General models of L2 learning

12

This chapter applies some general ideas from SLA research to language teaching, complemented by Chapter 13 which goes in the reverse direction. It deals with some of the general models and approaches that researchers have devised to explain how people learn second languages, rather than with individual pieces of research or different areas of language.

12.1 Universal Grammar

Focusing questions

- What kind of language input do you think learners need in order to acquire grammar naturally?
- How much importance do you place on (a) correction by parents in L1 acquisition? (b) correction by teachers in L2 learning?

Keywords

Universal Grammar (UG): 'the system of principles, conditions, and rules that are elements or properties of all human languages … the essence of human language' (Chomsky, 1976: 29)

principles of language: abstract principles that permit or prohibit certain structures from occurring in all human languages

parameters of language: systematic ways in which human languages vary, usually expressed as a choice between two options

pro-drop parameter: a parameter which, set one way, permits a pro-drop language not to have pronoun subjects in the sentence, and set the other, forces a non-pro-drop language to have explicit subjects

Minimalist Program: this is Chomsky's current working model that attempts to simplify the syntax to the minimum necessary for the human computational system to connect sounds and meanings

The Universal Grammar (UG) model, in the version first proposed by Chomsky in the 1980s, bases its general claims about learning on the principles and parameters grammar described in Chapter 2. What we have in our minds is a mental grammar of a language consisting of universal *principles* of language, such as the locality principle which shows why a sentence like 'Is Sam is the cat that black?' is impossible in all languages, and of *parameters* on which languages vary, such as the pro-drop parameter that explains why 'Shuo' (speaks) is a possible sentence in Chinese, but 'Speaks' is not possible in English. Principles account for all the things that languages have in common; parameters account for their differences.

The Universal Grammar model claims that these principles and parameters are built in to the human mind. Children do not need to learn the locality principle because their minds automatically impose it on any language they meet, whether it is English, Chinese or Arabic. However, they *do* need to learn that English sentences have subjects (non-pro-drop), while Chinese and Arabic sentences do not (pro-drop). It is the parameter settings that have to be learnt – to have a subject or not to have a subject. All the learner needs in order to set the values for parameters are a few samples of the language. Hearing 'There are some books on the table', a learner discovers that English has the non-pro-drop setting because 'dummy' subjects such as 'there' and 'it' do not occur in pro-drop languages.

To acquire the first language, the child applies the principles to the input that is encountered and adopts the right value for each parameter according to the input. Learning in the UG model is a matter of getting language input by hook or by crook; the faculty of language needs input to work on; it is the evidence on which the learners base their knowledge of language. This evidence can be either positive or negative. *Positive evidence* consists of actual sentences that learners hear, such as 'The Brighton train leaves London at five'. The grammatical information in the sentence allows them to construct a grammar that fits the word order 'facts' of English that subjects come before verbs (' … train leaves … '), verbs before objects (' … leaves London)', and prepositions before nouns (' … at five'), by setting the parameters in a particular way. The positive evidence in a few sentences is sufficient to show them the rules of English.

Negative evidence has two types. Because children never hear English sentences without subjects, such as 'Leaves', they deduce that English sentences must have subjects – the same evidence of absence as that advanced for curved bananas in the song 'I have never seen a straight banana'. The other type of negative evidence is correction: 'No, you mustn't say, "You was here"; you must say, "You were here".' Someone tells the learners that what they are doing is wrong.

Many linguists are convinced that all a child needs to learn the first language is positive evidence in the shape of actual sentences of the language; negative evidence could only help in marginal instances as it is not uniformly available. Second language learning may be different. The bulk of the evidence indeed comes from sentences the learner hears – positive evidence from linguistic input. But L2 learners also have a first language available to them. Negative evidence can be used to work out what does *not* occur in the second language, but might be expected to if the L2 grammar were like the L1 grammar. Spanish students listening to English will eventually notice that English lacks the subjectless sentences they are used to. The grounds for the expectation is not just guessing, but the knowledge of the first language the learners have in their minds, in other words a form of transfer.

Negative evidence by correction is also different in L2 learning. In the first language, it is not so much that it is ineffective as that it occurs rarely; parents rarely

correct their children's speech, and when they do it is usually for meaning rather than for grammar. In the second language classroom, correction of students' grammatical errors can, and often does, occur with high frequency. The L2 learner thus has an additional source of evidence not available to the L1 learner. Furthermore, the L2 learner often has grammatical explanations available as another source of evidence. This reflects a type of evidence that is absent from first language acquisition, at least up to the school years. Finally, the input to the L2 learner could be made more learnable by highlighting various aspects of it – *input enhancement* as Mike Sharwood-Smith (1993) calls it. James Morgan (1986) has talked about 'bracketed input', that is to say, sentences that make clear the phrase structure of the language by pausing or intonation. L2 teaching could try many ways of highlighting input, again an opportunity unique to L2 learning.

The UG model and language teaching

Much UG research has regarded the point of SLA research as being to contribute to linguistic theory rather than the other way round. Hence it is not really concerned with what teachers might make of UG.

Overall, UG theory suggests teachers should concentrate on those aspects of syntax that will not be acquired automatically by the students (Cook, 2001); there is no point teaching things which will be acquired by the students regardless of what the teacher does. As the Universal Grammar in the student's mind is so powerful, there is comparatively little for the teacher to do so far as the aspects of language it covers are concerned. Few mistakes occur with the word order parameters covered by the theory; I have never heard a student making mistakes like 'I live London in' for instance, that is, treating English as a language with postpositions rather than prepositions.

Instead, teaching can concentrate on providing data which the students can use to set the values of the parameters. Thinking of the language of the classroom as a source of input for parameter setting may be a helpful slant for language teachers. So in the case of the pro-drop parameter, UG theory suggests that teachers provide language input which allows the students to find out whether the setting should be pro-drop or non-pro-drop. Quite advanced L2 learners still differ from native speakers when the first and the second language have different settings for the pro-drop parameter. Thus the teacher's awareness of parameter resetting can be helpful. Similarly, syllabuses for language teaching that use grammar need to accommodate such basic syntactic ideas, if only to indicate to teachers which areas they can avoid teaching.

Let us take *Changes* (Richards, 1998) as an example. The input for setting the value for the pro-drop parameter is partly the absence of subjectless sentences, which is shared by all EFL coursebooks as well as *Changes*, and partly the presence of subjects such as 'it' and 'there'. Unit 5 introduces 'it' in time sentences such as 'It's five o'clock in the morning'. Unit 7 has 'There are three bedrooms'. Unit 8 introduces 'weather' 'it', as in 'It rains from January to March' and 'It'll cloud over tomorrow', together with other uses, as in 'It's spring. It's raining'. Everything necessary to set the parameter is introduced within the first weeks of the course. It is hard to imagine language teaching not reflecting these two aspects of the pro-drop parameter, just as it is hard for any small sample of speech not to use all the phonemes of English. Almost any language input should provide the information on which the parameter setting depends in a short space of time.

Many SLA researchers feel that the UG model is the most powerful account of L2 learning. Its attraction is that it links L2 learning to current linguistic ideas about language and language learning. It has brought to light a number of apparently simple phenomena like the pro-drop parameter that are relevant to L2 learning. Yet it would be wrong to draw conclusions from UG theory for anything other than the central area that is its proper domain, the core aspects of syntax. The UG model tackles the most profound areas of L2 acquisition, which are central to language and to the human mind. But there is rather little to say about them for language teaching. The UG principles are not learnt; the parameter settings probably need little attention. Any view of the whole L2 learning system has to take on board more than UG. Classroom L2 teaching too must include many aspects of language that UG does not cover.

Nevertheless, the UG model firmly reminds us that learners have minds and that the form which language knowledge takes in the human mind is crucial. Furthermore, because the type of syntactic description it uses tries to account for the syntax of all languages, it automatically allows for comparison between languages. Pro-drop is easy to explain to students and something like 90 per cent of the languages in the world are pro-drop; telling students of English about the pro-drop parameter can provide a short cut for teachers and students. The useful book *Learner English* (Swan and Smith, 2001) provides examples of mistakes from students with first languages ranging from Italian to Chinese to Thai that linguists would attribute to the pro-drop parameter.

The basis of the UG model is being revised within a theory known as the Minimalist Program (Chomsky, 1995). All language learning is now reduced to the learning of the properties of vocabulary. Take the arguments for verbs described in Chapter 3. Knowing the word 'give' means knowing that it usually has three arguments – an animate subject and two objects: 'Mary [animate subject] gave a book [direct object] to John [indirect object]', that is to say, you cannot say, 'The rock gave him a present' with a non-animate subject 'the rock', or 'The man gave a thousand pounds' without an indirect object saying whom it was given to. The grammar is seen as universal; the differences between languages come down to how words behave in sentences. Even the acquisition of grammatical morphemes such as past tense '-ed' is considered a matter of acquiring the phrases within which these morphemes can function and the parameter settings that go with them. Hence grammatical morphemes are, so to speak, attached to words before they are fitted into the sentence.

A technical account of these developments can be seen in Cook and Newson (2007). The version just presented can be called Minimalism Phase I; the later phases have reduced the apparatus of the grammar to an even barer minimum. Structure is no longer seen as a complex phrase structure, but as built up by an operation called Merge which combines two items into one; all the complexity of the phrase structure tree comes from this simple operation, starting from the properties of the lexical entry such as its arguments, but dispensing with phrases such as noun phrase and verb phrase. Chomsky has also been developing an idea about the perfection of language; the goal is to establish whether language is a perfect instrument for connecting sounds and meanings in the human mind.

The implications for SLA research of the Minimalist Program are as yet little known, except for the anchoring to vocabulary. So the main conclusion of minimalism for language teaching is, oddly enough, not about grammar, but about vocabulary; words should be taught, not as tokens with isolated meanings, but as items that play a part in the sentence by dictating the structures and words they may go with in the sentence.

Box 12.1 The Universal Grammar model of L2 learning

Key themes

- Language is the knowledge in individual minds.
- UG shapes and restricts the languages that are learnt through principles and parameters.
- Language learning is setting values for parameters and acquiring properties of lexical items, but not acquiring principles.

Teaching

- No need to teach 'principles'.
- Design optimum input for triggering parameters.
- Emphasize the teaching of vocabulary items with specifications of how they can occur in grammatical structures.

12.2 Processing models

Focusing questions

- What is the subject of the sentence 'The old man likes bananas'? How do you know?
- How important is it for students to recognize the subject of the sentence?
- Does practice make perfect in second language learning? Is it the same for all aspects of language?

Keywords

Competition Model: this claims that languages have to choose which aspect of language to emphasize in the processing of speech, whether intonation, vocabulary, word order or inflections

declarative/procedural memory: the memory for individual items of information (declarative memory) is different from the memory processes for handling that information (procedural memory)

connectionism: a theory which claims that all mental processing depends on developing and using the connections in the mind

agreement: the grammatical system in which two elements in the sentence show they go together by having appropriate word inflections, and so on, for example singular verb and singular subject in the English present tense

word order: a major element in conveying grammatical meaning in some, but not all languages, is word order; one variation between languages is the order of subject, verb and object: SVO (English), VSO (Arabic), SOV (Japanese), and so on

case: a major grammatical system in many languages in which words show their grammatical function (subject, object, etc.) by different forms; in English, surface case only affects pronouns ('I', 'me', 'my', etc.), but case is still invisibly important
animacy: whether a noun is animate or inanimate; not particularly important in English, but vital to Japanese, Italian, and so on

The Competition Model

At the opposite pole from Universal Grammar come models which see language in terms of dynamic processing and communication rather than as static knowledge. These are concerned with how people use language, rather than with sheer knowledge in the mind. One model of this type is the Competition Model developed by Brian MacWhinney and his associates (Bates and MacWhinney, 1981; MacWhinney, 1987, 2005). This derives from psychological theories of language in which L2 learning forms only a minor component.

Whatever the speaker wants to communicate has to be achieved through four aspects of language: word order, vocabulary, word forms (morphology) and intonation. As the speaker can only cope with a limited number of things at the same time, a language has to strike a balance between these four. The more a language uses intonation, the less it can rely on word order; the more emphasis on word forms, the less on word order; and so on. The different aspects of language 'compete' with each other for the same space in the mind. The results of this competition favour one or other of these aspects in different languages. A language such as Chinese, which has complicated intonation, has no grammatical inflections: intonation has won. English, with complicated word order, puts little emphasis on inflections: word order has won. Latin, with a complicated inflection system for nouns, has little use for word order, and so on.

The competition model has mostly been tested by experiments in which people have to find the subject of the sentence. While all languages probably have subjects, they differ in how they signal which part of the sentence the subject is. Take the English sentence 'He likes to drink Laphroaig.' What are the clues that give away which bit is the subject?

Word order

In many languages the subject occurs in a definite position in the sentence: 'he' comes before 'likes' in 'He likes to drink Laphroaig' and is therefore the subject. In English the subject is usually the noun phrase that comes before the verb; hence English is a subject verb object (SVO) language. Arabic and Berber are VSO languages, so the subject usually comes *after* the verb. In languages such as Baure and Tzeltal the subject comes after the object (VOS). Though they differ as to whether the subject comes at the beginning, the middle or the end, in all these languages word order is a good guide as to which noun phrase is the subject. The competition for space is being won by word order.

Agreement

The subject often agrees with the verb in number: both 'he' and 'likes' are singular in 'He likes to drink Laphroaig', as are 'il' and 'aime' in the French 'Il aime Paris'

(He loves Paris). In some languages the agreement of number is the most important clue to the subject; in English it affects only the third person present tense verb forms in '-s' ('He loves' versus 'They love').

Case

English uses the subject case 'he' to show the subject 'He likes Laphroaig', rather than 'Him likes Laphroaig' with the object case 'him'. In some languages the case of the noun is the most important clue to the subject, 'Ich liebe Bier' (I love beer) rather than 'Mich liebe Bier' in German. In English, case is not relevant except for the forms of the personal pronouns, 'he/him', and so on.

Animacy

In languages like Japanese the subject of the sentence is usually animate, that is to say, it refers to someone or something that is alive. The sentence 'The typhoon broke the window' is impossible in Japanese because typhoons are not alive, so 'typhoon' cannot be the subject. In English, whether the subject refers to something alive or not is rarely a clue to the subject. It is possible to say both 'Peter broke the window' and 'The window broke'. The competition is won in some languages by animacy.

So at least four clues potentially signal the subject of the sentence: word order, case, agreement between words, and animacy. The different clues to the subject are not equally important in each language. Rather the competition between them has been resolved in different ways in English, German, Japanese and Spanish.

Children learning their first language are therefore discovering which clues are important for that language and learning to pay less attention to the others. Each of the four competing clues has a 'weighting' that affects how each sentence is processed. Experiments have shown that speakers of English depend chiefly on word order; speakers of Dutch depend on agreement (Kilborn and Cooreman, 1987; McDonald, 1987); Japanese and Italian depend most on animacy (Harrington, 1987; Bates and MacWhinney, 1981). Learning how to process a second language means adjusting the weightings for each of the clues. L2 learners of English transfer the weightings from their first language. Thus Japanese and Italian learners select the subject because it is animate, and Dutch learners because it agrees with the verb. While their processes are not weighted so heavily as in their first languages, even at advanced stages they are still different. On the surface there need not be any sign of this in their normal language use. After all, they will still choose the subject correctly most of the time, whichever aspect they are relying on. Nevertheless, their actual speech processing uses different weightings. Currently, some research is showing how the second language affects the processing of the first language (Cook *et al.*, 2007) with four languages – Korean, Arabic, Japanese and Chinese (two scripts); Japanese people who know English interpret the subject differently in Japanese sentences from those who do not, not only in terms of animacy, but also, oddly enough, in terms of preference for plural subjects rather than singular subjects.

Processing models and cognitivism

The Competition Model deals with some of the performance processes discussed in Chapter 7. The model is related to the behaviourist tradition which claims that

language learning comes from outside – from input from others and from interaction and correction – rather than from inside the mind. An early version was Bloomfield's idea that language learning is a matter of associating words with things (Bloomfield, 1933). The child who imitates an adult saying 'doll' is favourably reinforced by adults whenever a doll is seen, and unfavourably reinforced when a doll is absent. The most sophisticated behaviourist account was provided by B.F. Skinner (1957) in the book *Verbal Behavior*, which was savagely reviewed by Chomsky (1959). Language to Skinner was learnt though 'verbal operants' that are controlled by the situation, which includes the social context, the individual's past history and the complex stimuli in the actual situation. One type of operant is the **mand**, which is the equivalent to a command (com+mand) and is reinforced by someone carrying it out; another is the **tact**, which is equivalent to a declarative (con+tact), and which is reinforced by social approval, and so on. The child builds up the complex use of language by interacting with people in a situation for a purpose – rather similar to the rationale of task-based learning.

Other contemporary psychological theories of language learning are also affiliated to behaviourism. John Anderson (1993) has proposed a 'cognitive behaviourist' model called ACTR, which sees learning as building up response strengths through a twofold division into **declarative** memory (individual pieces of information) and **procedural** memory (procedures for doing things). As declarative facts get better known, they are gradually incorporated into procedures, and several procedures are combined into one, thus cutting down on the amount of memory involved. SLA research has often found this distinction convenient; for example, it underlies the work of O'Malley and Chamot (1990) with learning strategies described in Chapter 5. Using a related approach, DeKeyser (1997) demonstrated that the learning of a second language (here an artificial language) conformed to the ideas of improvement with practice in classical psychology in terms of response time and number of errors.

Rumelhart and McClelland (1986) and others have been developing the similar theory of 'connectionism', which sees learning as establishing the strengths between the vast numbers of connections in the mind. It claims that language processing does not take place in a step-by-step fashion, but that many things are being processed simultaneously. The methodology of connectionism research consists of simulated learning by the computer; language data are fed into the computer's network of connections to see whether it will 'learn' the syntactic regularities. The L2 use of connectionism then depends on the computer being able to learn the first language before looking at the second. Blackwell and Broeder (1992) made the computer learn either Arabic or Turkish pronouns based on their frequency in language input to learners; then they added the second of the two languages. They found that the computer indeed duplicated the order of acquisition found in a naturalistic study of four L2 learners. Connectionism may be an important area for future L2 research, but is thinly researched at present.

The main L2 model in this tradition is the information-processing model (McLaughlin *et al.*, 1983). In this, learning starts from controlled processes, which gradually become automatic over time. When you first start to drive a car, you control the process of driving consciously – turning the wheel, using the accelerator, and so on. Soon driving becomes automatic, and for much of the time you have no awareness of the controls you are using. To quote McLaughlin (1987): 'Thus controlled processing can be said to lay down the "stepping stones" for automatic processing as the learner moves to more and more difficult levels.' This is not necessarily the same as being conscious of language rules. A learner who starts by

communicating hesitantly, and gradually becomes more fluent, is just as much going from controlled to automatic processes as one who starts from grammatical rules and then tries to use them in ordinary speech.

Clearly, some of the research discussed in other chapters supports this model, for instance the increasing quickness of reaction time as learners make the language more automatic (DeKeyser, 1997). However, the evidence for the information-processing model is mostly based on ideas taken from general psychological theory or on experiments with vocabulary, rather than on L2 learning itself. It requires a continuum from 'higher' to 'lower' skills. Students who do not progress in the second language are not making the lower-level skills sufficiently automatic. Thus children learning to read a second language may be held back by lacking the low-level skill of predicting what words come next. The information-processing model resembles the other processing models in assuming that language learning is the same as the learning of other skills such as car driving. All of them claim language is learnt by the same general principles of learning as everything else – the opposite assumptions to UG.

The main teaching application of these approaches is the emphasis on practice as the key to L2 learning. Practice builds up the weightings, response strengths, and so on, that determine how language is processed and stored. The UG model sets minimal store by practice; in principle, a parameter can be set by a single sentence for ever more. Processing models, however, see language as the gradual development of preferred ways of doing things. Much language teaching has insisted on the value of incremental practice, whether it is the audio-lingual structure drill or the communicative information gap game, described in Chapter 13. The processing models remind us that language is behaviour and skill as well as mental knowledge. Some skills are learnt by doing them over and over again. These ideas are support for the long-held teaching views about the value of practice – and more practice.

Box 12.2 Processing models

Key themes

- Language is processing at different levels.
- Learning involves practising to build up the proper weightings, connections, and so on.

Teaching

- Uses exercises to build up appropriate strengths of response in students.
- The classroom should maximize practice by students.

12.3 The socio-educational model

Focusing questions

- How crucial to success are the attitudes that the students bring to the classroom?
- What stereotype do you think your students have of the target culture?

Keyword

integrativeness: how the learner relates to the target culture in various ways

Many would say that all the models described so far neglect the most important part of language – its social aspect, $Lang_4$. There are two versions of this. One is that L2 learning usually takes place in a social situation where people interact with each other, whether in the classroom or outside. The second version is that L2 learning takes place within a society and has a function within that society. This covers the local and international goals of language teaching discussed in Chapter 11.

A complex view of L2 learning called the socio-educational model has been put forward by Robert Gardner (1985, 2007) to explain how individual factors and general features of society interact in L2 learning. Each of these factors is measured precisely through the research instrument he has developed called the AMTB (Attitudes and Motivation Test Battery), part of which was presented in Chapter 8.

He has always seen the two main ingredients in the learners' success as motivation and ability. Motivation consists of two chief factors: *attitudes to the learning situation*, that is, to the teacher and the course, and *integrativeness*, which is a complex of factors about how the learner regards the culture reflected in the second language. Put together with other factors, these elements yield the model seen in Figure 12.1, which shows the process that leads to a successful or unsuccessful language learning outcome.

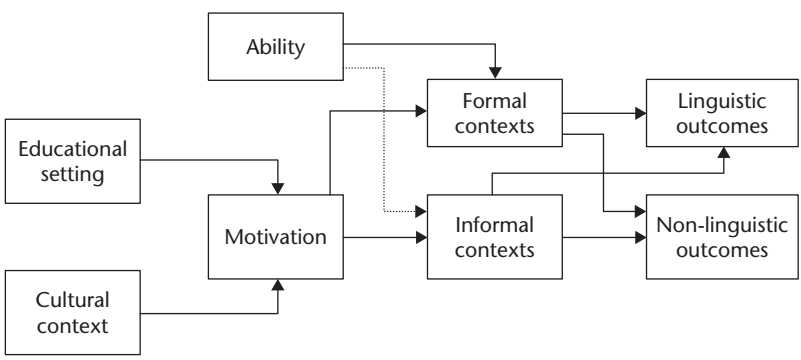

Figure 12.1 Robert Gardner's socio-educational model (Gardner, 2007)

But where do attitudes and integrativeness come from? The answer, according to Gardner, is the educational setting and cultural context within which the students are placed. A society sets a particular store by L2 learning; it has stereotyped views of foreigners and of certain nationalities, and it sees the classroom in a particular way. Hence one way of predicting if students will be successful at L2 learning is to look not at the attitudes of the students themselves, but at those of their parents or indeed of society at large. The crucial factors are how the learner regards the speakers of a second language, as seen in Chapter 8, and how highly he or she values L2 learning in the classroom.

The model also incorporates ability, how good the student is, which primarily affects learning in formal situations rather than in informal situations outside the

classroom. These main factors do not lead to L2 success in themselves, except through people's reactions to the actual teaching context, whether formal or informal. The model depicts a process in time, during which the students' background setting affects their motivation, and then their motivation and ability affect their learning situation and so produce a successful or unsuccessful outcome.

The socio-educational model chiefly applies to language teaching for local goals, where the students have definite views on the L2 group whose language they are learning through everyday contact with them within the society, say the position of Chinese learners of English in Vancouver. Students who are learning for international goals may not have such definite opinions. For example, English teaching in Cuba involves little contact with English-speaking groups except tourists.

The implications for teaching mirror the discussion in Chapter 11 of the roles of language teaching in society. The total situation in which the students are located plays a crucial part in their learning. If the goals of teaching are incompatible with their perceptions of the world and the social milieu in which they are placed, teaching has little point. Teachers either have to fit their teaching to the roles of language teaching for that person or that society, or they have to attempt to reform the social preconceptions of their students, difficult as this may be in the teeth of all the pressures that have been exerted on the students by the social milieu for all their lives. If they do not, the students will not succeed. This model also reminds the teacher of the nature of the L2 using situation. The goal of teaching is to enable a non-native speaker to use the language effectively, not to enable him or her to pass as native, as discussed in Chapter 11.

Box 12.3 The socio-educational model

Key themes

Success in classroom second language acquisition depends on the two main factors, integrativeness and attitudes to the learning situation, in a complex interaction with other factors, such as the student's ability and the type of learning context.

Teaching

For some students the emphasis should be on integrativeness; for others, with say ELF goals, it should be on instrumental motivation. Changing long-standing motivations in the students is difficult.

12.4 The interaction approach

Focusing questions

- What do you do when you do not understand what someone else has just said?
- What do you do when you think you have made a mistake in speaking?

Keywords

interaction hypothesis: successful second language acquisition depends crucially on conversational interaction with others
negotiation for meaning: solving mutual difficulties in conversation by means of various conversational moves
recasts: rephrasing incorrect student utterances

The interaction approach to SLA research has evolved for 30 years, primarily in the USA; it sees talking to other people as the key to acquiring a language. Three of its loosely connected tenets are explored below.

Language is acquired through interaction

In the 1960s, considerable research looked at how parents interact with children in the first language, with largely inconclusive results. Direct correction, in which the child's sentence is corrected by the parent, occurs very rarely; in one famous study by Christine Howe (1981), only 1 of 1,711 utterances by mothers involved correction. Ursula Bellugi and Roger Brown (1964) did find a process of 'imitation with expansion', in which the parent feeds back the child's sentence in an altered form:

Child: Baby highchair
Mother: Baby is in the highchair

Others, however, such as Nelson *et al*. (1973), did not find any beneficial effects on learning from such exchanges; see Cook and Newson (2007) for a further discussion. Nevertheless some psychologists, like Jerome Bruner (1983), have insisted that structured interaction is the driving force in first language acquisition.

What is the role of interaction in the learning of second languages? In 1981 Mike Long suggested that it is not what the learner hears but how they are interacted with that matters (Long, 1981). In its full form this became known as the interaction hypothesis (Long, 1996): essentially, that second language acquisition depends on profiting from conversation which makes concessions to the learner through processes of topic clarification and repair.

Learning through interaction involves negotiation of meaning.

The central concept in the interaction approach is 'negotiation of meaning' – 'the process in which, in an effort to communicate, learners and competent speakers provide and interpret signals of their own and their interlocutor's perceived comprehension' (Long, 1996: 418). In other words, useful interaction involves keeping the conversation rolling by continuously resolving any difficulties in comprehension. Some of the different possibilities are: 'repetitions, confirmations, reformulations, comprehension checks, clarification requests etc' (Long, 1996: 418).

Rather like communication strategies, negotiation for meaning is keeping the channel of communication open – the equivalent of saying, 'Are you still there?'

when the other person on the phone seems to fall silent. Almost invariably, these interactional moves have been discussed in terms of conversation between native and non-native speakers: comprehensibility has been weighted towards the native speaker rather than to successful L2 users. An exception is research by Garcia Mayo (2007), who found that L2 students talking to each other managed to successfully negotiate meaning in a variety of ways, that is, 'scaffolding' each other's use of language.

Teaching involves not only these ordinary conversational moves, but also those specific to the teaching situation in which the aim is learning. One is direct correction. Teachers have perhaps always corrected and always will. In my experience, students usually complain when their teachers do not correct, rather than when they correct them too much.

Box 12.4 Types of feedback by teachers to students (Lyster and Ranta, 1997)

- explicit corrections directly showing correct form
- recasts reformulating the sentence without the error
- clarification requests checking potential misunderstanding
- metalinguistic feedback commenting on wellformedness
- elicitation to get the correct form by pausing, asking questions or making them rephrase
- repetition by repeating the students' sentence, usually with a particular intonation

Box 12.4 shows a well-known list of types of correction devised by Roy Lyster and Leila Ranta (1997). In **explicit corrections** the teacher directly provides the correct form:

He goed to the movies.
No, he went to the movies.

In **recasts** the teacher rephrases the student's mistake:

He went to the movies, did he?

In **clarification requests** the teacher tries to clear up possible misunderstandings:

You mean he went to the movies?

Elicitations are when the teacher tries to get the student to make a second attempt:

Eh? What do you mean?

Repetitions involve the teacher repeating but highlighting the mistake:

He *goed* to the cinema?

While all these could occur in non-classroom conversation, they are more focused on the language mistake than the meaning, and doubtless occur with a much higher frequency in teaching than would be acceptable in ordinary conversation.

The idea of recasts has proved popular among researchers. An example from a European Science Foundation (ESF) transcript is:

A: I think one man er very happy only.
B: You think he was a very happy man?

B has recast A's utterance in a way that does not bring the conversation to a halt, as other types of correction would do, but reformulates the L2 user's utterance in a more acceptable way. The full definition by Lyster and Ranta (1997: 46) is: '*Recasts* involve the teacher's reformulation of all or part of a student's utterance minus the error'. One issue is whether the student takes this as a simple aid to the conversation (decoding) or as an aid to learning, singling out something they should be paying attention to (codebreaking). According to Younghee Sheen (2004), 60 per cent of feedback in a variety of language teaching contexts involved recasts. Long (1996) sees this ambiguity as their very usefulness: the student is not sidetracked from the meaning of what is being said, but nevertheless learns about the form of the language. Z.-H. Han (2002) taught tense consistency to students with and without recasts, and suggested that important factors which affected the extent to which students benefited from recasts were intensity of instruction and developmental readiness to acquire the point in question.

The most obvious drawback to the interaction approach is that, while there is considerable research describing how interaction occurs, there is still little proof of its importance to second language learning rather than to second language comprehension, whether correction or recasts. Indeed, Pauline Foster (1998) found that most students in the classroom would avoid making negotiation moves if they possibly could, perhaps because it exposed their ignorance in public. Undoubtedly interaction helps some aspects of second language learning, but it is not clear how crucial this may be compared to all the other factors in the complex second language learning situation. Teachers' interaction patterns are probably based on their experience and training; we do not know if there are better patterns they could adopt than these pre-existing patterns. Moreover, the analysis is usually based on interview-type data or classroom data involving a native speaker and a non-native student; hence it is not representative of normal L2 usage in the world outside the classroom, which often takes place between L2 users. Ernesto Macaro (2005) argues that the 'unswerving faith in the comprehensible input – negotiation – comprehensible output has been entirely due to the fact that the proponents of these theories and hypotheses simply did not speak the first language of their subjects or students'; in a situation where the teacher could speak the same language as the students they would resort to codeswitching. In other words, 'natural' L2 learning would involve an L1 component, and teaching becomes 'unnatural' when its reliance on the L2 forces the learner into these forms of interaction.

The teaching applications are partly to do with communication and task-based learning, discussed in Chapter 13. Mostly the interaction approach to teaching has been seen as encouraging the teacher to interact with students in the classroom and to use activities that require mutual interaction, also discussed in Chapter 13. Lightbown and Spada (2006) recommend recasts rather than corrections with adults, but not with children, as 'learners seem to hear them as confirmation of meaning rather than correction of form'. Since the approach is based on what teachers already do, it seems fairly circular to feed it back to them as advice on what they *should* do; it is only allowable if the expert says so. How many teachers trained in the past 40 years run inflexible classrooms with no interaction with the students or between the students?

Box 12.5 The interaction approach

Key theme

Conversational interaction involving negotiation of meaning is the crucial element in second language learning.

Teaching

- Teaching means setting up tasks that involve negotiation of meaning.
- Teacher or peer feedback is important to interaction, particularly through recasts.

12.5 Sociocultural SLA theory

Focusing questions

- What do you think is the relationship between what you say and what is going on in your mind?
- How much do you think language learning comes from within the child, how much from assistance from other people?

Keywords

internalization: in Vygotsky's theory, the process through which the child turns the external social use of language into internal mental use

zone of proximal development (ZPD): to Vygotsky, the gap between the child's low point of development, as measured individually, and high point, as measured on social tasks; in SLA research often used to refer to the gap between the learner's current stage and the next point on some developmental scale the learner is capable of reaching

scaffolding: the process that assists the learner in getting to the next point in development, in sociocultural theory consisting of social assistance by other people rather than of physical resources such as dictionaries

One of the most influential models since the early 1990s has been sociocultural theory, which emphasises the importance of interaction from a rather different perspective. This theory takes its starting point from the work of Lev Vygotsky, a leading figure in early Soviet psychology who died in 1934, but whose impact in the West came from the translations of his main books into English in 1962 and 1978 (misleadingly, in much of the SLA literature, his works are cited as if they appeared in the 1960s to 1980s, rather than being written in the 1930s). Vygotsky (1934/1962) was chiefly concerned with the child's development in relationship to the first language. His central claim is that, initially, language is a way of acting for the child, an external fact: saying 'milk' is a way of getting milk. Gradually

language becomes internalized as part of the child's mental activity: 'milk' becomes a concept in the mind. Hence at early stages children may seem to use words like 'if' and 'because' correctly, but in fact have no idea of their meaning, rather like Eve Clark's features view of vocabulary development seen in Chapter 3. There is a tension between external and internal language, with the child progressively using language for thinking rather than for action. Language is not just social, not just mental, but both – $Lang_4$ as well as $Lang_5$.

Vygotsky also perceived a potential gap between the child's actual developmental stage, as measured by standard tests on individual children, and the stage they are at when measured by tasks involving cooperation with other people. This he called 'the zone of proximal development' (ZPD), defined as 'the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in cooperation with more capable peers' (1935/1978: 86). In this zone come things that the child cannot do by himself or herself, but needs the assistance of others; in time these will become part of the child's internal knowledge. This means 'the only good learning is that which is in advance of development'. In one sense the ZPD parallels the well-known idea of 'reading readiness'; in Steiner schools, for example, children are not taught to read until they show certain physical signs of development, such as loss of milk teeth. And it is also a parallel to the teachability concept in processability theory seen in Chapter 3; you cannot teach things that are currently out of the learner's reach. The distinctive aspect of Vygotsky's ZPD is that the gap between the learner's current state and their future knowledge is bridged by assistance from others; learning demands social interaction so that the learner can internalize knowledge out of external action. Any new function 'appears twice: first on the social level, and later on the individual level; first *between* people (interpsychological) and then *inside* the child (intrapsychological)' (Vygotsky, 1935/78: 57).

The ZPD has been developed in SLA sociocultural theory far beyond Vygotsky's original interpretation. In particular, social assistance is interpreted through the concept of scaffolding, taken from one of the major later figures in twentieth-century developmental psychology, Jerome Bruner, who spent much time specifically researching the language of young children. He saw children as developing language in conjunction with their parents through conversational 'formats' that gradually expand over time until they die out; classic examples are nappy-changing routines and peekaboo games, which seem to be universal (Bruner, 1983). The child's language acquisition is scaffolded by the helpful adult who provides a continual supporting aid to the child's internalization of language, what Bruner calls the innate Language Acquisition Support System (LASS), in rivalry with Chomsky's Language Acquisition Device (LAD).

In an SLA context, scaffolding has been used in many diverse senses. For some, anything the learner consults or uses constitutes scaffolding, such as the use of grammar books or dictionaries; virtually anything that happens in the classroom, then, can count as scaffolding, say the traditional teaching style described in Chapter 9 known as IRF (initiation, response and feedback), or any kind of correction by the teacher. Others maintain the original Vygotskyan idea of the ZPD as the teacher helping the student; scaffolding is social mediation involving two people, and is performed by a person who is an expert. Some have extended scaffolding to include help from people at the same level as the student, that is, fellow students. In teaching terms, this includes everything from teacher-directed learning to carrying out tasks in pairs and groups – the liberating effect of the

communicative revolution of the 1970s. Swain and Lapkin (2002) combined both approaches by having an expert reformulate students' descriptions and then having the students discuss the reformulation with a fellow student, which turned out to be effective.

For this SLA theory, development seems to mean greater success in doing the task. For example, Amy Ohta (2000) describes the development of a learner of Japanese called Becky in a single classroom session, through detailed grammatical correction and prompting from a fellow student Hal, so that by the end she has reached a new developmental level; she has internalized the social interaction and become more autonomous. In a sense, this is micro-development over minutes rather than the macro-development over years mostly used by developmental psychologists.

Like the interaction hypothesis, sociocultural theory bases itself on the dialogue that learners encounter in the classroom. It is broader in scope in that it emphasises the assistance provided by others, of which the repairs to monolingual L2 conversation form only a small part. It has much higher aims in basing the learning that takes place through social interaction on a whole theory of mental development. Its essence is what Merrill Swain (2000: 102) calls 'collaborative dialogue' – 'dialogue in which speakers are engaged in problem solving and knowledge building'. Hence it is not the dialogue of the interaction hypothesis in which people exchange information, that is, communication, but an educational dialogue in which people create new knowledge, that is, learning. Dialogue provides not so much negotiation for meaning, as assistance in internalization.

The obvious teaching implications are structured situations in the classroom in which the students cooperate with the teacher or with fellow students, as shown in numerous detailed studies of L2 classrooms. In a sense, this is the same message as the other interaction-based teaching applications of SLA research; for instance, it can provide an underpinning in development psychology for the task-based learning movement, discussed in Chapter 13. In another sense it is too vague to give very precise teaching help; it could be used to justify almost anything in the classroom that involved an element of social interaction by the students and teacher. In particular, it is hard to see what the goals of language teaching are for sociocultural theory; it concerns the process of development, not the end point. Apart from the knowledge of language itself as an internalized mental entity, the only other gain from second language learning seems to be the enhanced metalinguistic awareness of the students.

Box 12.6 Sociocultural theory

Key themes

- Language learning is social mediation between the learner and someone else during which socially acquired knowledge becomes internal.
- It takes place through scaffolding by an expert or a fellow learner.

Teaching

- Use collaborative dialogue in the classroom through structured cooperative tasks.

12.6 Multi-competence – the L2 user approach

Focusing questions

- Do you speak your first language any differently because you know a second language?
- Do students want to speak like native speakers? Can they actually achieve it?

Keywords

multi-competence: the knowledge of more than one language in the same mind

L2 user: the person who knows a second language, at whatever level, considered as a user rather than a learner

Most of the models seen so far assume that having a second language is unusual. Whether it is Universal Grammar or the Competition Model, the starting point is knowledge of one language, not knowledge of several languages: a second language is an add-on to a first language model. Only the social-educational model is specifically a model of how L2 learning occurs, rather than an extrapolation from more general models. Thus, mostly they regard L2 learning as inefficient because the learners seldom reach the same level as the L1 child.

But why should they? By definition, L2 learners are not native speakers – at least according to the definition advanced in Chapter 1, 'a monolingual person who still speaks the language they learnt in childhood'. They can never be native speakers of another language, without time travel back to their childhood. There is a need to recognize the distinctive nature of knowing two or more languages without subordinating L2 knowledge to monolingual knowledge. As Sridhar and Sridhar (1986) point out, 'Paradoxical as it may seem, second language acquisition researchers seem to have neglected the fact that the goal of SLA is bilingualism.'

Chapter 1 introduced the term 'multi-competence' to refer to the overall knowledge of both the first language and the L2 interlanguage – two languages in one mind. The multi-competence model develops the implications of this for second language acquisition. The key insight is that the person who speaks more than one language should be considered in their own right, not as a monolingual who has tacked another language on to their repertoire. Since this is the model that I have been concerned with myself, some of the basic ideas are met everywhere in this book, particularly in Chapter 10. First we need to show that L2 users differ from those who use one language.

- *L2 users' knowledge of the second language is not the same as that of native speakers.* Students and teachers are frustrated by their inability to speak like natives. Very few people are ever satisfied by their L2 proficiency. Even bilinguals who can pass for native speakers still differ from native speakers; Coppetiers (1987) found that Americans living in France as bilinguals gave slightly different answers to questions about French from native speakers, even if none of their

colleagues had noticed their French was deficient. Only a small proportion of L2 learners can ever pass for natives. SLA research should be concerned with the typical achievement of L2 learners in their own right, rather than with that of the handful of exceptional individuals who can mimic native speakers.

- *L2 users' knowledge of their first language is not the same as that of monolingual native speakers*. While everyday experience clearly shows that the second language has an effect on the first, this is only now starting to be researched; see, for example, *Effects of the Second Language on the First* (Cook, 2003). Yet people's intuitions of their first language, their processing of sentences and even their gestures are affected to some extent by the second language that they know. Chapter 4 reports that French and Spanish learners of English have their voice onset time affected by their knowledge of English, so that to some extent they have a single system they use in both languages. English speakers of Japanese use *aizuchi* (nodding for agreement) when talking English (Locastro, 1987). Experiments with syntax have shown unexpected effects on the first language from knowing a second language. Hartsuiker *et al*. (2004) found, for instance, that hearing passives in one language increased their production in using another.
- *L2 users think in different ways to monolinguals*. Learning another language makes people think more flexibly, increases language awareness and leads to better attitudes towards other cultures. Indeed, these have often been seen as among the educational benefits of acquiring another language. English children who learn Italian for an hour a week learn to read more rapidly in English (Yelland *et al*., 1993).

All in all, learning another language changes people in many ways. The languages exist side by side in the same person, affecting not only the two languages, but also the person as a whole. Acquiring a second language does not mean acquiring the self-contained language system of a monolingual, but a second language system that coexists with the first in the same mind.

The L2 user in language teaching

The multi-competence approach suggests that key factors in language teaching are the L2 user and L2 use of language. Successful L2 users are not just passing for native speakers, but expressing their unique status as people who can function in two cultures. The major consequences for language teaching are set out below.

Teaching goals should be L2 user goals, not approximations to the native speaker

If L2 users differ from monolingual speakers, the benefits of learning a second language are becoming a different kind of person, not just adding another language. This is the basis for the argument presented in Chapter 11 that the proper goal of language teaching should be the proficient L2 user who is capable of using both languages, not the monolingual who functions in only one. The overall goals of language teaching should reflect what L2 users can do; the teaching materials should incorporate situations of L2 use and features of L2 user language, not those belonging to monolinguals. The native speaker teacher is not necessarily a good model for the student, as developed in Chapter 10.

The first language should be recognized in language teaching

If both languages are always linked in the mind, it is impossible for both of them not to be present in the students' minds at all times. It is an illusion that permitting only the second language in the classroom forces the students to avoid their first language; it simply makes it invisible. Hence, as discussed in Chapter 6, teachers should think how teaching can make systematic use of both languages, rather than try to exclude the first language. The insistence of the multi-competence model that the L2 user is at the centre of language teaching frees teaching from some long-standing assumptions. Teachers should be telling students how successful they are as L2 users, rather than implying that they are failures for not speaking like natives.

Box 12.7 Multi-competence and language teaching

Key themes

Multi-competence theory claims that L2 users are not the same as the monolingual native speaker because their knowledge of the second language and their knowledge of their first language is not the same, and they think in different ways.

Teaching uses

Teaching should:

- aim at the goal of creating successful L2 users, not imitation native speakers;
- make systematic use of the first language in the classroom.

12.7 General issues

All these models of L2 learning account persuasively for what it considers the crucial aspects of L2 learning. What is wrong with them is not their claims about their own front yard so much as their tendency to claim that the whole street belongs to them. Each of them is at best a piece of the jigsaw. Do the pieces add up to a single picture? Can a teacher believe (i) that language is mental knowledge (ii) gained by assigning weightings to factors (iii) by those with positive attitudes towards the target culture? This combines three arguably incompatible theories of language acquisition from different disciplines; superficially, it seems a good example of what George Orwell calls doublethink – the belief in two contradictory ideas at the same time. However, the differences between the areas of L2 learning dealt with by each model mean that they are by no means irreconcilable. UG applies only to 'core' grammar; response weightings apply to speech processing; attitudes to behaviour in academic classrooms. Only if the models dealt with the same areas would they come into conflict. There is no overall framework for all the models as yet. When they are fitted together, an overall model of L2 learning will one day emerge. At the moment there are many area-specific models, each of them providing some useful insights into its own province of L2 learning; there is not much point in debating whether a bicycle or an aeroplane is an easier way of getting from place to place; both have their proper uses. Hence there is not much sense in deciding which overall model is best; each has to be developed to its logical limits to see where it might lead.

For the sake of their students, teachers have to deal with L2 learning as a whole, as seen in Chapter 13. It is premature for any one of these models to be adopted as the sole basis for teaching, because, however right or wrong each one may be, none of them covers more than a small fraction of what the students need. As Spolsky (1989a) wisely remarks: 'any theory of second language learning that leads to a single method must be wrong'.

Discussion topics

1 Are there parts of the second language that we do not need to teach, and parts that are based on transfer from our first language?

2 How can vocabulary be taught in relationship to grammatical structure?

3 What parts of the second language can be built up by practice? What parts cannot?

4 How can teachers help students go from the formal language of the classroom to the informal language outside?

5 How much of students' success would you attribute to motivation, and how much to other factors?

6 Is it realistic to claim that the target of L2 teaching should be the L2 user, or do we have to compromise with students' beliefs that they want to be like native speakers?

7 Do you think you have gained more from acquiring a second language than just the language?

Further reading

Teaching applications of the UG model are discussed in Cook (1994) in T. Odlin (ed.), *Perspectives on Pedagogical Grammar*; its link to L2 learning is discussed in Cook and Newson (2007) *Chomsky's Universal Grammar*. Useful overall accounts of some L2 models are in Myles and Mitchell (2004) *Second Language Learning Theories*; and VanPatten and Williams (2006) *Theories in Second Language Acquisition*. A synthesising overview of L2 learning can be found in Spolsky (1989a) *Conditions for Second Language Learning*. The Competition Model is discussed more critically in Cook (1993) *Linguistics and Second Language Acquisition*. The multi-competence model is treated extensively in Cook (2002) *Portraits of the L2 User* and (2003) *Effects of the Second Language on the First*.