlight the importance of the effective use of metacognitive strategies for successful listening comprehension. In a study of adolescent learners of French, Vandergrift (2003b) found significant quantitative differences for four strategies: (1) total metacognitive strategy use, (2) comprehension monitoring, (3) questioning elaboration (flexibility in considering various possibilities before deciding on a framework for interpretation), and (4) online translation (by the less skilled listener). A qualitative analysis of think-aloud

protocols reinforced these differences and, in addition, found that the successful listener used an effective combination of metacognitive and cognitive strategies, a finding also reported by Goh (2002a) and Mareschal (2002).

Given the importance of metacognitive awareness in successful listening, Vandergrift investigated the effect of a strategies-based approach on student awareness of the process of listening. Students completed listening tasks where they also engaged in prediction, monitoring, problem solving, and evaluation (the major groups of metacognitive strategies). These tasks helped students learn or bring to consciousness metacognitive knowledge for self-regulation in listening. Both elementary school students (Vandergrift, 2002) and university students of French (Vandergrift, 2003a) found it motivating to learn to understand rapid, authentic texts and responded overwhelmingly in favor of this approach. Students commented on the power of predictions for successful listening, the importance of collaboration with a partner for monitoring, and the confidence-building role of this approach for enhancing their ability to comprehend oral texts.

The use of metacognitive strategies is not unique to successful L2 listening. Although L1 listeners have automatized word recognition skills, they also use metacognitive strategies for self-regulation of listening when they need to redirect attention to bolster waning interest or to critically evaluate what they hear. Imhof (2001) reports on a study of university students enrolled in a communications class who were taught three strategies and asked to apply them in a number of situations: attention management, asking pre-questions, and elaboration. After some adaptation of the strategies to personal needs over time, students reported improved listening habits: more sustained attention, more comprehensive understanding, deeper level of processing, and more reflective assessment.

These qualitative studies point to the promise of a strategies-based approach to teaching L2 listening. However, the long-term effects of this approach on listening achievement need to be examined in carefully designed classroom studies.

Instructional Observations

The results of the studies just described lead to the following observations concerning instruction in listening:

1. Limitations of working memory dictate that supports provided to the listener should relate directly to the text and the listening task. Advance organizers that distract from the main focus of the text use up precious attention space and limit the amount of working memory available to attend to text and task.
2. Captions, annotations, and computer programs to slow down speech may be useful for developing word recognition skills and learning vocabulary; however, their value in teaching students how to listen is questionable. Given that written support is usually not available in authentic, real-time listening, students need to learn to rely only on the acoustic signal and relevant contextual factors to

develop listening strategies. The use of captions, other written support, and reduced speech rate may encourage word-by-word decoding rather than foster the development of compensatory strategies that can help students cope with the demands of real-time listening. In fact, it may short-circuit the development of productive strategies.

3. Visual supports that are natural to the listening situation can provide important contextual information to help the listener. These map meaning automatically into long-term memory, freeing attentional capacity to concentrate on other details. However, picture “pop-ups” in multimedia environments are not helpful for learning to listen in real time. While they may be helpful for learning vocabulary, they may also short-circuit the development of listening strategies.
4. As noted earlier in this chapter, context is important to listening. Listeners use any relevant information at their disposal to interpret what they hear. Decontextualized word automatization activities, such as those carried out by Poelmans (2003) under laboratory conditions, deprive listeners of contextual clues available in real-life listening.
5. A strategies-based approach to listening instruction with beginner-level listeners builds confidence, raises awareness of the process of listening, and helps listeners learn to use effective combinations of metacognitive and cognitive strategies to understand texts in real time.

Teaching Students How to Listen

Instruction in the Process of Listening

Instruction in listening has too often been associated with testing, focusing on the product of listening (Sheerin, 1987). A focus on the right answer only, when the listener is incapable of keeping up with the speech rate, often creates a high level of anxiety, which, in turn, affects attention capacity (Arnold, 2000). While a focus on product allows the teacher to verify comprehension, the answer (correct or incorrect) reveals nothing about the process; i.e., how students arrived at comprehension. To help listeners develop strategies to compensate for gaps in understanding, teachers need to understand how listeners arrived at answers, particularly incorrect answers (Field, 2003). This information can then be used for diagnostic purposes, particularly in helping the less skilled listener to discover and try out more efficient strategies.

Recent literature on listening instruction indicates a greater interest in raising student awareness of the process of listening (Berne, 1998; Mendelsohn, 2001). A process approach can help students learn *how* to listen, guiding them through the stages that seem to characterize real-life listening (Field, 2001; Goh, 2002b; Mendelsohn, 2001; Vandergrift, 2003a). Using this approach, teachers can help beginning-level students learn how to comprehend short, authentic texts on topics related to student level and interest (e.g., announcements and advertisements). The

metacognitive strategies underlying this approach help listeners become more aware of how they can use what they already know to fill gaps in their understanding. The steps in this cycle and the metacognitive strategies underlying each step are presented in Figure 1.

Stage of Listening Instruction	Related Metacognitive Strategies
<i>Planning/predicting stage</i>	
1. Once students know topic and text type, they predict types of information and possible words they may hear.	1. Planning and directed attention
<i>First verification stage</i>	
2. Students verify initial hypotheses, correct as required, and note additional information understood.	2. Monitoring
3. Students compare what they have written with peers, modify as required, establish what needs resolution and decide on details that still need special attention.	3. Monitoring, planning, and selective attention
<i>Second verification stage</i>	
4. Students verify points of disagreement, make corrections, and write down additional details understood.	4. Monitoring and problem solving
5. Class discussion in which all contribute to reconstruction of the text's main points and most pertinent details, interspersed with reflections on how students arrived at the meaning of certain words or parts of the text.	5. Monitoring and evaluation
<i>Final verification stage</i>	
6. Students listen for information that they could not decipher earlier in the class discussion.	6. Selective attention and monitoring
<i>Reflection stage</i>	
7. Based on discussion of strategies used to compensate for what was not understood, students write goals for next listening activity.	7. Evaluation

Figure 1. Listening Instruction Stages and Related Metacognitive Strategies

This cycle, based on Field (2001) and Vandergrift (2003a), has been used successfully with beginning-level language learners at different ages, as noted in the previous section. This approach can also be used with profit by more advanced-level listeners faced with a difficult text or an unfamiliar variant of the target language. Field argues that this approach can help “risk takers” (listeners who do not verify hypotheses) to carefully evaluate their hypotheses in the light of contradictory evidence, and “risk avoiders” (listeners who are afraid to make hypotheses in case of failure) to make plausible predictions and accept that a potential discrepancy between predictions and outcome is not a mark of failure (Stanovich, 1980). Vandergrift argues that this approach helps listeners develop metacognitive knowledge, critical to the development of self-regulated listening (Chamot, Barnhardt, El-Dinary, & Robbins, 1999; Flavell, 1979; Wenden, 1998). Field and Vandergrift would agree that students need systematic practice in using listening strategies that will be useful outside of the classroom; this pedagogical cycle models real-life listening.

The value of a strategic, process approach to listening instruction is increasingly recognized. However, research evidence for the long-term impact of individual listening strategy instruction remains inconclusive (Chamot, 1995). Field (2001) suggests that a focus on individual strategies may help listeners learn to use one or two strategies successfully but not improve overall as listeners. Research on skilled listeners has described their approach to the listening task as “orchestrating strategies in a continuous metacognitive cycle” (Vandergrift, 2003b, p. 487) or “coupling strategies together like links in a fence” (Murphy, 1985, p. 38). The apparent interconnectedness of strategy use may explain why individual strategies instruction has not been as successful as hoped.

The recent literature on the L2 listening instruction suggests that students can benefit from an approach where strategies are taught in an integrated fashion. Guiding listeners through the process as a whole (the metacognitive cycle described above) as part of regular listening activities can help learners to improve overall as listeners (Field, 1998, 2001; Goh, 2002b; Holden, 2002; Vandergrift, 2002, 2003a). Students need repeated and systematic exposure to the same sequence of metacognitive strategies used by skilled listeners. This can be done through a variety of tasks, some more comprehension practice-oriented (as described above) and some more communicative in orientation (see White, 1998). However, all tasks should be grounded in the same metacognitive cycle. While the teacher will initially play a greater role, scaffolding should be gradually removed so that students do the work themselves, and the process can eventually become automatic. This methodology appears promising and has theoretical support. Moreover, Buck, who maintains that listening ability can only be achieved by listening to a lot of realistic texts for communicative purposes, suggests that listening instruction “can be greatly facilitated if teachers understand the nature of listening comprehension and can sensitize student to important issues and provide the optimum listening practice” (1995, p. 128). The potential of a process approach to L2 listening instruction, in essence “optimum listening practice,” is presently only supported by anecdotal evidence and qualitative studies, which show positive student attitudes and growing metacognitive awareness of the process of listening (e.g., Goh, 2002a; Vandergrift,

2002, 2003a). Nevertheless, the relative effects of this approach on actual student achievement in listening, particularly with beginning-level listeners, need to be empirically investigated in carefully designed, controlled classroom studies.¹

Computer applications of a similar approach have been proposed by Hoven (1999) in a theoretical model for computer-enhanced language learning that raises awareness of strategic processes for listening. The proposed software is learner-centered; it helps listeners set goals and gives them informed control over task, topic, text content, and pace of learning. Although this theoretical model has potential for using Web-based media and computers for listening instruction, the necessary software must still be designed and then empirically tested.

Instruction in Lexical Segmentation

As noted above, a process approach to listening instruction can enable beginning-level learners to achieve some success in using strategies to comprehend authentic texts. While students express appreciation for how this approach teaches them to use what they do know and to infer what they do not understand, students also express frustration at not being able to segment all the words out of the stream of sound. Top-down processing strategies may help in recognition of some words, but listeners are not always able to recognize even the words that they do know (Field, 2001). Listeners also need judicious practice in perception skills that will help them overcome the word segmentation skills of their native language and learn to identify words in L2 connected speech (Goh, 2002b; Rost, 2002). In fact, Hulstijn (2001) suggests that the development of a top-down, strategy-based approach for listening (and reading) is inadequate for linguistic input to become intake for L2 learning. He argues that bottom-up skills must also be developed so that all the components of the acoustic signal become meaningful units for the listener.

Attention to prosodic features such as stress and intonation are important for word segmentation in listening comprehension. Given that prosodic features influence how listeners chunk and interpret connected speech, attention to these features of text will be helpful for word recognition (Lynch, 1998). In her examination of prosodic cues in processing for comprehension, Harley (2000) concluded that English comprehension may be facilitated if students, regardless of age or language origin, pay attention to pause-bounded units rather than syntactic cues. In addition, research by Field (2003) suggests that listeners use a “strong-syllable” strategy with a high degree of success for word recognition and comprehension by placing word boundaries before stressed syllables. While this strategy may be helpful in recognizing individual words, segmenting of reduced forms such as contractions is even more complicated.

Hulstijn (2003) maintains that a strong second language program must include tasks that help listeners automatize bottom-up processing skills for word recognition. He describes a six-step procedure by which listeners can practice word acquisition skills: (1) listen to the recording, (2) ask themselves whether they have understood what they heard, (3) replay the recording as often as necessary, (4)

consult the written text to read what they have just heard, (5) recognize what they should have understood, and (6) replay the recording as often as necessary to understand all of the oral text without written support. Hulstijn and colleagues have developed a multimedia software program (123LISTEN) that allows the teacher to segment digitized video or audio texts into short chunks, each segment accompanied by a written transcript of the text. Listeners can choose three modes of listening: (1) nonstop listening without text, (2) listening by segment with delayed text display, and (3) listening by segment with simultaneous text display. Grounded in cognitive theories of connectionism and symbolism, the approach of 123LISTEN is intended to “help learners build associative networks allowing for fast, parallel processing of linguistic information” (Hulstijn 2003, p. 12).

Hulstijn argues that the real value of this software is the second mode where students listen first and then try to interpret what they are hearing. Only after attempting to understand what they have heard (using prediction and monitoring strategies) should students verify their understanding, using text display to read the words in the segment.² However, listeners might benefit even more from this approach if they first listened to the text as a whole, using the process approach described above. This would allow listeners to use prediction and monitoring strategies to greater advantage for deeper cognitive processing of the text before written segments are actually displayed for verification or visual representation of the acoustic signal.

Training in perception can take many forms. Goh (2002b) recommends analysis of parts of the text transcript (using the overhead projector) during the discussion phase of a process approach. Field (2003) recommends dictation as well as other remedial exercises to deal with special problems in concatenated speech such as reduced forms, assimilation, elision, resyllabification, and cliticization. Hulstijn (2001) recommends listening practice at an “*i* minus one” level, to develop automaticity in word recognition, e.g., listening to texts in which students can recognize most words and finding the differences between the aural form of the text and a written form that deviates slightly. While training activities such as these may lack the motivational dimension of a top-down, strategies-based approach, Hulstijn (2001) further suggests that the computer, “the ideal slave,” combined with human imagination, has the potential of making bottom-up training more appealing.

Summary

To summarize, listening comprehension involves two types of processes that interact freely with each other to help listeners construct a meaningful interpretation of what they hear. Teaching listeners how to use these processes in efficient and effective ways will need to balance a top-down, strategies-based approach with remedial, bottom-up training. While a top-down approach will help listeners develop real-life listening skills, it is not adequate for developing word recognition skills. At the same time, a more remedial bottom-up skills approach will help learners develop word recognition skills, but it must be used judiciously at early levels of language

learning so that learners do not develop an inefficient online translation approach to listening (Eastman, 1991; Vandergrift, 2003b).

Is it possible to combine these two approaches into one integrated model of L2 listening instruction? The reflection stage of the process approach to listening (macro-analysis of the text) described earlier could be expanded to include a more micro-analysis of the text. This would allow listeners to consult a written form of the text after completing the verification stages. If this is carried out with the class as a whole, some of this analysis could take place during the second verification stage where the text is reconstructed by the class. However, given the individual and unique ways in which listeners sometimes arrive at comprehension, the micro-analysis might be more beneficial and efficient if it were done in the language laboratory where listeners can work at their own pace on individual comprehension difficulties. Further elaboration and empirical testing of an integrated model incorporating both approaches to teaching listening would be an important avenue for future research.

Research on Different Types of Listening

Academic Listening

The scope of research on academic listening reported in Flowerdew (1994) continues to be the most comprehensive treatment of this dimension of listening to date. However, an interesting study by Littlemore (2001) on the widespread use of metaphor in university lectures adds important information to this research base. Metaphorical language often leads to *misunderstandings* by L2 listeners, resulting in misinterpretation of the lecture. Littlemore suggests that misinterpretations are much more serious than *nonunderstanding*, in which listeners are aware of a gap in understanding and can use clarification strategies to remedy comprehension. She recommends strategies for both lecturers and students to alleviate this problem.

Recognizing that academic listening involves more than lectures and note-taking, Feak and Salehzadeh (2001) report on the development and face validation of a listening placement test using video. Students were presented with multiple speaker interactions, where the visual element complemented the spoken element. Results of the pilot test indicated overwhelming agreement by both students and instructors that the video was a valid test of language use in diverse academic environments, not just the lecture hall.

Bidirectional Listening

The research on bidirectional or collaborative listening suggests that, compared to unidirectional listening, the cognitive demands made on the listener are much heavier (Lynch, 2002; Rost, 2002). To participate in a conversation, the listener must process the input in real time, clarify understanding when comprehension is uncertain, critically evaluate what is understood, and then respond. This dimension of listening does not receive enough research attention (e.g., Lynch,

2002) considering that bidirectional listening is what listeners engage in most often. In fact, some would argue that this is the only dimension of listening worth teaching; see the debate between Ridgway (2000a; 2000b) and Field (2000) in *ELT Journal*, 54(2).

Teaching listeners when and how to use efficient clarification strategies remains an important objective for research into this dimension of listening. Lam and Wong (2000) trained students in strategies such as self-clarification, seeking clarification, and verifying interventions of other members of a discussion group. However, students became bogged down in linguistic problems, especially when group members did not support each other in clarification efforts. Obviously, training in interaction strategies requires linguistic support (appropriate formula statements in L2) as students seek clarification due to comprehension problems.

Although listeners may use clarification strategies to signal a comprehension problem, they can also use receipt tokens to signal understanding and contribute to the construction of spoken discourse. Gardner (1998) investigated the use and meaning of receipt tokens such as “mm hm,” “yeah,” and “mm” in interaction, and their characteristics in terms of placement in conversation and prosodic shape. He provides evidence for the multiple meanings conveyed by these tokens and concludes that listeners, as conversationalists, need to be made aware of the utility and impact of these tokens and then provided with opportunities for practice and feedback.

Building on the already sizable literature on the impact of interaction on comprehension, Cabrera and Martinez (2001) confirm the importance of different types of interactional modification, i.e., repetitions, comprehension checks and gestures, in helping young children to listen. When the Spanish-speaking children listened to English stories with both interactional and linguistic adjustments (as opposed to linguistic adjustments only) the level of comprehension was significantly higher. This classroom study confirms earlier work by Pica (1994) and others on the listening interface in negotiation of meaning and its contribution to comprehension and language learning.

Narrow Listening

“Narrow listening” (Krashen, 1996) advocates providing listeners with large amounts of comprehensible input for language acquisition (see Krashen, 1987). Students listen repeatedly to oral texts on topics of their choosing, at their own pace, without the threat of evaluation. Dupuy (1999) investigated the effects of this approach on the language development of university students of French at different course levels. Analysis of self-assessment questionnaires showed that students at all levels found Narrow listening helpful in improving comprehension, fluency, and vocabulary. Students at all levels made significant self-reported gains in comprehension, with beginning students reporting greater gains than intermediate students.

Listening to Train the Ear

The Tomatis approach, which has received more attention in Europe than in North America, is based on the premise that the ear is the key organ to language learning. The Tomatis approach uses special headsets to enhance sound perception, allowing the listener to perceive sounds through bone as well as air. Tomatis's unique theory of language acquisition assumes that there is a close link between speech perception and speech production and that the ear can be trained or reeducated to perceive and analyze sounds through an auditory selection process. In a controlled experiment, Joiner (2000) found that the Tomatis group slightly outperformed the control group in comprehension, and many participants reported salutary effects on pronunciation skills and singing on key. Although technology requirements presently preclude widespread classroom use of the Tomatis approach, research in Europe continues (Kaunzner, 2001).

Sociolinguistic Dimensions of Listening Instruction

Arguing that research on L2 listening has focused largely on psycholinguistic aspects, Carrier (1999) discusses how the social context of listening also influences comprehension. She points out how status relationships between interlocutors affect language behavior and the amount of negotiation in face-to-face interactions. This can help or hinder comprehension. Teachers need to help students understand this dynamic and provide strategies that are helpful to negotiate meaning, in spite of the unequal status of the interlocutors.

Harris (2003) affirms the importance of understanding nonverbal elements and nonverbal paralinguistic elements in communication to the listener, even though these components are not part of the acoustic signal. Illustrative gestures, when they correspond with the L2 word(s), can facilitate word recognition and provide important clues for interpreting other parts of the text. However, when these gestures are culturally bound or amplify the meaning of the corresponding word(s), listeners at all proficiency levels need to attend to these gestures ("listen with their eyes") to understand their meaning within the text and/or cultural context.

Related to the sociolinguistic dimension of listening is the question of the variety of language used as linguistic model in listening instruction. Fox (2002) explores questions such as which variety to use in the beginning stages of language learning and when to introduce other varieties. Building on the concept of "pedagogical norm" (Valdman, 2000), Fox formulates the following comprehension norms: (1) students will listen to language heard by native speakers in authentic contexts; (2) students will speak with one accent but learn to understand many others (based on native speakers' idealized view of their own linguistic behavior); (3) students will understand careful speech of educated native speakers (based on native speakers' expectations on what is appropriate for language learners); and (4) processing and learning factors need to be considered in introducing different accents (a psycholinguistic rather than sociolinguistic norm) (Fox, 2002, p. 215). These

norms, she argues, provide a model for eventual introduction of a number of varieties of language, and the social and situational variants within each variety.

Directions for Future Research

This review has attempted to reflect the range of research during the past five years relating to listening instruction. Listening is the least explicit of all the language skills. Oral texts exist in real time and need to be processed quickly; when the text is over, only a mental representation remains. Since these processes are covert, listening is a difficult skill to research. This may explain the limited number of studies, particularly in listening instruction. Regardless, instruction that facilitates cognitive processing in listening comprehension needs more rigorous research, given the overall importance of listening for language learning.

First of all, if we wish to teach students how to listen (i.e., learn to listen), we need to investigate pedagogic approaches that do not short-circuit the strategic dimension of L2 listening. When students are provided with visual or written supports that are not authentic to the listening context, they are learning to listen. While this is a valid objective for language acquisition, students will not learn how to listen and rely on all the contextual clues available for comprehension in authentic, real-time listening contexts if this is the only focus of L2 listening.

Second, we need to continue to investigate the relative contribution of top-down and bottom-up processing at different proficiency levels for different tasks. A clearer understanding of the interaction among processing, proficiency level, and task will help listening teachers know what to emphasize at different language levels for different tasks. Furthermore, integrated models of listening instruction, such as the one proposed in this chapter, must be tested for their relative effectiveness in teaching students how to listen and how to develop word recognition skills.

Third, future research should investigate the conditions that are needed for technology-enhanced language learning to exert a beneficial influence on the learners' listening comprehension strategy development. In her comprehensive review of the literature, Joiner (1997) recommended more research on the effective use of technology in listening instruction. The benefits for teaching word recognition skills have been demonstrated. However, use of multimedia environments will only improve listening performance if the methodological innovations are grounded in theories of L2 listening and L2 acquisition (Rogers, 2002; Tschirner, 2001).

Fourth, bidirectional listening is the predominant type of listening, yet it is rarely researched. We need further research on teaching listeners in classroom settings how to negotiate meaning, clarify misunderstandings, and contribute to the conversation with a more proficient speaker.

Fifth, research into the components of L2 listening (i.e., the factors that explain variance in L2 listening) will help teachers better understand what needs to be emphasized in listening instruction.

To conclude, Rost maintains that two overlapping processes, “learning to listen in the L2 and learning the L2 through listening,” are involved in L2 listening development (2002, p. 91). This review of recent research in listening instruction has attempted to clarify what learning to listen means and how teachers can help students “learn to listen,” so that their students, in turn, can better “listen to learn.”

Acknowledgments

I would like to thank Catherine Mareschal for her help in locating source materials for this chapter and drafting summaries of the studies related to technology-enhanced listening instruction.

Notes

1. An empirical, longitudinal investigation of the relative effectiveness of a process approach compared to a comprehension-only approach with beginner-level learners of French, English, and Italian will be conducted at the University of Ottawa during the 2004–2005 academic year.
2. An empirical study of relative effectiveness of this mode of 123LISTEN is presently being conducted at the University of Amsterdam.

ANNOTATED BIBLIOGRAPHY

Buck, G. (2001). *Assessing listening*. Cambridge: Cambridge University Press.

The emphasis of this volume is on the assessment of listening comprehension, but it also includes useful information for classroom instruction and research. The overview of listening theory in the first two chapters is both comprehensive and accessible. In addition, the chapters on creating listening tasks (Chapter 5) and providing suitable texts (Chapter 6) are of particular interest to the listening teacher.

Field, J. (2001). Finding one’s way in the fog: Listening strategies and second-language learners. *Modern English Teacher*, 9(1), 29–34.

Field presents a task-based approach to listening instruction that leads students through the stages of real-life listening. He argues that this kind of listening practice helps students realize that partial understanding and formation of hypotheses are part of the process of L2 listening. This article demonstrates how this approach can help L2 listeners access authentic texts and experience success in real-life listening.

Flowerdew, J., & Miller, L. (2004). *Second language listening: Theory and practice*. New York: Cambridge University Press.

This volume, designed to be used with both preservice and in-service teachers, combines up-to-date listening theory with case studies of actual pedagogical practice. The authors describe current models of listening theory, exemplifying each with a textbook task. They address the role of technology in teaching listening, questioning techniques, and developing effective listening tests.

Goh, C. (2002b). *Teaching listening in the language classroom*. Singapore: SEAMEO Regional Language Centre.

This is a practitioner's handbook. After a brief introduction to some of the theoretical principles underlying the process of listening, Goh describes how to (1) design listening comprehension tasks, (2) develop lessons from listening tasks, (3) raise students' metacognitive awareness of the listening process, and (4) select and exploit authentic texts in the classroom. The value of this little volume lies in the concrete suggestions for teaching L2 listening skills and strategies, grounded in psycholinguistic theory about listening processes. The chapter on increasing metacognitive awareness underscores the importance of teaching students how to listen.

Rost, M. (2002). *Teaching and researching listening*. London: Longman.

This comprehensive volume presents a conceptual background of listening, some principles of listening instruction, and some potential areas for research in listening. Section I offers readers an overview of some of the processes involved in listening, primarily L1 listening. Section II outlines some principles of instructional design, as well as methods of teaching and assessing listening. Section III introduces research methods and action research frameworks, offering some concrete topics for teachers to try with their classes. Section IV provides information on a range of resources to help the teacher-researcher. This volume outlines many important issues relating to listening in L1 and L2. Practicing teachers may find the section on teaching not concrete enough to inform classroom practice; however, the teacher-researcher, interested in issues and a range of research methodologies, will find the section on research very informative.

Vandergrift, L. (2003a). From prediction through reflection: Guiding students through the process of L2 listening. *Canadian Modern Language Review*, 59(3), 425–440.

The effects of a task-based, process approach to listening instruction are examined in this article. Students responded positively, calling attention to the value of predictions, the usefulness of discussion with a partner, and the motivational effect of learning to understand authentic texts. This study

illustrates the potential for developing metacognitive processes and metacognitive knowledge for successful L2 listening strategies in early stages of language learning.

White, G. (1998). *Listening*. Oxford: Oxford University Press.

This is primarily a resource book of listening activities and practical guidance for the listening teacher. After analyzing the shortcomings of traditional approaches to teaching listening, White presents her skills-based approach. The chapters of particular interest include (1) activities to help students understand what it means to become a good listener, (2) activities on real-life listening, and (3) making listening materials. Although light on theory, this volume has concrete ideas for teaching listening at different proficiency levels.

OTHER REFERENCES

- Arnold, J. (2000). Seeing through listening comprehension exam anxiety. *TESOL Quarterly*, 34, 777–786.
- Berne, J. E. (1998). Examining the relationship between L2 listening research, pedagogical theory and practice. *Foreign Language Annals*, 31, 169–190.
- Buck, G. (1995). How to become a good listening teacher. In D. Mendelsohn & J. Rubin (Eds.), *A guide for the teaching of second language listening* (pp. 113–128). San Diego, CA: Dominic Press.
- Cabrera, M. & Martinez, P. (2001). The effects of repetition, comprehension checks, and gestures, on primary school children in an EFL situation. *ELT Journal*, 55(3), 281–288.
- Carrier, K. (1999). The social environment of second language listening: Does status play a role in comprehension? *Modern Language Journal*, 83, 65–79.
- Chamot, A. U. (1995). Learning strategies and listening comprehension. In D. Mendelsohn & J. Rubin (Eds.), *A guide for the teaching of second language listening* (pp. 13–30). San Diego: Dominic Press.
- Chamot, A. U., Barnhardt, S., El-Dinary, P. B., & Robbins, J. (1999). *The learning strategies handbook*. White Plains, NJ: Longman.
- Dupuy, B. C. (1999). Narrow listening: An alternative way to develop and enhance listening comprehension in students of French as a foreign language. *System*, 27, 351–361.
- Eastman, J. K. (1991). Learning to listen and comprehend: The beginning stages. *System*, 19, 179–188.
- Feak, C. B., & Salehzadeh, J. (2001). Challenges and issues in developing an EAP video listening placement assessment: A view from one program. *English for Specific Purposes*, 20, 477–493.
- Field, J. (1998). Skills and strategies: Towards a new methodology for listening. *ELT Journal*, 52, 110–118.

- Field, J. (2000). "Not waving but drowning": A reply to Tony Ridgway. *ELT Journal*, 54, 186–195.
- Field, J. (2002). The changing face of listening. In J. Richards & W. Renandya (Eds.), *Methodology in language teaching: An anthology of current practice* (pp. 242–247). Cambridge: Cambridge University Press.
- Field, J. (2003). Promoting perception: Lexical segmentation in second language listening. *ELT Journal*, 57, 325–334.
- Flavell, J. (1979). Metacognition and cognitive monitoring: A new area of cognitive development enquiry. *American Psychologist*, 34, 906–911.
- Flowerdew, J. (1994). *Academic listening: Research perspectives*. Cambridge: Cambridge University Press.
- Fox, C. (2002). Incorporating variation in the French classroom: A pedagogical norm for listening comprehension. In S. M. Gass, K. Bardovi-Harlig, S. M. Magnan, and J. Walz (Eds.) *Pedagogical norms for second and foreign language learning and teaching: Studies in honour of Albert Valdman* (pp. 201–219). Amsterdam: Benjamins.
- Gardner, R. (1998). Between speaking and listening: The vocalisation of understandings. *Applied Linguistics*, 19, 204–224.
- Ginther, A. (2002). Context and content visuals and performance on listening comprehension stimuli. *Language Testing*, 19, 133–167.
- Goh, C. (2000). A cognitive perspective on language learners' listening comprehension problems. *System*, 28, 55–75.
- Goh, C. (2002a). Exploring listening comprehension tactics and their interaction patterns. *System*, 30, 185–206.
- Harley, B. (2000). Listening strategies in ESL: Do age and L1 make a difference? *TESOL Quarterly*, 34, 769–776.
- Harris, T. (2003). Listening with your eyes: The importance of speech-related gestures in the language classroom. *Foreign Language Annals*, 36, 180–187.
- Hasan, A. (2000). Learners' perceptions of listening comprehension problems. *Language, Culture and Curriculum*, 13, 137–153.
- Herron, C., Cole, S., York, H., & Linden, P. (1998). A comparison study of student retention of foreign language video: Declarative versus interrogative advance organizers. *Modern Language Journal*, 82, 237–247.
- Holden, W. (2002). Listen and learn. *English Teaching Professional*, 23, 18–20.
- Hoven, D. (1999). A model for listening and viewing comprehension in multimedia environments. *Language Learning and Technology*, 3, 88–103.
- Hulstijn, J. H. (2001). Intentional and incidental second language vocabulary learning: A reappraisal of elaboration, rehearsal and automaticity. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 258–286). Cambridge: Cambridge University Press.
- Hulstijn, J. H. (2003, in press). Connectionist models of language processing and the training of listening skills with the aid of multimedia software. *Computer Assisted Language Learning*.
- Imhof, M. (2001). How to listen more effectively: Self-monitoring strategies in L1. *International Journal of Listening*, 14, 2–19.

- Joiner, E. (1997). Teaching listening: How technology can help. In M. Bush, & R. Terry (Eds.), *Technology-enhanced language learning* (pp. 77–121). Lincolnwood, IL: NTC Publishing Group.
- Joiner, E. (2000). Listening training for language learners: The Tomatis approach to second language acquisition. *Dimension*, 2000, 13–27.
- Jones, L. & Plass, J. (2002). Supporting listening comprehension and vocabulary acquisition in French with multimedia annotations. *The Modern Language Journal*, 86, 546–561.
- Kaunzner, U. (2001). *Das Ohr als Schlüssel zur Fremdsprachenkompetenz* [The ear as the key to foreign language competence]. Tübingen: Stauffenburg/Groos.
- Kim, J. (2002). Affective reactions to foreign language listening retrospective interviews with Korean EFL students. *Language Research*, 38, 117–151.
- Krashen, S. (1987). *Principles and practice in second language acquisition*. Englewood Cliffs, NJ: Prentice Hall.
- Krashen, S. (1996). The case for Narrow Listening. *System*, 24, 97–100.
- Lam, W., & Wong, J. (2000). The effects of strategy training on developing discussion skills in an ESL classroom. *ELT Journal*, 54, 245–255.
- Littlemore, J. (2001). The use of metaphor in university lectures and the problems that it causes for overseas students. *Teaching in Higher Education*, 6, 333–349.
- Long, D. R. (1990). What you don't know can't help you. *Studies in Second Language Acquisition*, 12, 65–80.
- Lynch, T. (1998). Theoretical perspectives on listening. *Annual Review of Applied Linguistics*, 18, 3–19.
- Lynch, T. (2002). Listening: Questions of level. In R. B. Kaplan, (Ed.), *Oxford handbook of applied linguistics* (pp. 39–48). Oxford: Oxford University Press.
- Mareschal, C. (2002). *A cognitive perspective on the listening comprehension strategies of second language learners in the intermediate grades*. Unpublished MA thesis, University of Ottawa.
- Markham, P., Peter, L., & McCarthy, T. (2001). The effects of native language vs. target language captions on foreign language students' DVD video comprehension. *Foreign Language Annals*, 34, 439–445.
- Mecarty, F. (2000). Lexical and grammatical knowledge in reading and listening comprehension by foreign language learners of Spanish. *Applied Language Learning*, 11, 323–348.
- Mendelsohn, D. (1998). Teaching listening. *Annual Review of Applied Linguistics*, 18, 81–101.
- Mendelsohn, D. (2001). Listening comprehension: We've come a long way, but . . . *Contact*, 27, 33–40.
- Morley, J. (1999). Current perspectives on improving aural comprehension. Retrieved from <http://www.eslmag.com/MorleyAuralStory.htm>.
- Murphy, J. M. (1985). *An investigation into the listening strategies of ESL college students*. (ERIC Document Reproduction Service No. ED278275).
- O'Malley, M., & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. Cambridge: Cambridge University Press.

- Osada, N. (2001). What strategy do less proficient learners employ in listening comprehension?: A reappraisal of bottom-up and top-down processing. *Journal of the Pan-Pacific Association of Applied Linguistics*, 5, 73–90.
- Oxford, R. (1993). Research update on teaching L2 listening. *System*, 21(2), 205–211.
- Peters, M. (1999). *Les stratégies de compréhension auditive chez des élèves du Bain Linguistique en français langue seconde* [The listening comprehension strategies of students in a French immersion program]. Unpublished Ph.D. dissertation. University of Ottawa.
- Pica, T. (1994). Research on negotiation: What does it reveal about second language learning conditions, processes and outcomes. *Language Learning*, 44, 493–527.
- Poelmans, P. (2003). *Developing second-language listening comprehension: Effects of training lower-order skills versus higher-order strategy*. Unpublished Ph.D. dissertation, University of Amsterdam.
- Ridgway, T. (2000a). Listening strategies—I beg your pardon? *ELT Journal*, 54, 179–185.
- Ridgway, T. (2000b). Hang on a minute! A reply to John Field. *ELT Journal*, 54, 196–197.
- Rogers, C. V. (2002). Tradition and technology in language teaching. *Dimension*, 2002, 17–32.
- Rubin, J. (1994). A review of second language listening comprehension research. *Modern Language Journal*, 78, 199–221.
- Segalowitz, N., & Segalowitz, S. (1993). Skilled performance practice and the differentiation of speed-up of automatization effects: Evidence from second language word recognition. *Applied Psycholinguistics*, 19, 53–67.
- Sheerin, J. (1987). Listening comprehension: Teaching or testing? *ELT Journal*, 4, 126–131.
- Stanovich, K. E. (1980). Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly*, 16, 32–71.
- Swaffar, J. K., & Bacon, S. M. (1993). Reading and listening comprehension: Perspectives on research and implications for practice. In A. H. Omaggio (Ed.), *Research in language learning: Principles, processes, and prospects* (pp.124–155). Lincolnwood, IL: National Textbook.
- Tschirner, E. (2001). Language acquisition in the classroom: The role of digital video. *Computer Assisted Language Learning*, 14, 305–319.
- Tsui, A., & Fullilove, J. (1998). Bottom-up or top-down processing as a discriminator of L2 listening performance. *Applied Linguistics*, 19, 432–451.
- Tyler, M. (2001). Resource consumption as a function of topic knowledge in nonnative and native comprehension. *Language Learning*, 51, 257–280.
- Valdman, A. (2000). Comment gérer la variation dans l'enseignement du français langue étrangère aux États-Unis [How to manage language variation in the teaching of French as a foreign language in the United States]. *French Review*, 73, 648–666.

- Vandergrift, L. (2002). "It was nice to see that our predictions were right:" Developing metacognition in L2 listening comprehension. *Canadian Modern Language Review*, 58, 555–575.
- Vandergrift, L. (2003b). Orchestrating strategy use: Toward a model of the skilled second language listener. *Language Learning*, 53, 463–496.
- Wenden, A. (1998). Metacognitive knowledge and language learning. *Applied Linguistics*, 19, 515–537.
- Zhao, Y. (1997). The effects of listeners' control of speech rate on second language comprehension. *Applied Linguistics*, 18, 49–68.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.