CHAPTER 1

Listening

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Introduction

The term **listening** is used in language teaching to refer to a complex process that allows us to understand spoken language. Listening, the most widely used language skill, is often used in conjunction with the other skills of speaking, reading and writing. Listening is not only a skill area in language performance, but is also a critical means of acquiring a second language (L2). Listening is the channel in which we process language in real time – employing pacing, units of encoding and pausing that are unique to spoken language.

As a goal-oriented activity, listening involves 'bottom-up' processing (in which listeners attend to data in the incoming speech signals) and 'top-down' processing (in which listeners utilise prior knowledge and expectations to create meaning). Both bottom-up and top-down processing are assumed to take place at various levels of cognitive organisation: phonological, grammatical, lexical and propositional. This complex process is often described as a 'parallel processing model' of language understanding: representations at these various levels create activation at other levels. The entire network of interactions serves to produce a 'best match' that fits all of the levels (McClelland 1987; Cowan 1995).

Background

Listening in language teaching has undergone several important influences, as the result of developments in anthropology, education, linguistics, sociology, and even global politics. From the time foreign languages were formally taught until the late nineteenth century, language learning was presented primarily in a written mode, with the role of descriptive grammars, bilingual dictionaries and 'problem sentences' for correct translation occupying the central role. Listening began to assume an important role in language teaching during the late-nineteenth-century Reform Movement, when linguists sought to elaborate a psychological theory of child language acquisition and apply it to the teaching of foreign languages. Resulting from this movement, the spoken language became the definitive source for and means of foreign language learning. Accuracy of perception and clarity of auditory memory became focal language learning skills.

This focus on speech was given a boost in the 1930s and 1940s when anthropologists began to study and describe the world's spoken languages. Influenced by this anthropological movement, Bloomfield declared that 'one learns to understand and speak a language primarily by hearing and imitating native speakers' (Bloomfield 1942). In the 1940s American applied linguists formalised this

'oral approach' into the audiolingual method with an emphasis on intensive oral–aural drills and extensive use of the language laboratory. The underlying assumption of the method was that learners could be 'trained' through intensive, structured and graded input to change their hearing 'habits'.

In contrast to this behaviourist approach, there was a growing interest in the United Kingdom in situational approaches. Firth and his contemporaries (see, e.g., Firth 1957; Chomsky 1957) believed that 'the context of situation' – rather than linguistic units themselves – determined the meaning of utterances. This implied that meaning is a function of the situational and cultural context in which it occurs, and that language understanding involved an integration of linguistic comprehension and non-linguistic interpretation.

Other key background influences are associated with the work of Chomsky and Hymes. A gradual acceptance of Chomsky's innatist views (see Chomsky 1965) led to the notion of the meaning-seeking mind and the concept of a 'natural approach' to language learning. In a natural approach, the learner works from an internal syllabus and requires input data (not necessarily in a graded order) to construct the target language system. In response to Chomsky's notion of language competence, Hymes (1971 [1972, 1979]) proposed the notion of 'communicative competence', stating that what is crucial is not so much a better understanding of how language is structured internally, but a better understanding of how language is used.

This sociological approach – eventually formalised as the discipline of 'conversation analysis' (CA) – had an eventual influence on language teaching syllabus design. The Council of Europe proposed defining a 'common core' of communicative language which all learners would be expected to acquire at the early stages of language learning (Council of Europe 1971). The communicative language teaching (CLT) movement, which had its roots in the 'threshold syllabus' of van Ek (1973), began to view listening as an integral part of communicative competence. Listening for meaning became the primary focus and finding relevant input for the learner assumed greater importance.

In the late 1960s and early 1970s, applied linguists recognised that listening was the primary channel by which the learner gains access to L2 'data', and that it therefore serves as the trigger for acquisition. Subsequent work in applied linguistics (see especially Long 1985b; Chaudron 1988; Pica 1994) has helped to define the role of listening input and interaction in second language acquisition. Since 1980, listening has been viewed as a primary vehicle for language learning (Richards 1985; Richards and Rodgers 1986; Rost 1990).

Research

Four areas affecting how listening is integrated into L2 pedagogy are reviewed here; these are: listening in SLA, speech processing, listening in interactive settings and strategy use.

LISTENING IN SLA

In second language acquisition (SLA) research, it is the 'linguistic environment' that serves as the stage for SLA. This environment – the speakers of the target language and their speech to the L2 learners – provides linguistic input in the form of listening opportunities embedded in social and academic situations. In order to acquire the language, learners must come to understand the language in these situations. This accessibility is made possible in part through accommodations made by native speakers to make language comprehension possible and in part through strategies the learner enacts to make the speech comprehensible.

Building on the research that showed a relationship between input adjustments and message comprehension, Krashen (1982) claimed that 'comprehensible input' was a necessary condition for language learning. In his 'input hypothesis', Krashen says further development from the learner's current stage of language knowledge can only be achieved by the learner 'comprehending' language that contains linguistic items (lexis, syntax, morphology) at a level slightly above the

learner's current knowledge ($i + 1$). Krashen claimed that comprehension is necessary in order for input to become 'intake', i.e. language data that is assimilated and used to promote further development. The ability to understand new language, Krashen maintained, is made possible by speech adjustments made to learners, in addition to the learner's use of shared knowledge of the context (Larsen-Freeman and Long 1991).

Although Krashen does not refer to strategic adjustments made by the learner to understand new language, the work of Pica *et al.* (1996) examines the role of adjustments in great detail. Their research has helped delineate how different task types (e.g. one-way vs. two-way information gap exchanges), interaction demands of tasks and interaction adjustments made by speaker and listener address the L2 learner's needs and boost subsequent development. This research outlines the dimensions of activity and strategy use required for successful listening development.

SPEECH PROCESSING

Speech-processing research provides important insights into L2 learning. Several factors are activated in speech perception (phonetic quality, prosodic patterns, pausing and speed of input), all of which influence the comprehensibility of input. While it is generally accepted that there is a common store of semantic information (single coding) in memory that is used in both first language (L1) and L2 speech comprehension, research shows that there are separate stores of phonological information (dual coding) for speech (Soares and Grosjean 1984; Sharwood Smith 1994). Semantic knowledge required for language understanding (scripts and schemata related to real world people, places and actions) is accessed through phonological tagging of the language that is heard. As such, facility with the phonological code of the L2 – and with the parallel cognitive processes of grammatical parsing and word recognition – is proposed as the basis for keeping up with the speed of spoken language (Magiste 1985).

Research in spoken-language recognition shows that each language has its own 'preferred strategies' for aural decoding, which are readily acquired by the L1 child, but often only partially acquired by the L2 learner. Preferred strategies involve four fundamental properties of spoken language:

1. the phonological system: the phonemes used in a particular language, typically only 30 or 40 out of hundreds of possible phonemes;

2. phonotactic rules: the sound sequences that a language allows to make up syllables; i.e. variations of what sounds can start or end syllables, whether the 'peak' of the syllable can be a simple or complex or lengthened vowel and whether the ending of the syllable can be a vowel or a consonant;

3. tone melodies: the characteristic variations in high, low, rising and falling tones to indicate lexical or discourse meanings;

4. the stress system: the way in which lexical stress is fixed within an utterance.

In 'bounded' (or 'syllable-timed') languages – such as Spanish and Japanese – stress is located at fixed distances from the boundaries of words. In 'unbounded' (or 'stress-timed') languages – such as English and Arabic – the main stress is pulled towards an utterance's focal syllable. Bounded languages consist of binary rhythmic units (or feet) and listeners tend to hear the language in a binary fashion, as pairs of equally strong syllables. Unbounded languages have no limit on the size of a foot, and listeners tend to hear the language in clusters of syllables organised by either trochaic (strong–weak) rhythm or iambic (weak–strong) rhythm. Stress-timing produces numerous linked or assimilated consonants and reduced (or weakened) vowels so that the pronunciation of words often seems slurred.

Differences in a learner's L1 and L2 with respect to any of these possible distinctions – phonology system, phonotactic rules, use of tone and use of stress – are likely to cause difficulties

in spoken-word recognition, at least initially and until ample attention is devoted to learning new strategies. Similarities in a learner's L1 and L2 with respect to one or more of these distinctions are likely to allow the learner greater ease and success with listening, and with word recognition in particular. For example, Japanese learners often have difficulty identifying key words in spoken English, due in part to the different stress systems; on the other hand, Danish learners of English typically have little difficulty learning to follow colloquial conversation, due in part to the similarities of stress, tone, phonology and phonotactic rules in English and Danish.

Of these four components in word recognition, stress is often reported to be the most problematic in L2 listening. In English, L2 listeners must come to use a metrical segmentation strategy that allows them to assume that a strong syllable is the onset of a new content word and that each 'pause unit' of speech contains one prominent content word (Cutler 1997).

Another research area related to speech perception is the effect of variable speech rate on comprehension. Findings clearly show that there is not an isomorphic relationship between speed of speech and comprehension (for a summary, see Flowerdew 1994b). One consistent finding is that the best aid to comprehension is to use normal speaking speed with extra pauses inserted.

LISTENING IN INTERACTIVE SETTINGS

Studies of L2 listening in conversational settings help explain the dynamics of interactive listening and the ways in which L2 speakers participate (or, conversely, are denied participation) in conversations. Such issues have been researched at the discourse analysis level, looking at how control and distribution of power is routinely employed through the structure (i.e. implicit rules) of interactions.

Research in cross-cultural pragmatics is relevant in understanding the dynamics of L2 listening in conversation. In general, cultures differ in their use of key conversation features, such as when to talk, how much to say, pacing and pausing in and between speaking turns, intonational emphasis, use of formulaic expressions, and indirectness (Tannen 1984b). The Cross-Cultural Speech Act Realization Project (CCSARP; Blum-Kulka *et al*. 1989) documents examples of cultural differences in directness–indirectness in several languages and for a number of speech acts (notably apologies, requests and promises). Clearly, knowledge of speakers' cultural norms influences listening success.

Conversational analysis is used to explore problems that L2 listeners experience. Comprehension difficulties in conversation arise not only at the levels of phonological processing, grammatical parsing and word recognition, but also at the levels of informational packaging and conceptual representation of the content. Other comprehension problems include those triggered by elliptical utterances (in which an item is omitted because it is assumed to be understood) and difficulty in assessing the point of an utterance (speaker's intent). In any interaction such problems can be cumulative, leading to misunderstandings and breakdowns in communication.

Bremer *et al*. (1996) document many of the social procedures that L2 listeners must come to use as they become more successful listeners and participants in conversations. These procedures include identification of topic shifts, providing backchannelling or listenership cues, participating in conversational routines (providing obligatory responses), shifting to topic initiator role, and initiating queries and repair of communication problems. Much research on L2 listening in conversation clearly concludes that, in order to become successful participants in target-language conversation, listeners need to employ a great deal of 'interactional work' (including using clarification strategies) in addition to linguistic processing.

STRATEGY USE

Listening strategies are conscious plans to deal with incoming speech, particularly when the listener knows that he or she must compensate for incomplete input or partial understanding. For representative studies in this area, see Rost and Ross 1991; Kasper 1984; Vandergrift 1996.

Rost and Ross's (1991) study of paused texts found that more proficient listeners tend to use more 'hypothesis testing' (asking about specific information in the story) rather than 'lexical push-downs' (asking about word meanings) and 'global reprises' (asking for general repetition). They also report that, following training sessions, listeners at all levels could ask more hypothesis testing questions. Their comprehension, measured by written summaries, also improved as a result.

Kasper's (1984) study using 'think aloud' protocols found that L2 listeners tend to form an initial interpretation of a topic (a 'frame') and then stick to it, trying to fit incoming words and propositions into that frame. L1 listeners were better at recognising when they had made a mistake about the topic and were prepared to initiate a new frame.

Vandergrift's (1996) study involving retrospective self-report validated O'Malley and Chamot's (1990) strategy classifications. He found explicit examples of learner use of both meta-cognitive strategies (such as planning and monitoring), cognitive strategies (such as linguistic inferencing and elaborating) and socio-affective strategies (such as questioning and self-encouragement). He also found a greater (reported) use of metacognitive strategies at higher proficiency levels. Based on his findings, Vandergrift proposes a pedagogic plan for encouraging the use of metacognitive strategies at all proficiency levels.

Practice

The teaching of listening involves the selection of input sources (which may be live, or be recorded on audio or video), the chunking of input into segments for presentation, and an activity cycle for learners to engage in. Effective teaching involves:

- careful selection of input sources (appropriately authentic, interesting, varied and challenging);
- creative design of tasks (well-structured, with opportunities for learners to activate their own knowledge and experience and to monitor what they are doing);
- assistance to help learners enact effective listening strategies (metacognitive, cognitive, and social); and
- integration of listening with other learning purposes (with appropriate links to speaking, reading and writing).

This section reviews some of the key recommendations that have been made by language educators concerning the teaching of listening. The notion of listening for meaning, in contrast to listening for language practice, became a standard in teaching by the mid-1980s. Since then, many practitioners have proposed systems for teaching listening that have influenced the language teaching profession. These can be summarised as follows:

- Morley (1984) offers an array of examples of selective listening materials, using authentic information and information-focused activities (e.g. notional–informational listening practice, situation–functional listening practice, discrimination-oriented practice, sound–spelling listening practice).
- Ur (1984) emphasises the importance of having listening instruction resemble 'real-life listening' in which the listener has built a sense of purpose and expectation for listening and in which there is a necessity for a listener response.
- Anderson and Lynch (1988) provide helpful means for grading input types and organising tasks to maximise learner interaction.
- Underwood (1989) describes listening activities in terms of three phases: pre-, while- and post-listening activities. She demonstrates the utility of using 'authentic' conversations (many of which were surreptitiously recorded).
- Richards (1990) provides an accessible guide for teachers in constructing exercises promoting

'top-down' or 'bottom-up' processing and focusing on transactional or interactional layers of discourse.

- Rost (1991) formalises elements of listening pedagogy into four classes of 'active listening': global listening to focus on meaning, intensive listening to focus on form, selective listening to focus on specific outcomes and interactive listening to focus on strategy development.
- Nunan (1995c) provides a compendium of recipes for exercises for listening classes, organised in four parts: developing cognitive strategies (listening for the main idea, listening for details, predicting), developing listening with other skills, listening to authentic material and using technology.
- Lynch (1996) outlines the types of negotiation tasks that can be used with recorded and 'live' inputs in order to require learners to focus on clarification processes. Lynch also elaborates upon Brown's (1994) guidelines for grading listening materials.
- White (1998) presents a series of principles for activities in which learners progress through repeated listenings of texts. She indicates the need to focus listening instruction on 'what went wrong' when learners do not understand and the value of having instructional links between listening and speaking.

Another area of focus in the practice of teaching listening is learner training. Rubin (1994) and Mendelsohn and Rubin (1995) discuss the importance of strategy training in classroom teaching. Mendelsohn (1998) notes that commercially available materials increasingly include strategy training, particularly 'activation of schemata' prior to listening. Rost (1994) presents a framework for incorporating five types of listening strategies into classroom instruction: predicting, monitoring, inferencing, clarifying and responding.

Numerous published materials incorporate principles that have been gleaned from research and practice. Many coursebooks treat development of listening in interesting and innovative ways. Among them are *Headway* (Soars and Soars 1993), *New Interchange* (Richards *et al.* 1998) and *English Firsthand* (Helgesen *et al.* 1999).

Another aspect of listening pedagogy is the use of the target language for instruction. From simpler notions like 'teaching English through English' (J. Willis 1981), through teaching 'sheltered content' courses in the target language (Brinton *et al.* 1989) to full-scale immersion programmes (Genesee 1984), the benefits for learning content through listening are far-reaching. Not only do the learners have an ongoing demonstration of the importance of listening, but they also have continuous opportunities for integrating listening with other language and academic learning skills, and for using listening for authentic purposes. For a review of issues in assessment, see Brindley (1998b) and Chapter 20 of this volume.

Current and future trends and directions

LISTENING PEDAGOGY

One important trend is the study of individual learners' listening processes, both in specific tasks and longitudinally. Lynch (1996) provides insightful studies of individual listeners, particularly ones experiencing difficulties in making progress. He documents learner changes in product (how much the learner understands), process (the strategies the learner uses to gain understanding) and perception (how the learner views or experiences his or her own difficulties and progress). Similarly, Robbins (1997) tracks several ESL learners, observing how their listening strategies with native-speaker conversation partners develop over time.

The role of phonology in L2 listening is beginning to receive attention. Studies such as Kim (1995), Ross (1997) and Quinn (1998) examine spoken word and phrase recognition by L2 learners, in native speaker–non-native speaker interactions and in fixed-input tasks. Such studies

help show the kind of specific phonological strategies needed to adjust to an L2, and the kind of compensatory strategies needed when listeners experience gaps in input.

A promising area of SLA work that affects listening pedagogy is 'input enhancement' (R. Ellis 1994); this is the notion of marking or flooding listening input with the same set of grammatical, lexical or pragmatic features in order to facilitate students' noticing of those features. As the notion of 'awareness-triggering learning' takes hold, the role of listening instruction in this regard will become even more important.

Another trend is renewed interest in 'academic listening', or extended listening for specific purposes. An edited volume by Flowerdew (1994b) reviews several lines of research on lecturing styles, speech perception, text-structure analysis, note-taking and aural memory. As the information revolution progresses, the need for the 'traditional' skills of selective and evaluative listening will become more important.

LISTENING TECHNOLOGY

The widespread availability of audiotape, videotape, CD-ROMs, DVDs and internet downloads of sound and video files has vastly increased potential input material for language learning. Consequently, selection of the most appropriate input, chunking the input into manageable and useful segments, developing support material (particularly for self-access learning) and training of learners in the best uses of this input is ever more important (Benson and Voller 1997).

The development of computerised speech synthesis, speech enhancement and speech-recognition technology has also enabled learners to 'interact' with computers in ways that simulate human interaction. Here also, the use of intelligent methodology that helps students focus on key listening skills and strategies is vital so that 'use of the technology' is not falsely equated with instruction.

Conclusion

Listening has rightly assumed a central role in language learning. The skills underlying listening have become more clearly defined. Strategies contributing to effective listening are now better understood. Teaching methodology in the mainstream has not yet caught up with theory. In many language curriculums, listening is still often considered a mysterious 'black box', for which the best approach seems to be simply 'more practice'. Specific skill instruction as well as strategy development still need greater attention in order to demystify the listening process. Similarly, materials design lags behind current theory, particularly in the areas of input selection and strategy development. Also, the assessment of listening, especially, remains far behind current views of listening. Although there have been marked advances, still in many areas (e.g. curriculum design, teaching methodology, materials design, learner training and testing) much work remains to be done to modernise the teaching of listening.

Key readings

Bremer *et al*. (1996) *Achieving Understanding*
Brindley (1998b) Assessing listening abilities
Flowerdew (1994b) Research related to second language lecture comprehension
Mendelsohn and Rubin (1995) *A Guide for the Teaching of Second Language Listening*
Nunan (1995c) *New Ways in Teaching Listening*
Rost (1990) *Listening in Language Learning*
White (1998) *Listening*

CHAPTER 2

Speaking

Martin Bygate

Introduction

Speaking in a second language (L2) involves the development of a particular type of communication skill. Oral language, because of its circumstances of production, tends to differ from written language in its typical grammatical, lexical and discourse patterns. In addition, some of the processing skills needed in speaking differ from those involved in reading and writing. This chapter outlines the place of speaking in oral methodology, the conceptual issues involved in oral language pedagogy, and it reviews relevant research and pedagogical implications.

Background

Speaking in an L2 has occupied a peculiar position throughout much of the history of language teaching, and only in the last two decades has it begun to emerge as a branch of teaching, learning and testing in its own right, rarely focusing on the production of spoken discourse. There are three main reasons for this. The first is tradition: grammar–translation approaches to language teaching still have a huge influence in language teaching, marginalising the teaching of communication skills. The second is technology: only since the mid-1970s has tape-recording been sufficiently cheap and practical to enable the widespread study of talk – whether native speaker talk (Carter and McCarthy 1997: 7) or learner talk – and use of tape recorders in the language classroom. Due to the difficulty of studying talk, it was easier for teachers, methodologists, applied linguists and linguists to focus on written language than spoken language (for nearly 20 years the TESOL convention has run annual colloquia on the teaching of reading and writing, but not on speaking or listening).

The third reason for its peculiar development might be termed 'exploitation': most approaches to language teaching other than grammar–translation (the direct method, the audiolingual approach) as well more marginal approaches (such as the Silent Way, Community Language Learning and Suggestopedia) exploited oral communication centrally as part of their methodology: not as a discourse skill in its own right, but rather as a special medium for providing language input, memorisation practice and habit-formation (see, e.g., Howatt 1984: 192–208). Most of the focus in teaching oral skills was limited to pronunciation. As Howatt comments of the late-nineteenth-century Reform Movement, 'it was essential that the learner's pronunciation should be correct before moving on to texts' (Howatt 1984: 172). Even for those such as Sweet, for whom pronunciation was crucial at the beginning, 'spoken interaction, or conversation, was the

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end-point of classroom instruction, not its point of departure' (1984: 187). Hence, speaking was mainly associated with pronunciation, and with getting new language noticed and integrated into the learner's competence. Oral discourse was only possible at the end. This confusion of speaking as a skill in its own right with speaking as a central medium for learning continues in current developments. Recently, however, speaking has increasingly emerged as a special area in language pedagogy.

Within existing approaches to the teaching of language, one of the first to offer a clear perspective on the teaching of oral skills was audiolingualism. Audiolingualism appreciated the importance of input before output. And with oral skills preceding written, the four phase cycle of listening–speaking–reading–writing was applied in sequence for each structure (rather than as an argument for providing extensive listening input as in other approaches). More centrally, audiolingualism was based on behaviourist theories of learning and assumed that language was little more than overt, observable behaviour. Its proponents believed that repetition was central to learning, since this has been shown to help memorisation, automaticity and the formation of associations between different elements of language, and between language and contexts of use. Hence, teaching oral language was thought to require no more than engineering the repeated oral production of structures in the target language, concentrating on the development of grammatical and phonological accuracy, combined with fluency; representative examples of materials include Fries 1952; English Language Services 1964; Alexander 1967; O'Neill *et al.* 1971. When tape recorders and language laboratories gradually came into existence in the 1950s, they were mainly used for pronunciation, grammar and translation practice, often in the context of courses named as such.

In the 1970s, language teaching became increasingly influenced by cognitive and socio-linguistic theories of language and learning. Specialists realised that audiolingual approaches omitted to take account of two aspects of language in communication: first, it neglected the relationship between language and meaning; and, second, it failed to provide a social context within which the formal features of language could be associated with functional aspects, such as politeness. A communicative approach developed in two ways. First, a notional–functional approach attempted to extend the teaching of grammar to include the teaching of interactional notions (paying attention to factors of formality and functions, such as making requests, apologies, invitations and introductions). Second, a learner-centred approach emerged which emphasised the importance for learning of starting from the meanings learners wanted to communicate, and working out how to express them.

Nonetheless, at best these approaches were based on the identification of speech acts; in contrast with the teaching of reading and writing, none were anchored in the study of naturally occurring oral interactive discourse, or in the study of the development of oral L2 skills. More recently, skills-based models have been used to study oral L2 use, within the context of a task-based approach.

To some extent this has been influenced by developments in the study of oral discourse in a first language (L1). Conversation analysts (see Yule 1996) and discourse analysts (see Cook 1989; Hoey 1991; Carter and McCarthy 1997) have revealed features of oral discourse which differ from written discourse and across languages; they illustrate the kinds of features learners need to learn. Studies of L2 use have shown the kinds of problems L2 learners face – and the skills they need to overcome them – to communicate in an L2 (e.g. Bialystok 1990). Finally, studies of oral L2 performance within task-based contexts have identified the problems of using more accurate, fluent and complex language, and have started to explore the ways in which learners' communicative performance can be influenced through communication practice.

Research

CHARACTERISTICS OF SPEECH

To understand what is involved in developing oral L2 skills, it is useful to consider the nature and conditions of speech. Most current approaches draw on a psycholinguistic skills- (or 'information-')processing model. Levelt (1989) proposed that speech production involves four major processes: **conceptualisation**, **formulation**, **articulation** and **self-monitoring** (for an accessible account, see Scovel 1998). **Conceptualisation** is concerned with planning the message content. It draws on background knowledge, knowledge about the topic, about the speech situation and on knowledge of patterns of discourse. The conceptualiser includes a 'monitor', which checks everything that occurs in the interaction to ensure that the communication goes to plan. This enables speakers to self-correct for expression, grammar and pronunciation. After conceptualisation, the **formulator** finds the words and phrases to express the meanings, sequencing them and putting in appropriate grammatical markers (such as inflections, auxiliaries, articles). It also prepares the sound patterns of the words to be used: L1 errors of pronunciation very commonly involve switching sounds between words that are separated from each other; such switches suggest that the pronunciation of words must be prepared in batches prior to pronunciation. The third process is **articulation**. This involves the motor control of the articulatory organs; in English: the lips, tongue, teeth, alveolar palate, velum, glottis, mouth cavity and breath. **Self-monitoring** is concerned with language users being able to identify and self-correct mistakes.

All this happens very fast and, to be successful, depends on automation: to some degree in conceptualisation, to a considerable extent in formulation and almost entirely in articulation. Automation is necessary since humans do not have enough attention capacity consciously to control the three types of process. Hence, for an elementary L2 speaker it will be difficult to manage this speech fluently and accurately, since they lack automation and/or accuracy, and it is difficult for them to pay attention to all these processes simultaneously under pressure of time.

The skills are also affected by the context. Speaking is typically **reciprocal**: any interlocutors are normally all able to contribute simultaneously to the discourse, and to respond immediately to each other's contributions. Further, in oral communication many people can participate in the same interaction, making it somewhat less predictable than written interaction. Oral interaction varies widely in terms of whether participants have equal speaking rights, or whether one of the speakers adopts or is accorded special rights, such as in doctor–patient, teacher–pupil, professor–student, examiner–examinee, parent–offspring, adult–child interactions. Symmetry affects the freedom of speakers to develop or initiate topics, ask for clarification or close the interaction. Further, speaking is **physically situated face-to-face** interaction: usually speakers can see each other and so can refer to the physical context and use a number of physical signals to indicate, for instance, attention to the interaction, their intention to contribute and their attitude towards what is being said. Hence, speech can tolerate more implicit reference.

Finally, in most speech situations speech is produced 'on line'. Speakers have to decide on their message and communicate it without taking time to check it over and correct it: any interlocutors cannot be expected to wait long for the opportunity to speak themselves. Hence, time pressure means that the process of conceptualisation, formulation and articulation may not be well planned or implemented, and may need pauses and corrections.

These conditions and processes affect the language that is typically produced. For instance, speech more often than writing refers to the interlocutors and the physical time and place of the communication. In addition, speech typically expresses politeness so as to protect the **face** of the interlocutors (Scollon and Scollon 1983), and to structure the dialogue in stages (see Widdowson 1983). The discourse typically results in patterns which are distinct from those normally found in writing (such as the beginnings, endings and intervening phases of a doctor–patient or teacher–student interaction). Selinker and Douglas (1985), Zuengler and Bent (1991) and Bardovi-Harlig