2 Listening Competence

Scenario (Excerpts From Student Listening Diaries)

Usually when I listen to the radio or watch TV I can hear clearly most of their words and paragraphs, but I can't connect the words quickly. So sometimes I couldn't catch what they said. On the other hand, when I talk about something to someone, mostly I can understand them. I think it is because that when I talk with somebody I make myself into the language surrounding but when I listen to the radio or watch TV, I don't. (Abdul)

I think it is important to relate the things we heard to the things we experienced. I often find that it will be easier for me to understand the speech in English if I've known something about the topic in Chinese. The second method to grasp the main idea is that I notice the junction of several parts. We often get confused when we don't know the structure of the whole speaking. (Zhifei)

I think culture is the key element in language. Sometimes I can catch the whole sentence. But I can't understand the true meaning of the words. Because I haven't the same culture as the speaker, I couldn't give the accurate response to it. When I couldn't understand the speaker's words, I give a smiling to response it. Maybe I look a little wooden, but I have no choice. If I always ask the speaker to say again, he or she'll feel too boring with me. (Wang Li)

I had dinner with a Japanese couple. We talked about wide-ranging general topics in a relaxed atmosphere. If I encounter some unknown words, I would ask my friend politely. Then he would explain it to me, or give an example. I think to improve my listening skill, I'd better talk with native speaker as much as possible. (Carmen)

Last Saturday, after having enjoyed an English discussion on TV for more than 20 minutes, I suddenly realized that I had been watching with almost complete understanding of every sentence and that I had not been forcing myself to concentrate as before. It was as if I was watching a Spanish program. It was incredibly wonderful. Later, as I reflected upon the experience I assumed that it was because I had been caught by the topic that was being discussed. So next time, I will try to be an active listener instead of a passive one. (Xavier)

> When I listened to the BBC I noticed that it was easy to understand the familiar news. If an event happens for a long period and has being reported continuously and I know the process and background, it will be easy to understand. And if I've read the news in the newspapers in Chinese or English, it is also easy to understand the same news in radio. (Ling)

Pre-reading Reflection

1. Identify the listening problems that these six L2 learners reported. Do you see any similarities in the demands they faced?
2. What do these learners recount about listening in different contexts? How do you think context affects listening difficulty?
3. What seem to be the common listening difficulties reported by these learners? How might they be able to overcome these difficulties?
4. To what degree do the listening experiences of these L2 learners resonate with your own L2 listening experiences or those of your students? Explain.

Introduction

The last chapter concluded that a more innovative approach to teaching listening is needed to help L2 listeners improve their listening abilities and manage their own learning development. A good place for teachers to begin is a better understanding of the listening process. Some questions that we can ask are: How does L2 listening comprehension work? What are the cognitive processes that operate during listening? What are the most crucial knowledge sources on which listeners draw to process and interpret what they hear? What are the unique cognitive and affective demands of interactive listening, where listeners can intervene and alternate in the roles of both speaker and listener?

This chapter will discuss what we know about the listening skill so as to understand better what listeners do to comprehend what they hear. It will examine what constitutes listening competence by focusing on four aspects of listening:

- Cognitive processes in listening
- Knowledge sources used in listening
- Skills used for listening
- Unique features of interactive listening.

Cognitive Processes in Listening

This section will discuss the cognitive processes that come into play during the process of L2 listening comprehension: (1) top-down and

bottom-up processing; (2) controlled and automatic processing; (3) perception, parsing, and utilization; and (4) metacognition. These processes describe what listeners do during the act of listening, how they can do this efficiently, and how they regulate these processes. The interrelationships between the various cognitive processes in rapid, automatic listening comprehension are encapsulated in Figure 2.1.

Top-Down and Bottom-Up Processing

Fundamental to an understanding of comprehension processes are the distinction between bottom-up and top-down processing, the types of knowledge each process applies to the emerging interpretation of a message, and the interaction between these processes.

Bottom-up processing involves segmentation of the sound stream into meaningful units to interpret the message. It is a rather mechanical process in which listeners segment the sound stream and construct meaning by accretion, based on their knowledge of the segmentals (individual sounds or phonemes) and suprasegmentals (patterns of language intonation, such as stress, tone, and rhythm) of the target language. Listeners gradually build meaning from phonemes to words to increasingly larger units of meaning (full sentences and larger chunks of discourse).

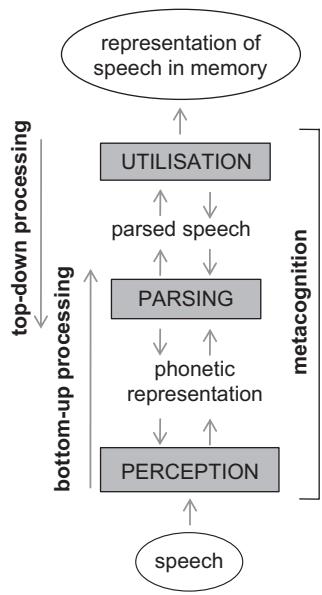

Figure 2.1 Cognitive Processes in L2 Listening and Their Interrelationships

This component of listening, seen as a decoding process, assumes that the comprehension process begins with information in the sound stream, with minimal contribution of information from the listener's prior knowledge of the world. Listeners draw primarily on linguistic knowledge that includes phonological knowledge (phonemes, stress, intonation, and other sound adjustments made by speakers to facilitate speech production), lexical knowledge, and syntactic knowledge (grammar) of the target language. Used alone, this approach to comprehension is not adequate, because listeners cannot keep up with the sound stream.

Top-down processing, on the other hand, primarily involves the application of context and prior knowledge to interpret the message. Listeners who approach a comprehension task in a top-down manner use their knowledge of the context of the listening event or the topic of a listening text to activate a conceptual framework for understanding the message. Listeners can apply different types of knowledge to the task, including prior (world or experiential) knowledge, pragmatic knowledge, cultural knowledge about the target language, and discourse knowledge (types of texts and how information is organized in these texts). These knowledge sources are stored in the listener's long-term memory in the form of schemata (complex mental structures that group all knowledge concerning a concept). This top-down component of listening, seen as an interpretation process, assumes that comprehension begins with listener expectations about information in the text and subsequent application of appropriate knowledge sources to comprehend the sound stream. Used alone, this approach to comprehension is not adequate either, because listeners may not have all the prior knowledge required or share enough of the speaker's perspective on the subject matter to interpret accurately.

In reality, top-down and bottom-up processes rarely operate independently. For example, Nix's (2016) study found that bottom-up listening strategies alone does not directly affect learners' listening comprehension but need to be mediated by top-down strategies. Similarly, Yeldham and Gruba (2014) suggested that bottom-up listening skills should be taught together with knowledge-based listening strategies to develop learners' interactive listening abilities and that learners should "develop an interaction between bottom-up and top-down processes" to improve their listening abilities. Research in first language (L1) speech perception also provides evidence for the interactive nature of these processes, particularly regarding how information from top-down processing drives and constrains interpretation (Davis & Johnsrude, 2007). Linguistic information gleaned from the decoding process and prior knowledge applied during the interpretation are processed in parallel fashion as listeners create a mental representation of what they heard (see Chapter 3 for a more complete description of this parallel processing).

The degree to which listeners may use one process more than another will depend on their purpose for listening. A listener who needs to verify a specific detail, such as the price of an item or driving directions, may engage in more bottom-up processing than a listener who is interested in obtaining an overview of what happened at a particular event. Research on these cognitive processes suggests that L2 listeners need to learn how to use both processes to their advantage, depending on the purpose for listening, learner characteristics (e.g., language proficiency, working memory capacity, age), and the context of the listening event.

Controlled and Automatic Processing

When listening is fluent, as in L1 listening, cognitive processing occurs extremely rapidly, moving back and forth between top-down and bottom-up processes as required to achieve comprehension. Successful L2 listening depends, obviously, on the degree to which listeners can efficiently coordinate these processes. L1 listeners do this automatically (particularly bottom-up processing), with little conscious attention to individual words. L2 listeners, on the other hand, usually have limited language knowledge; therefore, they are not able to automatically process everything that they hear. Depending on their level of L2 proficiency or their familiarity with the topic of the text, listeners may need to focus consciously on some aspects of the input or learn to selectively attend to basic elements of meaning, such as salient content words. Whatever listeners cannot process automatically is subject to controlled processing, time permitting.

Controlled (as opposed to automatic) processing involves conscious attention to and processing of elements in the speech stream. A cognitive skill, such as listening, becomes automatic with practice, like other skilled behaviors (Johnson, 1996). When we first begin riding a bicycle, for example, we need to pay deliberate attention to coordinate getting on the bike, maintaining balance, steering with the handle bars, and gaining momentum by moving the pedals with our feet. Eventually this becomes automatic, and we no longer need to pay conscious attention to the coordination of these different elements of the skill. When processing spoken language requires conscious attention to different elements of the sound stream, due to the limitations of working memory and speed of the incoming input, comprehension will suffer. Controlled processing is not efficient because it cannot keep up with the incoming input; consequently, comprehension either breaks down or listeners resort to compensatory strategies, contextual factors, and other relevant information available to them to guess at what they did not understand.

As suggested in our discussion so far, memory plays a crucial role in comprehension processing. Traditionally, the concept of memory has

been divided into two components: long-term memory (LTM) and working memory (WM, formerly called short-term memory). LTM, as noted in the discussion of top-down processing, is the bank of information that listeners access to interpret what they are trying to understand. This bank of information is comprised of accumulated prior knowledge and life experiences of the listener, organized as schemata. Appropriate schemata are activated when listening to a related topic. While LTM shapes the interpretation of what listeners hear, WM influences the efficiency of the cognitive processing and allows the listener to think about an appropriate response, as in the case of interactive listening.

In contrast to LTM, WM has limited capacity; listeners can only hold a limited number of units before this information fades and new information has to be processed (Call, 1985). Listeners hold the retained units of information in a phonological loop for a few seconds until the sounds can be segmented into words or larger chunks of meaningful speech through links with LTM. How much information a listener can hold in WM will depend on their level of language proficiency. As their level of language proficiency increases, listeners are able to retain and process increasingly larger chunks of meaningful speech. Recent research by Vandergrift and Baker (2018) showed some relationship between WM and listening comprehension, but it was not a predictor of listening performance.

Cognitive activity in WM is overseen and regulated by an executive control responsible for high-level activities such as planning, coordinating flow of information, and retrieving knowledge from LTM (Baddeley, 2003a, 2003b). The more familiar the units are to listeners, the more quickly LTM can supply previously acquired linguistic and prior knowledge for listeners to process. An example of this phenomenon is the difference we experience in processing a new telephone number, in contrast to processing a sentence with the same number of individual units. We process the sentence more efficiently because the links between the units are meaningful and easier to retain, due to the rapid links with semantic and syntactic components of our linguistic knowledge store in LTM. The digits of the telephone number, on the other hand, need to be processed individually since the digits, although meaningful as individual numerals, are new information to LTM as a single, combined unit. Once we have more experience with this telephone number, it will be stored in LTM and processed in WM as one meaningful unit; for example, the phone number of a newly discovered restaurant. Processing the telephone number as a single unit leaves more attentional resources (room in WM) for additional information, thereby increasing the efficiency of cognitive processing.

The link between WM and LTM plays a critical role in successful listening comprehension. The more listeners process information automatically, the more they can allocate the limited attentional resources of their

WM to processing new information. Increased WM space allows listeners to draw knowledge from LTM to form better interpretations as well as listening critically when needed.

Perception, Parsing, and Utilization

Another perspective on cognitive processes that can provide further insight into how listeners construct meaning is Anderson's (1995) differentiation of listening comprehension into three interconnected phases: perceptual processing (perception), parsing, and utilization. Although this model may suggest a sequence of phases, the three phases have a two-way relationship with one another that, in fact, reflects the integrated nature of how bottom-up and top-down occurs.

During the perception phase, listeners use bottom-up processing to recognize sound categories (phonemes) of the language, pauses, and acoustic emphases and hold these in memory. Listeners decode incoming speech by (1) attending to the text, to the exclusion of other sounds in the environment; (2) noting similarities, pauses, and acoustic emphases relevant to a particular language; and then (3) grouping these according to the categories of the identified language. This is the initial stage in the word segmentation process. A phonetic representation of what is retained is passed on for parsing.

Development of word segmentation skills is a major challenge for L2 listeners. Unlike readers, listeners do not have the luxury of spaces to help them determine word boundaries. Listeners must parse the sound stream into meaningful units when word boundaries are difficult to determine, due to stress patterns, elisions, and reduced forms. Even if they can recognize individual words when spoken in isolation or presented in written form, listeners may not always be able to recognize those same words in connected speech. Furthermore, word segmentation skills are language specific and acquired early in life. They are so solidly ingrained in the listener's processing system that these L1 segmentation strategies are involuntarily applied when listening to a non-native language. Difficulties reported by L2 listeners during the perception phase include (1) not recognizing words, (2) neglecting parts of speech that follow, (3) not chunking the stream of speech, (4) missing the beginning of a sentence or message, and (5) concentration problems (Goh, 2000).

During the parsing phase, listeners parse the phonetic representation of what was retained in memory and begin to activate potential word candidates. Listeners use the parsed speech to retrieve potential word candidates from LTM, based on cues such as word onset, perceptual salience, or phonotactic conventions (rules that apply to the sequencing of phonemes). Using any one or more of these cues, listeners create propositions (abstract representations of an idea) in order to hold a meaning-based representation of these words in WM as new input is processed.

Meaning is often the principal clue in segmentation. As language proficiency develops, listeners can more quickly activate successful word candidates related to the context or topic, and hold meaning in increasingly larger chunks of propositional content. With regard to the identification of function and content words, L2 listeners appear to be more successful in identifying content words (Field, 2008b). This is not surprising, since content words carry meaning and, because of the limitations of WM, L2 listeners need to be selective. Difficulties reported by listeners during this phase include (1) quickly forgetting what is heard, (2) being unable to form a mental representation from words heard, and (3) not understanding subsequent parts because of what was missed earlier (Goh, 2000).

Finally, in the utilization phase, listeners relate the resulting meaningful units to information sources in LTM in order to interpret the intended or implied meanings. This phase primarily involves top-down processing of the parsed speech. An important characteristic of this phase is that listeners use information from outside the linguistic input to interpret what they have retained (the parsed speech). Using pragmatic and prior knowledge (stored as schemata in LTM) and any relevant information in the listening context, listeners elaborate on the newly parsed information and monitor this interpretation for congruency with their previous knowledge and the evolving representation of the text in memory as often as necessary within the time available.

During the utilization phase, listeners generate a conceptual framework against which to match their emerging interpretation of the text or conversation and to go beyond the literal meaning of the input, when warranted. Fluent listeners then automatically reconcile linguistic input with their accumulated store of prior knowledge in order to determine meaning. When the automatic processes break down, due to a comprehension problem, listening becomes a problem-solving activity. Listeners, for example, may need to reconsider inferences made. Difficulties reported by listeners during this phase include (1) understanding the words but not the message and (2) feeling confused because of seeming incongruencies in the message (Goh, 2000).

These processes neither work independently nor in a linear fashion, as can be seen in Figure 2.1. Arrows moving back and forth between the component processes suggest that cognitive processing at each level can influence and be influenced by the results of cognitive processing that precedes or follows. In fact, this occurs so rapidly in fully automatic, fluent listening that these processes take place in parallel fashion; that is, they occur simultaneously as new speech is processed.

Metacognition

How do listeners manage to control comprehension processes that occur at different levels with lightning speed? Proficient listeners are able to

control or regulate these processes through their use of metacognitive knowledge. Metacognition refers to listener awareness of the cognitive processes involved in comprehension and the capacity to oversee, regulate, and direct these processes (Goh, 2008). In addition to the ability to reflect on these processes, it includes knowledge about the task-, person-, and strategy-related factors that come into play during any cognitive activity (Flavell, 1979). The control dimension of metacognition involves the use of cognitive processes such as planning, monitoring, problem-solving, and evaluating to effectively regulate listening comprehension.

Application of metacognitive knowledge is a mental characteristic shared by successful learners; in fact, Vandergrift, Goh, Mareschal, and Tafaghodtari (2006) found that approximately 13% of variance in listening achievement could be explained by metacognition, while 15% and 22% were reported by Zeng (2012) and Goh and Hu (2014), respectively. In sum, listeners who can apply metacognitive knowledge about listening during the cognitive processes of comprehension are better able to regulate these processes and draw on the relevant knowledge sources in an efficient manner to build text comprehension. The nature and role of metacognitive knowledge will be discussed in detail in Chapter 5. We now turn to the skills that enable listeners to listen purposefully to achieve their communication goal.

Listening Skills

Competent listeners vary the way they listen in different contexts and for different purposes. They use different enabling skills or sub-skills to help them receive and interpret the spoken input and use it for a purpose that prompted the listening in the first place. These enabling skills, also sometimes refer to as sub-skills, have appeared in many discussions about L2 listening in the form of taxonomies and lists of varying lengths and levels of detail. Buck (2001) makes a distinction between skills needed for listening for explicit information and those for inferring implicit information. Field (2008a) distinguishes between skills for decoding small units of sounds and words, and bottom-up skills and skills for making interpretations based on these decoded sounds. Similarly, Rost (1990, 2016) presents listening skills as two kinds of inferencing skills: low-level inferencing (decoding) and high-level inferencing (interpreting and model constructing). In this book, we propose conceptualizing skills for listening as core skills that listeners require in order to engage with listening input in ways that are relevant to their communicative purposes. Depending on the length of the input and the purpose for listening, an individual may use one or more of these six core skills. These are listening for details, listening to infer, listening for global understanding, listening for main ideas, listening to predict, and listening selectively (see

Figure 9.1 for further details). Specifications of skills are helpful to both teachers and learners because they enable learners to model their listening behavior after what competent listeners do successfully.

The psychological reality of these enabling skills has nevertheless been questioned and there remains a paucity of research that investigates the divisibility of the language skill construct. A study by Goh and Aryadoust (2015) offered some preliminary insights into the construct of L2 listening. They interrogated whether listening abilities listed for an international standardized test of academic listening could be empirically separated based on test-takers' performance. The results showed that the sub-skills in the test were empirically divisible, and this has lent support to the sub-skill approach to teaching and assessment.

Knowledge Sources in Listening

As listeners engage in the cognitive processes described above, they draw on different knowledge sources: linguistic knowledge, pragmatic knowledge, prior knowledge, and discourse knowledge. Information retrieved from these 'data banks' will influence the quality and the direction of the cognitive processing. In this section, we will focus on the role of each of these knowledge sources in the listening process. These relationships are encapsulated in Figure 2.2.

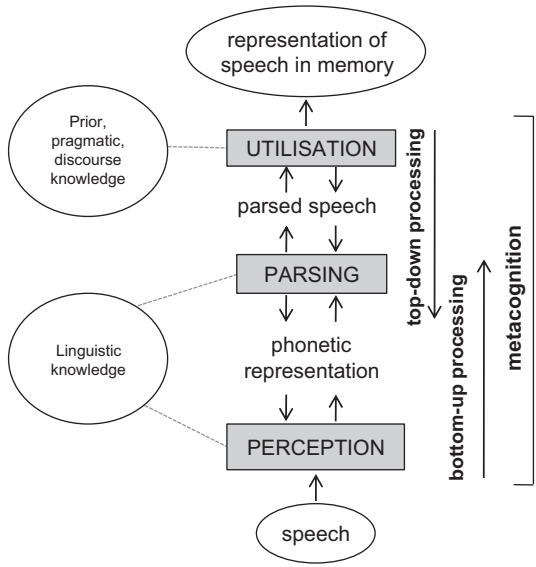

Figure 2.2 Cognitive Processes and Knowledge Sources in Listening Comprehension

Linguistic Knowledge

Linguistic knowledge is fundamental to listening comprehension; vocabulary knowledge is a strong predictor of L2 listening success. In addition to vocabulary, or semantic knowledge, linguistic knowledge includes phonological knowledge (phonemes, stress, intonation, and speech modifications such as assimilation and elision) and syntactic knowledge (grammar) of the target language. Phonological and syntactic knowledge help listeners parse the sound stream for meaningful units of language and assign semantic roles to words. Application of all three elements of linguistic knowledge helps listeners assign meaning to word-level units and to the relationship between words at the discourse level.

Linguistic knowledge also means knowing how to use one's knowledge of a language in real time; that is, as rapid speech unfolds. Recognizing a word in its written form or hearing it in isolation does not necessarily mean that we will recognize that same word in the context of rapid speech. This is the real challenge of listening comprehension: L2 listeners need to be able to rapidly parse words out from a stream of sound. Some words are easily parsed and can be quickly mapped onto LTM, such as cognates for linguistically similar languages; sound effects and paralinguistics that are not culturally bound; and, increasingly, English words related to technology or the media (e.g., iPod) that are becoming universally understood. Other words will require deeper processing.

Pragmatic Knowledge

Listening comprehension involves far more than just understanding words. Listeners use pragmatic knowledge when they apply information that goes beyond the literal meaning of a word, message, or text to interpret the speaker's intended meaning. Rost (2014) distinguishes two levels of pragmatic knowledge in listening comprehension: the interpersonal or interactional level, which is meant to maintain social relationship between interlocutor and listener, and the transactional, task-oriented level, which is meant to accomplish mutual task in the encounter. Listeners usually apply pragmatic knowledge during the utilization phase of the comprehension process. It is informed, for example, by interpretation of tone (e.g., sarcasm and questions). L2 pragmatic knowledge helps the listener to infer the speaker's intention, particularly if there is any ambiguity in the literal meaning of the utterance. Pragmatic knowledge is often culturally bound and, therefore, closely related to socio-cultural and socio-linguistic knowledge (e.g., formal or informal registers, idioms and slang), which listeners use to further interpret an utterance (Buck, 2001).

Recent work by Dipper, Black, and Bryan (2005) on 'thinking for listening' may help to explain how listeners use pragmatic knowledge to enrich

the linguistic input. During the utilization phase, they found that listeners generate familiar 'conceptual events' or scenarios from LTM and match the emerging meaning of the text or utterance against them. In adapting this scenario, according to Dipper et al., listeners go beyond semantic meaning to consider the contextualized meaning intended by the speaker. A request such as 'Do you have the salt?' at the dinner table likely suggests that the speaker would like someone to pass the salt, rather than reply affirmatively. This is the process underlying the cognitive strategy of elaboration.

Prior Knowledge

Listening comprehension is comparable to a problem-solving activity: listeners match what they hear (the linguistic input) with what they know about how things work in the world (their prior knowledge). The role of prior knowledge (also known as world, encyclopedic, or experiential knowledge) in L2 listening comprehension is well established (e.g., Macaro, Vanderplank, & Graham, 2005; Nix, 2016). This knowledge source plays a critical role at the utilization phase of the listening process. For example, a discussion about experiences in renting an apartment to activate vocabulary and types of scenarios will greatly facilitate comprehension of a listening text where students listen to a phone conversation inquiring about rental space or watch a video about visiting the apartment and talking to the landlord. For this reason, it is important to provide listeners with the context of a listen text or event before they begin listening. Contextualized listeners then have the necessary information to activate their prior knowledge on the topic and to develop a conceptual framework in order to parse the linguistic input for potential words and content. Contextual information can help listeners process the linguistic input more efficiently, freeing up WM resources to process larger chunks of information.

Although prior knowledge is important for facilitating comprehension, it can also be misleading when used inflexibly. Listener use of prior knowledge can lead to inaccurate comprehension when it is not supported by corroborating evidence that matches the listener's expectations (Macaro et al., 2005). This underscores the importance of flexibility in the comprehension process. Using a combination of questioning and elaboration (activating prior knowledge), listeners must continually consider different possibilities and monitor the emerging interpretation for congruency with their expectations and prior knowledge (Vandergrift, 2003b).

Discourse Knowledge

Discourse (textual) knowledge involves comprehension at the level of text organization. Awareness of the kind of information (sometimes

called script knowledge) found in certain texts and how that information is organized will facilitate the listener's ability to process this information. A restaurant advertisement, for example, is likely to include name, address, phone number, and the restaurant's specialty or current specials, in addition to other information. Listeners use discourse knowledge when they consider and apply knowledge of text types to the comprehension process.

Depending on the nature of the text, this category includes knowledge of and attention to discourse markers that signal the beginning (e.g., first of all) or conclusion (e.g., in sum) of a set of arguments, an opposing argument (e.g., on the other hand) or a hypothesis (e.g., if). Such signals give listeners some idea of what type of information they can expect to hear. Discourse knowledge can be used proactively by the listener to anticipate the kinds of information that might be found in a text. This kind of knowledge is often used in combination with prior knowledge. Listeners, for example, can use knowledge about how an interview with a soccer player might begin, what questions are asked, and how the interview will likely end to anticipate what they will hear in a similar interview.

Discourse knowledge is very important in interactive listening. In these contexts, listeners use discourse knowledge to facilitate the processing of what they hear and how they may be asked to respond. For example, in an information exchange, such as purchasing shoes, listeners can use their knowledge of the script that is likely to unfold to anticipate the questions that will be asked and the answers they will need to provide for the exchange to be successful. Furthermore, in these contexts, listeners use discourse knowledge when they use appropriate back-channelling cues, determine when to take their turn in conversation, and decide when and how to ask clarification questions.

In sum, the different knowledge sources work together with the cognitive processes to help listeners arrive at a meaningful interpretation of a listening text. Some of these knowledge sources, such as prior knowledge, can be transferred from L1. In other cases, depending on the similarities between the languages (root language, script system, and cultural conventions), some elements of pragmatic, discourse, and linguistic knowledge may transfer. As L2 listeners gain more language experience and their language proficiency develops, they are able to process information more efficiently and access these knowledge sources more rapidly. A schematic representation of these knowledge sources and how they relate to the component processes underlying listening comprehension appears in Figure 2.2.

Interactive Listening

Most classroom listening instruction uses non-participatory, one-way listening. This kind of listening is primarily transactional in nature; the

Table 2.1 Differences Between Interactive and One-Way Listening

Criterion	*One-Way listening*	*Interactive Listening*
Flow of communication	One-way: listening only	Two-way: listener alternates as speaker and listener
Function of language	Transactional	Transactional, interactional, and/or social
Goal of communication	Interpret meaning	Interpret meaning, negotiate meaning, respond and/or initiate, establish social relationships
Strategy use	Comprehension strategies	Comprehension and reception strategies
Social demands	Low	High
Cognitive demands	High	High

goal is to obtain information for some kind of communicative purpose, and there is no opportunity to intervene for purposes of clarification. An important goal for many L2 learners, however, is competence in interactive listening, which is the ability to interact with speakers of the target language in social situations, such as conversations. The goal of this kind of listening can be transactional, interactional, or purely social to foster social relationships. Learning how to handle the cognitive and social demands of these kinds of listening events is an important component of listening competence. For this reason, we include the unique features of interactive listening in our discussion of L2 listening competence. While the cognitive processes are common to both types of listening, there are also some important differences related to flow of communication, listening function, communication goal, strategy use, social demands, and cognitive demands, as can be seen in Table 2.1.

Similarities and Differences Between One-Way and Interactive Listening

The cognitive processes are fundamental to the listening process, regardless of context. Listeners engaged in one-way listening or interactive listening events use top-down and bottom-up processing, and concurrently engage in perception, parsing, and utilization to understand what their interlocutor is saying. In both contexts, they use metacognitive knowledge to control these processes as efficiently as possible.

While they are processing what their interlocutor is saying, listeners involved in interactive listening access the same knowledge sources as in one-way listening. They draw on their mental lexicon for the linguistic knowledge necessary to parse the input and on their bank of prior, pragmatic, and discourse knowledge to interpret the overall intended meaning of their interlocutor within the context of the interaction.

Although one-way and interactive listening share many characteristics, they are also different in important ways. First, in interactive listening, speaker and listener share a common communicative goal, listening context, or life experience. Second, interactive listeners have the opportunity to act in the dual role of listener and speaker; they can clarify meaning or ask their interlocutor to slow down or repeat what was said. In this regard, a number of reception strategies are available to listeners to facilitate listening in these contexts. This makes interactive listening less demanding.

On the other hand, there are factors in interactive listening that can make it equally more demanding. First, listeners in these contexts are expected to reply; they must prepare and formulate a response as they process the speech of their interlocutor. This adds significantly to the cognitive load, because they must begin to formulate a response while at the same time attending to the speaker's message. Second, depending on the relationship of the listener to his or her interlocutor, the social and affective demands of the listening task may be very high, thereby constraining WM resources. We will now consider separately the role of each of these factors in L2 listening competence.

Contextual Nature of Interactive Listening

Context plays a greater role in interactive listening. Whether the context is formal or informal, listeners in interactive situations often have a common communicative goal that facilitates interpretation: for example, the job description, the applicant's curriculum vitae and the job interview protocol between the job applicant and the interviewer; the 'script' for selling/buying shoes shared by salesperson and customer; or the common life experiences and assumptions shared by friends in conversation. In each of these situations, the context provides the backdrop against which (1) to predict information heard, question-types used, routines followed, or, in the case of conversation between friends, to assume common understandings without stating things explicitly; and (2) to monitor interpretation as the interaction unfolds. The highly contextualized nature of each of these interactive situations will facilitate perception and parsing, since potential word candidates will be more quickly activated and connections between words made more quickly, allowing listeners to process the interlocutor's utterances more efficiently. At the same time, listeners use their metacognitive knowledge to guide their predictions and to monitor their comprehension for congruence with their expectations. When they are confronted with something unexpected and are unable to resolve the comprehension problem internally, or simply do not understand, listeners can intervene and ask their interlocutor to clarify, repeat, or speak slower. The possibility to clarify and/or verify meaning is probably the greatest benefit for L2 listeners in interactive listening. They can be provided with strategies to become good listeners and to intervene appropriately.

Strategies for Interactive Listening

In a classroom study on interactive listening strategies used by students during seminar discussions, Lynch (1995) observed two broad categories. The first includes old information questions for clarification of an earlier comprehension difficulty, responses characterized by a backward orientation. The second includes new information questions or receipt tokens that carry the discourse forward or ask the interlocutor to elaborate further – responses characterized by a forward orientation. Table 2.2 highlights a number of interactive listening strategies identified through research with L2 listeners engaged in interactive tasks (Dörnyei & Kormos, 1998; Rost & Ross, 1991; Vandergrift, 1997b). Evidence for these strategies was corroborated in subsequent studies (Farrell & Mallard, 2006; Vandergrift, 2006).

Strategies With a Backward Orientation

The first three strategies in Table 2.2 describe the efforts employed by listeners to clarify understanding of an earlier difficulty. When they do not understand, cannot hear, or are uncertain about what they have heard, listeners can use a global reprise such as 'Pardon?' They can also ask their interlocutors to repeat what they have said, or they can convey non-comprehension through some voluntary or involuntary non-verbal signal, such as a confused look. The first two signals are explicit requests for help, while the third, more subtle signal may or may not be picked up by the interlocutor. On a less global level of misunderstanding, when listeners have not understood a particular word or fragment that appears to be key to understanding the message, they can use a specific reprise; that is, ask for clarification by pointing out the word or fragment that is not understood. Finally, to ensure that they have understood correctly, listeners can seek clarification through a process of hypothesis testing. They can ask a specific question about what their interlocutor has just said to confirm that they have understood and/or what they are expected to do. With the help of these kinds of strategies, listeners signal their need for confirmation or clarification, prompting their interlocutor to confirm or clarify comprehension and then move the interaction forward.

When listeners clarify or verify comprehension, they are engaged in meaning negotiation. By signaling comprehension difficulties to their interlocutor, listeners solicit further language input. The interlocutor responds by repeating or restating the message in a different way, thereby tailoring the language input to a level comprehensible to the listener. If the restated information is still not adequately understood for the interaction to move forward, both interlocutors can continue to negotiate meaning until an adequate level of comprehension has been realized. The importance of these interactive listening strategies cannot be underestimated. Besides allowing interaction to move forward between interlocutors at

Table 2.2 Interactive Listening Strategies, Definitions and Examples

	Strategy	*Definition*	*Examples*
Backward Orientation	1. Global reprise/ask for repetition/ convey non-understanding	Listeners either ask for outright repetition, rephrasing or simplification of preceding utterance, or indicate non-understanding in non-verbal ways.	'What was the question?' 'Pardon?' Confused looks, blank looks, furrowed eyebrows.
	2. Ask for clarification/ specific lexical reprise	Listeners ask a question referring to a specific word, term, or fragment that was not understood in the previous utterance.	'Where?' '. . . *le souper*?' (is that dinner?) '. . . he is going?'
	3. Hypothesis testing/ask for confirmation	Listeners ask specific questions about facts in the preceding utterance to verify that they have understood and/or what they are expected to do.	'. . . after finishing his homework?' '. . . the last book?'
Forward Orientation	4. Uptaking/ back-channelling	Listeners use kinesics and verbal or non-verbal signals to indicate to their interlocutor to continue and that they understand.	Nods, 'uh-huh', '*oui*', 'ah', 'oh', laughing at the appropriate time
	5. Forward inference/ interpretive summary	Listeners overtly indicate current understanding by asking questions using previously understood information.	'If he is chosen, do you think he will go?'
	6. Faking/ feigning understanding	Listeners send uptaking signals or non-committal responses in order to avoid seeking clarification and admitting to their interlocutor that they have not understood.	'*Comme ci, comme ça*'. [So-so.] 'Yes'. [*smiles*] '*Je pense*'. [I think so.]

Source: Adapted from Vandergrift (1997a).

different levels of proficiency, reception strategies have the potential for providing comprehensible input to language learners, particularly the less proficient learner. When listeners have the opportunity to negotiate meaning, language input can be made comprehensible to them at their current level of understanding. This can have salutary effects on language acquisition (Pica, 1996; Lightbown & Spada, 2006).

Strategies With a Forward Orientation

Interactive listening involves more than comprehension clarification. Good listeners also do their part to move the interaction forward through culturally acceptable receipt tokens (uptakes or back-channels) or other acknowledgements of comprehension, as described in the last three strategies in Table 2.2. Before examining these strategies more closely, it is worth noting that although hypothesis testing (the third strategy) is included with clarification strategies, it is also a transition strategy. It allows listeners to clarify understanding, the interlocutor to affirm comprehension, and the interaction to move forward. Among the strategies used by listeners to move the interaction forward, however, the most common and natural response is uptaking or back-channelling. To signal to their interlocutor to continue, listeners use kinesics (nods), verbal ('Yes', 'Really?'), or other non-verbal signals ('Uh-huh') that convey their interest and their comprehension so far. The types of back-channelling cues, as well as when and how often to use them, are often culturally bound.

The forward inference is a useful, higher level of back-channelling. In this case, listeners overtly indicate their current understanding by asking questions that include an interpretive summary based on previously understood information. For example, in a conversation where a woman is explaining that her daughter will likely place high enough at the regional diving competition to go on to compete at the provincial level, the listener can demonstrate involvement in the interaction and move the conversation forward with a question such as 'That's great. If she wins, where will she go?' In this case, the listener has helped her interlocutor move the interaction forward through active listening.

The final strategy, feigning understanding or faking, has mixed usefulness. Listeners may feign understanding in situations where their intervention may appear disruptive or discourteous, particularly if the interlocutor is not well known to them. In these contexts, listeners may hope that what was misunderstood will be clarified through contextual clues in the developing interaction or that an upcoming response on their part will not be related to what they did not understand. Listeners may initiate a global or specific reprise at that time, depending on their relationship to the interlocutor. Sometimes, however, interlocutors will continue to fake understanding just to save face. For example, in a study by Foster and Ohta (2005), a qualitative analysis of negotiation of meaning

revealed that interlocutors in each dyad, in order to save face, actively supported each other in accomplishing the task, even when meaning may not have been entirely clear.

Social Demands of Interactive Listening

An important variable in the success of interactive listening is the social dynamic between the interlocutors. When listeners face a comprehension problem, how they deal with it will depend on a number of affective variables such as willingness to take risks, fear of losing face, assertiveness, and motivation. The degree to which these variables will influence the interaction depends on the relationship between the interlocutors, since status relationships can affect comprehension and the freedom to negotiate meaning. Differences, for example, in age, gender, language proficiency, and power relationships (employer–employee) often make interactive listening a context where the disadvantaged listener feels powerless. This sense of inferiority often affects how much is understood (due to increased anxiety) and the degree to which listeners will dare to clarify comprehension, in order to save face. Furthermore, the face-to-face nature of these events also requires listeners to attend to non-verbal signals (e.g., furrowed eyebrows), body language, and culturally bound cues (e.g., certain gestures), which can add to or change the literal meaning of an utterance. This also increases the cognitive demands of interactive listening.

Finally, the obligation of listeners to respond to their interlocutor, an integral part of interactive listening, adds to the demands of the task. As listeners attend to their interlocutor, they must not only process the content of the message in real time; they also need to clarify their understanding when comprehension is uncertain and respond appropriately. This increases the cognitive load significantly, because listeners must allocate their limited attentional resources to both comprehension and production in swift succession.

In sum, the unique features of interactive listening bring to light additional factors for a more comprehensive understanding of listening competence. For interactive listening, listeners must process linguistic input in real time (as in one-way listening) and respond appropriately. In this context, listeners can generally exert greater control by clarifying understanding when comprehension is uncertain or incomplete, through the use of culturally appropriate interactive listening strategies. Interactive listening may be easier than one-way listening, particularly if the context is familiar and the interlocutors are comfortable with each other. On the other hand, social relationships can negatively affect comprehension and the freedom to negotiate meaning, particularly when one interlocutor is in a power relationship over the other.

Summary

This chapter has presented and discussed the factors that contribute to competence in L2 listening. We have seen that listening is a complex cognitive skill that must operate automatically for listeners to efficiently process what they hear. Listeners construct meaning by linking information from a listening text with knowledge stores in LTM, informed by their overall prior knowledge and life experiences. Top-down and bottom-up processes play a key role in all three phases of comprehension (perception, parsing, and utilization) and they are informed by knowledge sources such as linguistic, pragmatic, discourse, and prior knowledge. Competent listeners use metacognition to regulate these processes to achieve successful comprehension. Finally, we have examined the differences between interactive and one-way listening, noting the unique features of interactive listening that provide us with a more complete picture of listening competence in different contexts.

In the next chapter, we will examine a model of listening comprehension that integrates into one comprehensive system the interaction between these cognitive processes and knowledge sources for both one-way and interactive listening.

Discussion Questions and Tasks

1. How might learner characteristics such as language proficiency, L1 listening, and cultural background constrain the type of language processing used by listeners?
2. Buck (2001) suggests that listening is a very individual and personal process, where there are often differences between listener interpretations of a text. Explain how this might be possible.
3. Looking back at the diary excerpts in the opening scenario of this chapter, what are the knowledge sources these students have identified?
4. Think back to the difficulties you experienced in listening to a new language. What was most difficult for you? Relate this to the listening processes described in this chapter. Based on your new awareness of the processes underlying listening comprehension, what might you do differently? Why?
5. Why is interactive listening a fertile environment for language acquisition? What are the ideal conditions of the task or context that can potentially foster language acquisition?

Suggestions for Further Reading

Buck, G. (2001). An overview of listening comprehension. In *Assessing listening* (pp. 1–30). Cambridge: Cambridge University Press.

Although the emphasis of this volume is on the assessment of listening, the overview of theory and research on listening in the first chapter is both comprehensive and accessible.

Eckerth, J. (2009). Negotiated interaction in the L2 classroom. *Language Teaching*, *42*, 109–130.

A classroom-based study on the negotiation of meaning, replicating an earlier, often-cited study by Foster (1998).

Farrell, T. C., & Mallard, C. (2006). The use of reception strategies by learners of French as a foreign language. *Modern Language Journal*, *90*, 338–352.

A study of interactive listening involving language learners engaged in an information gap task, documenting the reception strategies used.

Goh, C. (2000). A cognitive perspective on language learners' listening comprehension problems. *System*, *28*, 55–75.

A study on comprehension problems that identifies the real-time listening difficulties faced by a group of ESL learners, examining and discussing these difficulties within the three-phase model of language comprehension proposed by Anderson (1995).

Rost, M. (2016). *Teaching and researching listening* (3rd ed.). New York: Routledge.

Discussions of neurological processing, linguistic and semantic processing, pragmatic processing and automated processing are particularly relevant to an understanding of processes that underpin listening competence introduced in this chapter.