8 Sociocultural perspectives on second language learning

The co-construction of linguistic knowledge in dialogue is language learning in progress. (Swain and Lapkin, 1998, p. 321)

8.1 Introduction
In this chapter and the next (Chapter 9), we turn our attention to theorists who view language learning in essentially social terms. In both these chapters, we examine the work of those who claim that target language interaction cannot be viewed simply as a source of ‘input’ to be parsed by internal learning mechanisms, but that it has a much more central role to play in learning. Indeed, for some researchers, interaction itself constitutes the learning process, which is quintessentially social rather than individual in nature. This is not a new view (for example, see Hatch, 1978, cited in Chapter 6), but it has been given extra impetus from the 1990s onward by an increasing interest in applying learning theory associated with the Soviet developmental psychologist Lev S. Vygotsky to the domain of second language learning. In this chapter, we review and evaluate this strand of neo-Vygotskian thinking and research, here called ‘sociocultural’ theory (SCT), following most current writers in this field.

Since the 1980s, the foremost group advocating the relevance of sociocultural theory to second language learning have been James Lantolf and his associates. From the mid-1990s Lantolf edited several collections of papers which illustrated the application of different facets of Vygotskian thinking to second language learning (Lantolf and Appel, 1994; Lantolf, 2000). A later volume by Lantolf and Thorne (2006) provided the most substantial theoretical overview of applications of SCT concepts to SLA to date, but numerous other shorter accounts by Lantolf and others have provided updates regarding theoretical developments as well as summarizing a wider range of empirical sociocultural research (for example, Swain et al., 2002; Thorne and Lantolf, 2006; Lantolf and Thorne, 2007; Lantolf and Poehner, 2008, 2009; Lantolf, 2011; Swain et al., 2011; Lantolf, 2012).

8.2 Sociocultural theory
Lev Semeonovich Vygotsky was born in 1896, the same year as the Swiss developmental psychologist Jean Piaget whose views on language development were briefly mentioned in Chapter 1. Born in the Russian provinces, Vygotsky was active in Moscow scientific circles between 1925 and his early death in 1934. Like Piaget, he was a researcher and theorist of child development; however, his work fell into disfavour within Soviet psychology, and the first of
8.2 Sociocultural theory

his many writings to be translated into English, *Thought and language*, appeared only in 1962. (This book was later republished as *Thinking and speech*: Vygotsky, 1987.) Since that time his views on child development have become increasingly influential, having been taken up and promoted by psychologists and child development theorists such as Jerome Bruner (1985), James Wertsch (1985, 1998) and Barbara Rogoff (1990, 2003), and applied in classroom studies by many educational researchers (for example, Mercer, 1995, 2000; Daniels, 2007; Mercer and Littleton, 2007; Wells, 1999, 2009). Contemporary interpretations and modifications to Vygotsky's original ideas mean that current sociocultural theory is best described as 'neo-Vygotskian'. (For an authoritative review of Vygotsky's original ideas and their modern interpretation, see Daniels *et al.*, 2007). In the rest of this section, we will outline a number of key ideas current in contemporary interpretations/discussions of Vygotsky which, as we shall see, have been taken up and developed by SLL theorists.

8.2.1 Mediation and mediated learning

Mediation is a central concept in Vygotsky's writings (see reviews in Lantolf and Thorne, 2006, pp. 59–83; Wertsch, 2007). Lantolf (2000) provides an introductory account:

> The central and distinguishing concept of sociocultural theory is that higher forms of human mental activity are mediated. Vygotsky (1987) argued that just as humans do not act directly on the physical world but rely, instead, on tools and labour activity, we also use symbolic tools, or signs, to mediate and regulate our relationships with others and with ourselves. Physical and symbolic tools are artifacts created by human culture(s) over time and are made available to succeeding generations, which often modify these artifacts before passing them on to future generations. Included among symbolic tools are numbers and arithmetic systems, music, art, and above all, language. As with physical tools, humans use symbolic artifacts to establish an indirect, or mediated, relationship between ourselves and the world. The task for psychology, in Vygotsky's view, is to understand how human social and mental activity is organised through culturally constructed artifacts and social relationships. (Lantolf, 2000, p. 80)

This quotation shows clearly the sociocultural belief in the centrality of language as a 'tool for thought', or a means of mediation, in mental activity. Through language, for example, we can direct our own attention (or that of others) to significant features in the environment, rehearse information to be learned, formulate a plan or articulate the steps to be taken in solving a problem. In turn, it is claimed that the nature of our available mental tools can itself shape our thinking to some extent. For example, Olson has argued that once writing systems were invented, these 'mental tools' changed our understanding of the nature of language itself, because they provided humanity with concepts...
and categories for thinking about language, such as the ‘word’, the ‘sentence’ or the ‘phoneme’, which did not exist prior to the development of literacy (1995). Similarly, Thorne (2009) claims that texts produced through internet means such as blogging, instant messaging and online fan fiction (‘new media literacy’) not only have new and distinctive characteristics shaped by the technology itself, but also contribute to forging new cultural practices and new understandings of the term ‘community’.

From the sociocultural point of view, learning itself is also a mediated process. It is mediated partly through learners’ developing use and control of mental tools (and once again, language is the central tool for learning, though other semiotic modes of representation play a role: Wells, 1999, pp. 319–20). Importantly, learning is also seen as socially mediated, that is to say, it is dependent on face-to-face interaction and shared processes such as joint problem-solving and discussion, with experts and also with peers. There is some controversy among sociocultural theorists about how these learning processes are claimed to work (see extended discussion in Lantolf and Thorne, 2006, Chapter 6). Some key ideas are explored further in the next subsection.

8.2.2 Regulation, scaffolding and the Zone of Proximal Development

The mature, skilled individual is capable of autonomous functioning and self-management, that is, of self-regulation. However, the child or the unskilled individual learns by carrying out tasks and activities under the guidance of other more skilled individuals (such as caregivers or teachers), initially through a process of other-regulation, typically mediated through language. That is, the child or the learner is inducted into a shared understanding of how to do things through collaborative talk, until eventually they internalize (Lantolf and Thorne, 2006) or appropriate (for example, Rogoff, 1995) new knowledge or skills into their own individual consciousness. So, successful learning involves a shift from collaborative inter-mental activity to autonomous intra-mental activity.

The process of supportive dialogue which directs the attention of the learner to key features of the environment, and which prompts them through successive steps of a problem, came to be known as scaffolding in some interpretations of sociocultural theory. Some of the earliest scholars to promote this metaphor were Wood et al. (1976); for more recent discussion and review, see, for example, Daniels (2007). According to Stone (1998, slightly paraphrased from Daniels, 2007, p. 323), scaffolding has four key features:

1. The recruitment by an adult of a child’s involvement in a meaningful and culturally desirable activity beyond the child’s current understanding or control;
2. Assistance ... using a process of ‘online diagnosis’ of the learner’s understanding and skill level, and the estimation of the amount of support required;
3. Support which is not a uniform prescription, but may vary in mode (e.g. physical gesture, verbal prompt, extensive dialogue), as well as in amount;

4. The support provided is gradually withdrawn as control of the task is transferred to the learner.

As Donato puts it, ‘scaffolded performance is a dialogically constituted interpsychological mechanism that promotes the novice’s internalisation of knowledge co-constructed in shared activity’ (1994, p. 41). However, in some recent sociocultural work on second language learning, the term ‘languaging’ has been preferred for talk focusing on the construction of linguistic knowledge (see Swain et al., 2011, and further discussion below in Sections 8.3.1–8.3.3).

The domain where learning can most productively take place was christened by Vygotsky the Zone of Proximal Development (ZPD), that is, the domain of knowledge or skill where the learner is not yet capable of independent functioning, but can achieve a desired outcome given relevant assistance. The ZPD was defined by Vygotsky as:

the difference between the child’s developmental level as determined by independent problem solving and the higher level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (1978, p. 85)

These ideas are illustrated in the sequence below, which presents an example taken from the general educational literature (Mercer and Littleton, 2007, p. 80):

The computer screen shows:

Q3

Rough surfaces cause

a) As much friction as a smooth surface?
b) More friction than a smooth surface?
c) Less friction than a smooth surface?

Rachel: Which one do you think it is?

Cindy: ‘c’

Rachel: I think ‘b’ (laughs)

Cindy: I don’t. Look, ‘changes more surfaces than a smooth surface’ (misreading the screen)

Rachel: Yeah I know, but if you rub

Cindy: (inaudible)

Rachel: Yeah I know but – wait, wait – listen, if you rub two smooth surfaces together will they be slippery or not? (rubs hands together)

Cindy: Stable – depends how tight you’ve got it
SECOND LANGUAGE LEARNING THEORIES

Rachel: Cindy listen! If you’ve got oil on your hands and you rub them together will they be slippery or not? (rubs hands together)

Cindy: Well you see (rubs hands in a parody of Rachel, but without hands touching) cos they don’t rub together, they go

Rachel: Cindy! (mock exasperation) If you’ve got

Cindy: Yeah, they will be slippery (laughs)

Rachel: Yeah, exactly. So if you’ve got two rough surfaces and you rub them together it will not be as slippery will it?

Cindy: No

Rachel: So that proves my point doesn’t it?

Cindy: mmm

Rachel: Yes, do you agree? Good (she clicks on answer ‘b’)

(On-screen indication that ‘b’ was selected)

Here, the student Cindy starts by approaching the computer-based problem rather carelessly (misreading the instructions). She is scaffolded by fellow student Rachel with a mimed example, which is made successively more explicit (the idea of a lubricant is introduced). Eventually, Rachel's miming and questioning lead Cindy to think through the problem, and once an agreed answer has emerged/been internalized, the computer solution is cross-checked.

The ZPD has proved a very attractive concept for educators, but its interpretation has been controversial. For example, it seems clear that from a classic Vygotskian perspective, instruction ‘leads’ development within the ZPD – that is to say, the learner is challenged by the presentation of some new, advanced stimulus or idea, and the learner’s developmental level is apparent from the nature of their response. However, many neo-Vygotskian interpreters of the ZPD idea seem influenced by constructionist or co-constructionist thinking, where the learner(s) themselves build new knowledge, as they grapple with a problem-solving activity. (A fuller account of current debates around the ZPD and its application in general education can be found, for example, in Del Río and Álvarez, 2007; Daniels, 2007.)

8.2.3 Microgenesis

The example just quoted illustrates in miniature some general principles of sociocultural learning theory. According to Vygotsky’s ‘genetic law’ of cultural development, these principles apply on a range of different timescales. These include the learning which the human race has passed through over successive generations (phylogenesis), as well as the learning which the individual human infant experiences (ontogenesis). For the entire human race, as well as for the
individual infant, learning is seen as first social, then individual. As Vygotsky put it:

Every function in the child’s cultural development appears twice: first, on the social level, and later, on the individual level; first between people (interpsychological), and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relations between human individuals. (Vygotsky, 1978, p. 57)

Throughout their life, of course, human beings remain capable of learning; and the ongoing learning process for more mature individuals acquiring new knowledge or skills is seen in the same way. That is, new concepts continue to be acquired through social/interactional means, a process which can sometimes be traced visibly in the course of talk between expert and novice. This most local, contextualized learning process is labelled microgenesis (Lantolf and Thorne, 2006, p. 52); it is important for sociocultural accounts of second language learning, as will be made clear below.

This broad cultural-historical perspective on human development, from phylogenesis to microgenesis, forms an overall backdrop to empirical sociocultural research. As far as research methods were concerned, Vygotsky himself reacted against the experimental methods of the psychology of his day. He made proposals for so-called double stimulation, that is, a methodology where one or more pre-planned stimuli were introduced into a problem-solving situation, and the uses made of these stimuli, plus the creation and use of other tools by the research participants, were studied and documented (see the account in Engeström, 2007). This general idea of making one or more interventions in a situation, and tracking the outcomes in a holistic way (but in the absence of formal experimental features such as a control group, for example), is compatible with several current qualitative research methodologies, and highly characteristic of contemporary sociocultural research in second language learning (see Lantolf and Thorne, 2006, Chapter 6).

8.2.4 Private and inner speech

For sociocultural theorists, language is the prime symbolic mediating tool for the development of consciousness, for the human race overall and also for the individual, whether child or adult. The relationship of language and thought has therefore been a consistent focus of attention.

Young children can often be observed to engage in private speech, talk apparently to and for themselves, rather than for any external conversational partner. From the point of view of classic Piagetian theory of child development, this talk has been interpreted as evidence of children’s egocentrism, or inability to view the world from another’s point of view. However, private speech is
interpreted differently in sociocultural theory. Here, it is seen as evidence of the child’s growing ability to regulate their own behaviour – when, for example, the child talks to itself while painting a picture, or solving a puzzle. For Vygotsky, private speech eventually becomes inner speech, a use of language to regulate internal thought, without any external articulation. From this point of view, private speech reflects an advance on the earliest uses of language, which are social and interpersonal. The fully autonomous individual has developed inner speech as a tool of thought, and normally feels no further need to articulate external private speech. However, when tackling a new task, even skilled adults may accompany and regulate their efforts with a private monologue. (For a fuller account see John-Steiner, 2007.)

8.2.5 Activity theory

The last important sociocultural idea which we need to consider is that of activity theory, originally developed by one of Vygotsky’s successors, A.N. Leontiev (Leontiev, 1981; Zinchenko, 1995; Lantolf and Thorne, 2006, Chapter 8) and further popularized today by Yrjö Engeström and associates (Engeström, 1999; Daniels et al., 2010). Where Vygotsky focused mainly on the relation between individuals and their goals, mediated by physical and cultural tools, activity theorists set out to make sense of individual actions within a broader, collaborative setting. Leontiev himself illustrated the idea of ‘activity’ with the example of hunting among hunter-gatherer peoples, where individual actions (such as the driving of game animals) make sense only within the broader collective activity, stimulated by the need for food or clothing (Leontiev, 1981, p. 210).

Contemporary activity theorists have modelled so-called ‘activity systems’ as shown in Figure 8.1 (after Engeström, 1999). The top part of this model reflects Vygotskian concerns with the individual (the ‘subject’ in the diagram, in Leontiev’s example perhaps the individual hunter), their goals (the ‘object’, perhaps the game animal) and mediation by physical or cultural tools (the

Figure 8.1 Model of an activity system (after Engeström, 1999)
8.3 Applications of sociocultural theory to SLL

From a sociocultural perspective, children’s early language learning arises from processes of meaning-making in collaborative activity with other members of a given culture. From this collaborative activity, language itself develops as a ‘tool’ for making meaning (Newman and Holzman, 1993, in Dunn and Lantolf, 1998, p. 420). Lantolf and Thorne (2006) note that the view of first language acquisition which ‘best complements’ sociocultural theory is that of an emergent system, in which people ‘develop a repertoire of linguistic devices, to produce and interpret communicative intentions’ (p. 173). They view SCT as compatible with the usage-based theory of Tomasello (2003) and others, which we have reviewed in Chapter 4. (For a fuller discussion, see Thorne and Lantolf, 2006, pp. 172–5.)

From a sociocultural point of view, therefore, having internalized the symbolic tools of the first language system, the second language learner has further opportunities to create yet more tools and new ways of meaning, through collaborative L2 activity. Applications of the ZPD to second language learning assumes that new language knowledge is jointly constructed through collaborative activity, which may or may not involve formal instruction and metatalk (depending on whether the learning is naturalistic, or classroom-bound: see discussion in Section 8.3.3 below in the context of concept-based instruction). The new language is then appropriated and internalized by the learners, seen as active agents in their own development.

In the following sections, we will consider a selection of L2 research studies which have appealed to key Vygotskian ideas: private speech, activity theory, the role of self-regulation and the ZPD in language learning and assessment, and finally the new field of concept-based mediation and instruction.

8.3.1 Self-regulation, private speech and ‘languaging’ in second language discourse

Instances of private speech have been regularly noted in naturalistic studies of child L2 acquisition. However, their significance has been variously interpreted.
The following example is quoted by Hatch (1978), from a study by Itoh (1973) of a Japanese L1 child, Takahiro, learning English as L2:

H: House.
Takahiro: This house?
H: House.
T: House.
    To make the house.
    To make the house.
    To make the house.
    This?
    House.
    Garage.
    Garage house
    house
    big house
    Oh-no!
    broken.
H: Too bad.
T: Too bad.
H: Try again.
T: I get try.
    I get try.
H: Good.

For Hatch, Takahiro’s extended speech turn, accompanying a construction activity of some kind, is viewed as ‘not social speech at all but [only] language play’ (p. 411). From a Vygotskian perspective, however, this extended spoken accompaniment to action provides evidence about the role of language in problem-solving and self-regulation. (It also provides evidence for the appropriation by the child of the new lexical item house, initially supplied by the supportive adult, but then quickly reused by Takahiro in a range of syntactic frames.)

The first phase of studies which explicitly brought Vygotskian conceptions of private speech to bear on second language learner data mostly worked with data elicited from older learners, in semi-controlled settings (see reviews by McCafferty, 1994; de Guerrero, 2005; and Lantolf and Thorne, 2006, Chapter 4). In one of the first attempts to apply any aspect of Vygotskian theory to second language learning, Frawley and Lantolf (1985) reported an empirical study of
English L2 learners undertaking a picture-based narrative task. The sequence of pictures comprised the following frames:

Frame 1: A boy walks along a road.
Frame 2: He sees an ice cream seller.
Frame 3: He buys a 50-cent ice cream cone.
Frame 4: He gives the cone to a small boy.
Frame 5: A man approaches the small boy.
Frame 6: The man takes the cone from the small boy. The small boy cries.

In retelling this story, the English L2 learners produced accounts which were, as narratives, disjointed and incoherent. However, they incorporated into their accounts many utterances which involved direct reactions/descriptions of individual pictures (I see a boy on the road), or externalizations of the task itself (You want me to say what they are doing? This is the problem now, etc). These metacomments were absent from the fluent performances of a group of native speakers (A little boy is walking down the street ...).

Frawley and Lantolf interpreted the data as demonstrating the learners’ need to ‘impose order on the task by speaking and identifying the task’ (p. 26). In Vygotskian terms, they argued that the learners were struggling to move beyond object-regulation (in this case, evidenced in direct reactions to the individual pictures, or descriptions of them) towards self-regulation and control over the narrative task. Because they could not take self-regulation for granted, their efforts to gain control were explicitly articulated throughout their performances, which were therefore a mixture of self-directed (that is, private) speech and social speech.

McCafferty conducted further studies of learner narratives (1992, 1994), and argued similarly that many utterances incorporated within the narrative of the L2 subject were examples of private speech. In these studies, McCafferty compared the extent of private speech to be found in the narratives produced by learners at different levels of proficiency as well as by native speakers, demonstrating a systematic relationship between the use of private speech to regulate task performance, and the degree of task difficulty being experienced.

Other studies have documented the naturalistic use of private speech among L2 learners. For example, Lee (2008) video-recorded seven adult Korean–English bilingual biology students at an English-medium American university, while they studied privately in their rooms for an upcoming examination. The students were filmed for three hours each; all of them used some form of private speech, some of them very actively (up to 60 minutes of the total time). The students read aloud to themselves, asked themselves questions and answered them, annotated texts and drew pictures; they also regulated their attention through self-directed gesture. Much of this private activity was carried out bilingually, in both English
and Korean, and Lee argues that the students were dialoguing with themselves, both ensuring they understood the scientific material, and building up their specialist English-language knowledge in the field.

In the language classroom, researchers have recorded learners’ private L2 speech during ongoing classroom interaction, and have investigated possible links between this type of private speech and the internalization of new language forms. A striking example is the work of Amy Snyder Ohta, who conducted longitudinal case studies of seven adult learners of Japanese as L2, in classroom settings (2001). The learners regularly wore personal microphones, so that their private speech was recorded alongside other types of language use. In Ohta’s study, the learners were judged to be using L2 private speech when they whispered or spoke with reduced volume, and/or when they spoke but were not attended to by others (for example, by the teacher). Most of the learners in this study used L2 private speech regularly during whole class interaction.

Ohta identifies three main types of L2 private speech. The commonest form was repetition, where the learners privately repeated the utterances of the teacher or of other students. This was common practice with new L2 material which was the focus of class attention. The example below shows learner Rob repeating a new Japanese word privately (the symbols ° and °° are indicators of lowered speech volume):

1  T:  Ja shinshifuku uriba ni nani ga arimasu ka?  
   So, what is there in the men's department?

2  S9:  Kutsushita ga arimasu.  
   There are socks.

3  T:  Kutsushita ga arimasu.  
   There are socks.

4  S10:  Jaketto.  
   Jackets.

5  S11:  Nekutai.  
   Ties.

   There are jackets. Uh S12? There are ties. S12?

7  S12:  Uh [kutsushita ga arimasu.  
   Uh there are socks.

→ 8  R:  [°°Nekutai nekutai °°(.) °nekutai nekutai °°°Tie tie °°(.) °tie tie °°].

(Ohta, 2001, pp. 57–8)

Learners also produced vicarious responses, when they responded privately to a question from the teacher, or secretly repaired/completed someone else’s
utterance. In the following example, learner Kuo-ming produces an incorrect vicarious response first of all, and then self-corrects privately after hearing the teacher’s utterance:

1. T: Eto jaa kanji no kuizu arimashita ne::. (.) arimashita. (.) ne arimashita ne, muzukashikatta desu ka?
   *Um well there was a kanji quiz wasn’t there. (.) there was (.) right? There was, was it difficult?*

→ 2. Km: °Um°

→ 3. Ss: lie
   *No*

→ 4. Km: °E::h yasashi desu°
   °E::h it is easy° (error: should be in the past tense)

5. T: Yasashikatta desu um
   *It was easy um*

→ 6. Km: [°°Yasashikatta desu°°
   °°It was easy°°

→ 7. T: Ii desu ne::. Jaa kanji ii desu ka?
   *That’s good. Is everyone okay with the kanji?*

(Ohta, 2001, p. 51)

Finally, learners engaged in manipulation, when they privately constructed their own L2 utterances, manipulating sentence structure, building up and breaking down words and playing with sounds.

Ohta claims that her case study learners typically engaged in L2 private speech when confronted with ‘new or problematic’ language. This private speech allowed them to develop phonological and articulatory control of new material (through repetition). It provided opportunities for hypothesis testing about sentence construction, for example through comparison of privately produced candidate forms with the utterances of others, or through working on segmentation problems. Private speech during whole class talk also allowed for rehearsal of social interaction and conversational exchanges, ahead of, for example, involvement in pair or group work. Altogether, Ohta argues that:

> covert learner activity is a centerpiece of learning processes, deepening our understanding of how learners appropriate language through interactive processes...

... results suggest the power of engagement as a factor in L2 acquisition, as the data reveal instances in which linguistic affordances acted on by the learner in private speech are incorporated into the learner’s developing linguistic system. (2001, pp. 30–1)

The two studies just quoted (Lee, 2008 and Ohta, 2001) concentrate on the use of L1 and L2 private speech to manage ongoing learning activity, in natural
situations (the student’s residence, a regular Japanese L2 classroom). Such studies have not documented systematically the learning outcomes resulting from the use of private speech. However, some studies have also set out to capture this. For example, Swain et al. (2009) ran an interventionist study, where they set out to teach university learners of L2 French the concept of grammatical ‘voice’, and its realization in the French verb system, using a pre-test + post-test design.

Nine students took part in this short study. At the beginning of the 90-minute intervention, they were each asked to explain their understanding of active/passive/middle ‘voice’. They then worked individually through a set of study materials, written in English, which explained both the grammar and semantics of voice in French. They were encouraged to verbalize their understandings as they worked through the materials (this use of L1-medium private speech is called ‘languaging’ by Swain and her colleagues). Finally, they were asked to redefine the nature of ‘voice’, and to comment on active, middle and passive verb forms in a given text. (This was the immediate post-test.) One week later, as a delayed post-test, they took a short cloze test in which they had to generate active, passive and middle verb forms in writing. All aspects of the study were conducted individually, audio-recorded and transcribed for later analysis.

This study showed general improvement in the students’ understanding of the concept of ‘voice’, and particularly of semantic concepts such as ‘agent’, ‘patient’, etc. Moreover, there was a significant correlation between the amount of ‘languaging’/private speech produced by the learners, and their success on the immediate post-test (though not on the delayed post-test). The researchers conclude that individual ‘languaging’ is an effective means to develop conceptual understanding of L2 grammar; overall the study presents an example of ‘double stimulation’ method in action, with the instructional materials plus the activity of languaging promoting at least short-term development in these French learners.

8.3.2 Activity theory, small group interaction and L2 internet communication

Early interest in activity theory on the part of second language researchers broadly followed the argument of Leontiev (1981) that human development results from engagement in activity mediated not only by directly relevant physical or cultural/symbolic tools, but also by the wider sociocultural context. This in turn may mean that what appears to be the ‘same’ task or activity turns out to be enacted differently by different people, depending on their interpretation of the goals of the task, or the cultural understandings they bring to the undertaking.

In second language research, this insight has mostly inspired research into a variety of L2 tasks, used for both second language research and classroom
second language instruction. Early second language learning research drawing on activity theory typically studied the execution of face-to-face tasks; more recently, activity theorists have also turned their attention to computer-mediated communication (see reviews by Lantolf and Thorne, 2006, Chapter 9; Thorne, 2008, and Swain et al., 2011, Chapter 6).

In an early study, Platt and Brooks (1994) investigated pedagogic tasks in the L2 classroom. They recorded pairs and groups of students undertaking a variety of communicative problem-solving tasks in classroom settings, and used activity theory to interpret the resulting discourse. The tasks included map-reading and jigsaw-puzzle completion, that is, the sorts of tasks which interaction theorists view as useful in promoting the negotiation of meaning, and hence providing rich opportunities for L2 acquisition. However, Platt and Brooks argue that the tasks they studied did not provide a uniform learning environment for participating learners, because they were experienced differently by different people. Their examples included:

1. Students ‘going through the motions’ of English L2 task performance, rehearsing a problem which they appeared already to understand (role playing the demonstration of an oscilloscope).

2. A student who engaged in long stretches of private speech to regulate his own performance, as he addressed the ‘same’ oscilloscope demonstration task, apparently incapable of attending to his peers who tried to redirect him.

3. Students learning Swahili at beginner level who successfully carried out a map-based information exchange task in L2, using a combination of paralinguistic means and single word paratactic constructions.

4. High school students making extensive use of L1 to define and redefine the groundrules for an L2 Spanish jigsaw-puzzle completion task, and to comment on task performance.

Interpreting these observations from an activity theory perspective, Platt and Brooks claim that students’ own immediate task-related goals and task engagement were critical in influencing both the nature of the activities as they were actually experienced, and the language learning opportunities made available (Platt and Brooks, 2002).

McCafferty et al. (2001) applied activity theory more directly to a language learning issue – the acquisition of L2 vocabulary. These researchers ran a small-scale comparative study with two groups of learners of L2 Spanish. One group were given a list of previously unknown words about animals, and asked to include them in an essay about zoos. The second group were asked to plan an interview with fellow students about their early language learning experiences, and were told they could ask for any vocabulary items they needed to fill gaps. It was found that the vocabulary items requested by individual members of the second group, and then actively used by them during the interview process,
were retained much better than the animal words provided for the first group. McCafferty et al. interpreted these results as showing that words are learned better when linked to 'goal-directed action'.

Another group of L2 sociocultural researchers have applied activity theory to the study of internet communication. Thorne (2003, 2008, 2009) has conducted a range of studies of L2 learners engaged in telecollaboration, internet gaming and other forms of internet use. He argues that it is necessary to draw on the Engeström notion of an ‘activity system’ to make sense of students’ participation in such activities, where their cultural backgrounds and prior internet experience are diverse.

For example, Kramsch and Thorne (2002) evaluated a less-than-successful language exchange between American and French students, carried out by email. The American students were experienced email users, and expected an informal and spontaneous exchange about youth culture, with many short questions and answers. However, the (less experienced) French students could only communicate via their teacher’s internet connection, with disappointing results as far as the Americans were concerned:

Eric: e-mail is kind of like not a written thing ... when you read e-mail, you get conversation but in a written form so you can go back and look at them. That’s neat. ... But in the [French] communications, it felt like they were writing essays and sending them to us rather than having an e-mail conversation with us. (Quoted in Thorne, 2003, p. 45)

These researchers attributed the students’ mutual disappointment to mismatches in what they call ‘cultures of use’ in respect of the internet, that is, to contradictions in the wider activity system. To understand these problems, it was necessary to ‘frame in-class digital interaction within the larger context of participants’ prior and everyday use of internet communication tools’ (Thorne, 2008, p. 424).

Thorne (2003) also reports a case study of a more successful virtual language exchange between one American female student (Kirsten) and a French male student (Oliver). They had been paired up through an institutionally arranged email scheme, but, as Kirsten reported in interview, the partnership took a positive turn when the French student initiated a switch to instant messaging (IM). The participants preferred an internet tool which they saw as more spontaneous and ‘conversational’:

Interviewer: Is IM better for=
Kirsten: =oh definitely=
Interviewer: =for you and Oliver to communicate with each other than e-mail? or
Kirsten: Yeah, e-mail is kinda like “ahh, here’s my point, here ya go;” but it’s really hard to have a conversation. (Thorne, 2003, pp. 47–8)
In this preferred environment, the partners quickly developed a close online relationship, which encompassed talk about language, as well as talk about common interests. Kirsten reported receiving help with a number of her language problems, including the use of polite and familiar address forms:

Kirsten: If you read my first e-mail, too, I asked him to correct my grammar and he did. He was really nice about it but like, we went [over] I guess my typical errors, and uh, he taught me some things I wasn’t quite grasping when the teacher taught it in French. =

Interviewer: =Right, right. Is there any of that in here? [pointing to the e-mail and IM transcripts Kirsten had brought with her].

Kirsten: Yeah, actually. If you read where he goes ... We were talking about the election and the fact that Le Pen, he didn’t like him at all and it was such a disaster. And then [he said] “let’s talk about your French.” And he went through and he said this [Kirsten points to a line in Oliver’s email which reads “Bon je garde le ‘vous’ mais, de grace, utilise ‘tu’ avec moi!!” (okay I will stick to ‘vous’, but for goodness sake, use ‘tu’ with me!)] And then, at the very end of here [pointing to her e-mail response to Oliver], see, I do learn. I changed it! (Thorne, 2003, p. 49)

Thorne interprets this intervention as a piece of successful other-regulation by Oliver, a highly valued peer; overall, Kirsten’s enthusiasm for Oliver, in combination with IM as a physical tool, led to greatly increased confidence and willingness to express herself in French, that is, to emergent self-regulation within a well-functioning activity system, as seen in the later IM transcripts.

8.3.3 Mediation, ‘languaging’ and second language learning in the Zone of Proximal Development

We have seen that sociocultural theorists view language as a cultural-symbolic tool which arises both phylogenetically (that is, in the history of the human race) and ontogenetically (that is, in the development of the individual child), as an outcome of social communicative activity (Thorne and Lantolf, 2006; Wells, 2009, Chapter 11). They accept the view of other usage-based linguistic theorists that the only genetic endowments needed are (a) the ability to read the intentions of other people in a context of interaction (a so-called ‘theory of mind’), and (b) skills of pattern-finding or categorization (Tomasello, 2003, pp. 3–4). Given this endowment, all aspects of the cultural tool of language can gradually be acquired through engagement in communicational activity, and the mediation of others who will regulate attention, use language flexibly to convey communicative intentions, and supplement language use with gesture and objects. Here, grammar as well as vocabulary are treated in the same way: as learnable by the individual, through mediated language experience.
Many naturalistic studies conducted by researchers working outside the Vygotskian tradition show sharing and transfer of new L2 lexical and grammatical knowledge between speakers. We have already seen the child learner Takahiro appropriating and using the word *house*, offered to him by an adult carer (Hatch, 1978, p. 410). Another of Hatch’s examples shows an adult learner eliciting an expression she needs (*last year*) from a cooperative interlocutor:

**NS:**

O that’s a beautiful plant!

I like that.

Did you buy that?

**Rafaela:**

Excuse me…

This is the…

October 24.

The how you say…

The … (writes ‘1974’)

year, ah?

**NS:**

1974. Last year.

**R:**

Ah! Last years.

**NS:**

One. (Correction of plural form)

**R:**

Last year. Last year a friend gave me it.

(Hatch, 1978, p. 427)

From an input/interaction perspective (as discussed in Chapter 6), such passages would be viewed as negotiation of meaning, conversational repair etc., which maximizes the relevance of the available input for the learner’s acquisitional stage. From a sociocultural perspective, however, we are witnessing microgenesis in the learner’s L2 system, through the appropriation of a new lexical item from the talk of the native speaker.

### 8.3.3.1 Teacher mediation in the L2 classroom

Most sociocultural research into dialogue and its role in second language learning has taken place in classrooms rather than in informal settings. Following the classic Vygotskian view of the ZPD as involving interaction between an ‘expert’ and a ‘novice’, one group of sociocultural studies has examined the L2 development which appears to take place as a result of mediation during teacher–student talk.

The well-known study by Aljaafreh and Lantolf (1994) was a pioneering example. The participants were adult ESL learners receiving one-to-one feedback from a language tutor on weekly writing assignments. At each weekly tutorial, the students first of all reread their own writing, and checked it for any errors they...
could identify without help; the tutor and student then worked through the assignment together, sentence by sentence. When an error was identified, the tutor aimed to scaffold the learner to correct it: 'the idea is to offer just enough assistance to encourage and guide the learner to participate in the activity and to assume increased responsibility for arriving at the appropriate performance' (p. 469).

The learners were tracked and audio-recorded for eight weeks; the study focused on their developing capability (or microgenetic growth) on four grammatical points in written English (articles, tense marking, use of prepositions and modal verbs). First, the researchers looked for an increase in accuracy in the use of these forms over time, as well as for any generalization of learning beyond the specific items which had received attention in tutorial discussion. Second, even where these errors continued to appear in students' writing, they looked for evidence of students' developing capacity to self-correct (that is, increased self-regulation and reduced other-regulation).

Aljaafreh and Lantolf developed a 'Regulatory Scale' for the tutor's interventions, ranging from implicit to explicit correction; this scale is shown as Figure 8.2.

<table>
<thead>
<tr>
<th>No.</th>
<th>Intervention Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Tutor asks the learner to read, find the errors, and correct them independently, prior to the tutorial</td>
</tr>
<tr>
<td>1</td>
<td>Construction of a 'collaborative frame' prompted by the presence of the tutor as a potential dialogic partner</td>
</tr>
<tr>
<td>2</td>
<td>Prompted or focused reading of the sentence that contains the error by the learner or the tutor</td>
</tr>
<tr>
<td>3</td>
<td>Tutor indicates that something may be wrong in a segment (e.g. sentence, clause, line) - 'Is there anything wrong in this sentence?'</td>
</tr>
<tr>
<td>4</td>
<td>Tutor rejects unsuccessful attempts at recognising the error</td>
</tr>
<tr>
<td>5</td>
<td>Tutor narrows down the location of the error (e.g. repeats or points to the specific segment containing the error)</td>
</tr>
<tr>
<td>6</td>
<td>Tutor indicates the nature of the error, but does not identify the error ('There is something wrong with the tense marking here')</td>
</tr>
<tr>
<td>7</td>
<td>Tutor identifies the error ('You can't use an auxiliary here')</td>
</tr>
<tr>
<td>8</td>
<td>Tutor rejects learner's unsuccessful attempts at correction</td>
</tr>
<tr>
<td>9</td>
<td>Tutor provides clues to help the learner arrive at the correct form (e.g. 'It is not really past but something that is still going on')</td>
</tr>
<tr>
<td>10</td>
<td>Tutor provides the correct form</td>
</tr>
<tr>
<td>11</td>
<td>Tutor provides some explanation for use of the correct form</td>
</tr>
<tr>
<td>12</td>
<td>Tutor provides examples of the correct pattern</td>
</tr>
</tbody>
</table>

Figure 8.2 Regulatory scale for error feedback – Implicit (strategic) to Explicit (source: Aljaafreh and Lantolf, 1994, p. 471)

When the feedback needed by individual students moved closer to the Implicit end of this scale, they were considered to be moving towards more independent and self-regulated performance, and this was consequently taken as positive evidence of learning.
The protocols presented in Figure 8.3 illustrate the type of data collected and discussed by these researchers.

In Protocol L, we see the tutor and student F attempting to work out the correct tense markings for modal + main verb constructions. The tutor provides progressively more explicit feedback on the student’s written error.

<table>
<thead>
<tr>
<th>(L)</th>
<th>(M)</th>
<th>(N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>T:</td>
<td>Okay, 'to the [yeah] to the US.</td>
</tr>
<tr>
<td></td>
<td>F:</td>
<td>[Okay] in that moment i can’t ...</td>
</tr>
<tr>
<td>2</td>
<td>T:</td>
<td>lived in the house because I didn’t have any furniture’.</td>
</tr>
<tr>
<td>3</td>
<td>F:</td>
<td>Is that ... what is wrong with that sentence, too?</td>
</tr>
<tr>
<td>4</td>
<td>T:</td>
<td>What is wrong with the sentence we just read? ... ‘In that moment I can’t lived in the house because I didn’t have any furniture’ ... do you see?</td>
</tr>
<tr>
<td>5</td>
<td>F:</td>
<td>Ah yes, I know</td>
</tr>
<tr>
<td>6</td>
<td>T:</td>
<td>Okay, so what’s what’s wrong what’s wrong here?</td>
</tr>
<tr>
<td>7</td>
<td>F:</td>
<td>The tense of this live</td>
</tr>
<tr>
<td>8</td>
<td>T:</td>
<td>Okay, what about the the ... is it just in this or in this, the whole thing?</td>
</tr>
<tr>
<td>9</td>
<td>F:</td>
<td>The whole this</td>
</tr>
<tr>
<td>10</td>
<td>T:</td>
<td>Okay, how do you correct it? ... Okay, ‘in that moment, ... What? What is the past tense of can? what was happening ... what ... the past, right? What was happening ... what ... the event happened in the past right? So what is the past tense of this verb can? ... Do you know?</td>
</tr>
<tr>
<td>11</td>
<td>F:</td>
<td>Ah yes</td>
</tr>
<tr>
<td>12</td>
<td>T:</td>
<td>Okay, ‘I could not ...’</td>
</tr>
<tr>
<td>13</td>
<td>F:</td>
<td>Live</td>
</tr>
<tr>
<td>14</td>
<td>T:</td>
<td>Ah exactly, okay. So when you use this in the past then the second verb is the simple ...</td>
</tr>
<tr>
<td>15</td>
<td>F:</td>
<td>Yes</td>
</tr>
<tr>
<td>16</td>
<td>T:</td>
<td>Form, okay ... ah ‘in that moment I could not ...’ Live in the house</td>
</tr>
<tr>
<td>17</td>
<td>F:</td>
<td>Okay, 'I called other friends who can’t went do the party.' Okay, what is wrong here?</td>
</tr>
<tr>
<td>18</td>
<td>T:</td>
<td>‘Who can’t went do the party’ because that night they worked at the hospital’. Okay, from here, ‘I called other friends who can’t went do the party’ What’s wrong in this?</td>
</tr>
<tr>
<td>19</td>
<td>F:</td>
<td>Okay, what else? ... what about the verb and the tense? the verb and the tense?</td>
</tr>
<tr>
<td>20</td>
<td>T:</td>
<td>Okay, here</td>
</tr>
<tr>
<td>21</td>
<td>F:</td>
<td>Past tense</td>
</tr>
<tr>
<td>22</td>
<td>T:</td>
<td>All right, okay, ‘who [alright] could not’. Alright? and ?...</td>
</tr>
<tr>
<td>23</td>
<td>F:</td>
<td>To</td>
</tr>
<tr>
<td>24</td>
<td>T:</td>
<td>Here [points to the verb phrase]. What’s the right form?</td>
</tr>
<tr>
<td>25</td>
<td>F:</td>
<td>I ... go</td>
</tr>
<tr>
<td>26</td>
<td>T:</td>
<td>Go. Okay, ‘could not go to [that’s right] to the party’ ...</td>
</tr>
<tr>
<td>27</td>
<td>T:</td>
<td>Is there anything wrong here in this sentence? ‘I took only Ani because I couldn’t took both’ ... Do you see anything wrong? ... particularly here ‘because I couldn’t took both’</td>
</tr>
<tr>
<td>28</td>
<td>F:</td>
<td>Or Maki?</td>
</tr>
<tr>
<td>29</td>
<td>T:</td>
<td>What the verb verb ... something wrong with the verb ...</td>
</tr>
<tr>
<td>30</td>
<td>F:</td>
<td>Ah, yes ...</td>
</tr>
<tr>
<td>31</td>
<td>T:</td>
<td>That you used. Okay, where? Do you see it?</td>
</tr>
<tr>
<td>32</td>
<td>F:</td>
<td>(points to the verb)</td>
</tr>
<tr>
<td>33</td>
<td>T:</td>
<td>Took? okay</td>
</tr>
<tr>
<td>34</td>
<td>F:</td>
<td>Take</td>
</tr>
<tr>
<td>35</td>
<td>T:</td>
<td>Alright, take (laughs)</td>
</tr>
</tbody>
</table>

Figure 8.3 Microgenesis in the language system (source: Aljaafreh and Lantolf, 1994, pp. 478–9)
Applications of sociocultural theory to SLL

(cited in Lines 2/3), actually modelling the correct past-tense form for modal auxiliary can in Line 23. Later in the same tutorial, the same problem is encountered again (Protocol M, Lines 1/2). Initially, the learner focuses on a different problem (she has written do for to, an error which she notices and corrects). However, once the tutor draws her attention to the incorrect verb pattern, she supplies firstly the correct auxiliary past-tense form could, and then the untensed form of the main verb go. The researchers argue that this reduced need for other-regulation itself constitutes evidence for microgenetic development.

Protocol N provides further performance data, this time from the tutorial which took place around the student’s next assignment, one week later. The researchers claim that here again we see evidence of microgenesis both in production of the Modal + Verb construction and the extent of responsibility assumed by the learner for its production (p. 479). The learner has independently produced the correct past-tense form could in her written text. She has still marked the main verb incorrectly for tense, but interrupts the tutor to identify the error (Line 6), and offers the correct form take with very little hesitation (though her laughter and embarrassment show that self-regulation is still not automatized or complete). In later essays, this student’s performance on this particular construction is error-free, and there is some evidence of generalization to other modals.

In a later study, Nassaji and Swain (2000) set out to test more formally the claim of Aljaafreh and Lantolf that effective mediation depends on the state of the learner’s ZPD. These researchers worked with two case study learners, both Korean L1 adult learners of English as L2. As in the earlier study, the learners each met a tutor weekly, to review and correct written English assignments; however, this study concentrated on just one feature of English grammar, the use of definite and indefinite articles. When working with one of the learners, the tutor followed the principles of the Aljaafreh and Lantolf regulatory scale. With the other learner, however, the tutor did not ‘scale’ the feedback, but provided randomly chosen feedback.

The two learners’ progress in English article usage was tracked over several weeks’ assignments, and at the end of the study specially developed tests based on the learners’ own compositions were also administered. By the end of the study, the first learner had substantially improved her use of English articles, while the second learner had not. Most of the time, it seemed, the randomly selected feedback had not been helpful, while the negotiated feedback had led to microgenesis. The researchers interpret these findings as:

consistent with the Vygotskian sociocultural perspective in which knowledge is defined as social in nature and is constructed through a process of collaboration, interaction and communication among learners in social settings and as the result of interaction within the ZPD. (Nassaji and Swain, 2000, p. 49)
8.3.3.2 Dynamic assessment

More recently, research into the ZPD has been taken in a new direction by the introduction to second language learning research of the concept of ‘dynamic assessment’ (Lantolf and Thorne, 2006, Chapter 12; Poehner, 2008). Dynamic assessment (DA) is a systematic attempt to apply the ZPD idea to measurement of individual learner capacities, which ‘breaks with the traditional dichotomy between assessment and instruction’ (Poehner, 2008, p. 34). DA has been developed in general education, in varied forms. Kozulin and Gindis (2007) sum up the underlying principles of DA:

1. Cognitive processes are modifiable and an important task of assessment is to ascertain their degree of modifiability, rather than remain restricted to estimation of the child’s manifest level of functioning;
2. Interactive assessment that includes a learning phase provides better insight into the child’s learning capacities than unaided performance;
3. The primary goal of assessment is to suggest psychoeducational interventions aimed as the enhancement and realisation of the child’s latent ability to learn.

(Kozulin and Gindis, 2007, pp. 355–6)

Together, Lantolf and Poehner (2011) report a project involving a teacher of L2 Spanish at elementary school, who used DA procedures to support her students’ learning of noun–adjective concord during her regular Spanish lessons focusing on animals of Latin America. For each lesson, the teacher worked out a ‘menu’ of teacher prompts, and used these in response to student concord errors. (Sample prompts are shown in Figure 8.4.) As her assessment tool, the teacher recorded on a simple tracking sheet the amount and type of mediation required by individual students. Figure 8.5 shows a protocol extract with a student requiring most types of mediation before he can produce the expected noun–adjective plural concord; the teacher’s assessment notes recorded formally this student’s need for extensive mediation at this point.

![Figure 8.4](https://example.com/figure8_4.png)

**Figure 8.4** Teacher’s mediating moves (Lantolf and Poehner, 2011, p. 20)
8.3 Applications of sociocultural theory to SLL

Qualitative analysis of similar lesson protocols and teacher notes showed that students making apparently similar errors needed different levels of prompting. Over time the need for prompts generally was reduced and performances improved. The researchers attribute this improvement to the carefully graded prompting, and also argued that other students benefited from ‘overhearing’ prompting directed to their peers.

8.3.3.3 Peer-to-peer dialogue and ‘languaging’ within the ZPD

While Vygotsky’s original formulation of the ZPD was primarily concerned with interaction between ‘novice’ and ‘expert’, current sociocultural theorists have expanded the concept to include pair and group work among peers:

To learn in the ZPD does not require that there be a designated teacher; whenever people collaborate in an activity, each can assist the others, and each can learn from the contributions of the others. (Wells, 1999, p. 333)

SCT research on peer interaction in the language classroom is reviewed by Swain et al. (2002), by Lantolf and Thorne (2006, Chapter 11) and by Swain et al. (2011, Chapter 3). Different types of collaborative dialogue have been studied,

Figure 8.5 Dynamic assessment in action (Lantolf and Poehner, 2011, pp. 21–2)
including how learners support each other during oral L2 production, how they work together during ‘focus on form’ activities and how they collaborate around L2 writing activities. Here we briefly examine examples of each type.

The longitudinal study by Ohta of seven adult learners of Japanese L2 has already been introduced (2000, 2001). Ohta’s naturalistic classroom recordings provide abundant examples of peer scaffolding, during oral pairwork. Figure 8.6 lists the array of strategies used by peers in Ohta’s study to support their partner, ranked in order of explicitness. The extract below illustrates both repair and co-construction, in an episode where learners Bryce and Matt are describing what people in magazine pictures are wearing:

1  B:  Un. Hai um kuroi ti-shatsu o kiru, to: um
   Yeah. Yes um he wears a black t-shirt, and um
→ 2  M:  Kiteimasu?
   He’s wearing?

1. Methods (when interlocutor is struggling)

<table>
<thead>
<tr>
<th>Degree of explicitness</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiting</td>
<td>One partner gives the other, even when struggling, time to complete an L2 utterance without making any contribution.</td>
</tr>
<tr>
<td>Prompting</td>
<td>Partner repeats the syllable or word just uttered, helping the interlocutor to continue.</td>
</tr>
<tr>
<td>Co-construction</td>
<td>Partner contributes an item (syllable, word, phrase etc) that works toward completion of the utterance.</td>
</tr>
<tr>
<td>Explaining</td>
<td>Partner explains in L1 (English)</td>
</tr>
</tbody>
</table>

2. Additional methods (when interlocutor makes an error)

<table>
<thead>
<tr>
<th>Degree of explicitness</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiating repair</td>
<td>Partner indicates that the preceding utterance is somehow problematic, for example saying ‘huh’?. This provides an opportunity for the interlocutor to consider the utterance and self-correct.</td>
</tr>
<tr>
<td>Providing repair</td>
<td>Partner initiates and carries out repair.</td>
</tr>
<tr>
<td>Asking the teacher</td>
<td>Partner notices the interlocutor’s error and asks the teacher about it.</td>
</tr>
</tbody>
</table>

Figure 8.6 Methods of assistance occurring during classroom peer interaction (after Ohta, 2001, p. 89)
8.3 Applications of sociocultural theory to SLL

The data provided by Ohta includes some evidence of learners prompting and scaffolding others with language material which they are not capable of producing reliably themselves, during their own oral production. Ohta explains this by drawing on concepts from cognitive theory: selective attention and the limited capacity of Working Memory (see Chapter 5). She argues that for beginning learners, formulating and producing an L2 utterance means solving a whole variety of phonological, lexical and syntactic problems, and they may lack the Working Memory capacity to solve them all in real time. However, the listening partner, who is not burdened with the demands of actual production, has capacity available both to analyse what is being said, and to project what might come next. They thus have sufficient attentional resources available to collaborate with the speaker, and provide assistance even for language points where their own productive ability is not yet automatized (Ohta, 2001, pp. 77–9). Other researchers have looked at peer interaction during the performance of classroom activities with a focus on form. For example, in a study of writing in L2 French, Swain and Lapkin (1998) recorded pairs of immersion students...
undertaking a jigsaw task. Each student was given half of a set of pictures which together told a story; the task for the pair was to reconstruct the complete story and to produce a written version. In their report, Swain and Lapkin concentrate on what they call ‘language related episodes’ (LREs) recorded during the activity, that is, episodes where the learners were discussing points of form such as whether or not a verb was reflexive, or sorting out vocabulary problems. They focus on one pair of students (Kim and Rick), who produced the best-quality written story, having also invested most time in the task, and having produced the largest number of LREs. Kim and Rick used a wide range of strategies to co-construct their written story, generating and assessing alternatives, correcting each other’s L2 productions, and also using the L1 as a tool to regulate their behaviour. Swain and Lapkin claim that this cognitive activity led to microgenesis taking place for both L2 vocabulary and for grammar. This is argued from the evidence of the oral protocols themselves, and from the written story which resulted, but also from the evidence of specially devised post-tests, which checked the students’ recall of some of the words and grammar points discussed during the observed LREs.

The students Kim and Rick, discussed by Swain and Lapkin (1998), were both strong students who worked effectively together. Students undertaking pair work may act competitively rather than collaboratively, and the work of Storch, for example, has provided evidence that, in such cases, supportive scaffolding and the transfer of L2 knowledge is considerably reduced (Storch, 2002). In response to such observations, Mercer (2000) and Klingner and Vaughn (2000) have developed general instructional procedures to promote collaborative rather than competitive dialogue among classroom peers.

8.3.3.4 Languaging and concept-based instruction

In a wide-ranging review of sociocultural theory, Swain et al. (2011) have promoted the term ‘languaging’ to cover both private speech and peer collaborative dialogue, where language is ‘being used as a cognitive tool to mediate the process of thinking’ (Swain et al., 2011, p. 44). These writers view ‘languaging’ as a mechanism for the internalization of new knowledge, but they also see it as a means of externalization which transforms the learner’s developing thoughts ‘into artifacts that allow for further contemplation’ (p. 43). Like other sociocultural L2 theorists, they are flexible as to whether ‘languaging’ is performed in L1 or in L2, and argue that L1 may often be necessary where an activity requires complex analysis or processing. (We previously discussed the study by Swain et al., 2009, which promoted L1 private speech as a means of understanding a challenging grammar concept.)

This leads us to a final key idea attaching to L2 sociocultural research which has emerged clearly in recent studies and discussion: that of ‘concept-based mediation’ (Lantolf, 2011). In their 2006 book, Lantolf and Thorne point out
that for the classic Vygotskian tradition, the distinctive role of formal education was to develop learners’ conceptual scientific understanding (pp. 290–1), in line with the overall view that ‘instruction leads development’. Thus, for example, Vygotsky argued for the importance of L1 grammar instruction, and of language awareness more generally, for the ‘general development of the child’s thought’ (1987, p. 205).

Lantolf and Thorne apply this line of thinking to current debates about the place of metalinguistic understanding in classroom second language learning, and argue that classrooms cannot replicate the spontaneous learning typical of first language acquisition. Instead they argue in favour of research into the classroom as a site for the ‘intentional development of communicatively functional declarative knowledge’ (Lantolf, 2011, p. 37). They look to cognitive linguistics (see Chapter 7) as a source of suitable conceptual accounts of grammar phenomena, which are at the core of so-called ‘concept-based instruction’, along with various kinds of language practice activities, and languaging in which the learners re-explain the new concepts to themselves, and comment on concrete examples of their use.

Earlier, in Section 8.3.1 on private speech, we already encountered an example of concept-based instruction research (Swain et al., 2009). Another study of concept-based instruction for Spanish L2 has been reported by Negueruela (2008). Here, the students were taught a conceptual understanding of a number of key grammatical distinctions in Spanish, following principles articulated by Piotr Galperin (1992 in Negueruela, 2008):

1. concepts form the minimal unit of instruction in the L2 classroom;
2. concepts must be materialised as didactic tools …;
3. concepts must be verbalised [including] speaking to oneself, and using concepts as tools for understanding, to explain the deployment of meaning in communication;
4. categories of meaning must be connected to other categories of meaning …

For example, they studied the conceptual (semantic) distinctions between indicative and subjunctive mood in Spanish, and between preterit and imperfect aspect. The ‘didactic tools’ were devised following principled accounts found in cognitive linguistics; Figure 8.7 shows an example from Negueruela, 2008, devised to guide mood selection in Spanish. To meet principle 3, Negueruela experimented with both classroom collaborative dialogue (not so successful) and individual homework verbalization tasks (more successful in this case). To meet principle 4, he addressed a number of different grammar topics, and aimed to develop students’ understanding of the underlying relations between them.

As in many SCT studies, Negueruela evaluated the success of his project by tracing the development of some individual participants over time, both in
terms of their verbalizations and developing semantic understandings, and in terms of ‘discourse performance’ (use of the targeted grammar forms, in written compositions). The verbalizations of the single participant discussed in Negueruela (2008) shifted over time from ‘rules of thumb’ to more meaning-based comments on the use of the subjunctive mood; her use of subjunctive morphology in writing also became more consistent and accurate; and she reflected positively on the whole experience, ‘languaging’ included.

8.4 Evaluation

Since its emergence in the 1990s, sociocultural theory has rapidly established itself as an active research programme within the field of second language learning. What are its most original features, and how far have its claims been empirically established?

8.4.1 The scope of sociocultural research

L2 researchers working in a sociocultural framework are making an ambitious attempt to apply a general theory of cognition and of development which has been influential in other domains of social and educational research to the language learning problem. First, the conventional separation between social and psychological aspects of cognition and development is rejected. Similarly, the classic Saussurean view of language as a formal abstract system, which has an existence distinct from language use, is also in principle rejected. Learning is seen as a social and inter-mental activity, taking place in the ZPD, which precedes individual development (viewed as the internalization or appropriation of socially constructed knowledge). These have been challenging ideas, for an L2 research
community accustomed to the Chomskyan distinction between language competence and language performance, and to psycholinguistic assumptions about individual development. The sociocultural tradition has found a more sympathetic hearing among other research traditions belonging broadly to the ‘social turn’ of the 1990s and 2000s (see Duff, 2007, on connections between SCT and language socialization theory). Its applications are also appealing to language educators, who can find that sociocultural theory offers a creative agenda for the renewal of L2 classroom practice.

The empirical research which we have sampled in this chapter has used a varied range of sociocultural constructs (private speech, activity theory, mediation, languaging, the ZPD) to address a variety of aspects of L2 learning (from the acquisition of lexis and grammar, to the development of conceptual understanding, and of discourse skills such as narrative and L2 writing). Studies have typically been small-scale, and have generally focused on teenage and adult classroom learners. In line with the ideas of ‘genetic method’ and ‘dynamic assessment’, sociocultural researchers typically record and transcribe learners engaging in some type of organized language learning activity, whether with an individual tutor, a class teacher, or one or more peers. The resulting protocols are then analysed qualitatively, to trace the mediation and co-construction of conceptual and/or linguistic knowledge.

Sociocultural theory clearly meets at least the first and third of the evaluation criteria for a credible theory proposed in Chapter 1. It offers a well-developed conceptual framework, with a long pedigree and roots in an ambitious general explanatory theory of human learning. In recent writings, there is an evident intention among SCT theorists to demarcate more precisely the area of application of the theory, and, in particular, to promote applied research on concept-based instruction and on dynamic assessment (Lantolf, 2012, p. 68). There is a commitment to empirical research tracing learner development longitudinally, using analyses of ongoing interaction to trace the influence of learning tools such as private speech, the role of mediation and the emergence of new knowledge. This partly satisfies the second criterion, though this approach to empirical research is affected by some of the usual difficulties in developing causal explanations and generalizations through naturalistic research.

Researchers working in this tradition are conscious of these issues, and there are examples of studies which have tried to address them (for example, those studies we have cited which have included some form of distinct post-test in their design: Nassaji and Swain, 2000; Swain et al., 2009 and others). But many of the strongest sociocultural claims about the relationship between interaction and learning have been made on a local scale, with reference to discrete elements of language. SCT research has not yet seen the cumulative focus of successive studies on very similar domains, which characterizes, for example,
the interactionist approach. The new sharper focus – on, for example, concept-based instruction – may change this.

8.4.2 Sociocultural interpretations of language and communication

Sociocultural theory views language as a ‘tool for thought’. It is therefore critical of ‘transmission’ theories of communication, which present language primarily as an instrument for the passage back and forth of predetermined messages and meanings. Dialogic communication is seen as central to the joint construction of knowledge (including knowledge of language forms), which is first mediated inter-mentally, and then appropriated and internalized by the individual. Similarly, private speech, meta-statement etc. are valued positively as instruments for self-regulation, that is, the development of autonomous control over new knowledge.

In addition to these general claims regarding the functions for which language may be used, we have already noted the rejection by sociocultural theorists of the classic Saussurean idea of language as an autonomous abstract system, and of Chomsky’s distinction between competence and performance. The early phases of sociocultural work did not offer in its place any very thorough or detailed view of the nature of language as a system – a ‘property theory’ was lacking, and earlier sociocultural studies of language development within the ZPD focused on individual lexical items or morphosyntactic features as defined in traditional descriptive grammars (for example, Aljaafreh and Lantolf, 1994). More recently, however, sociocultural theorists have aligned themselves much more explicitly with meaning-based, functional perspectives on language, and have proposed what they term a ‘linguistics of communicative activity’:

Language from this perspective is not about rule governed a priori grammar systems that must be acquired before people can engage in communication, but is instead about communicative resources that are formed and reformed in the very activity in which they are used – concrete linguistically-mediated communicative and cognitive activity. (Thorne and Lantolf, 2006, p. 177)

With respect to language learning, Thorne and Lantolf (2006) also align themselves with the usage-based theory of Tomasello (2003). These theoretical developments have had limited impact so far on empirical research in the SCT tradition, but the developing work on concept-based instruction is grounded in a meaning-centred view of language.

8.4.3 The sociocultural view of (language) learning

Sociocultural theorists assume that the same general learning mechanisms will apply to language as to other forms of knowledge and skill. All learning is seen as
first social, then individual; first inter-mental, then intra-mental. Also, learners are seen as active constructors of their own learning environment, which they shape through their choice of goals and operations. So, this tradition has a good deal to say about aspects of the learning process, and has invested considerable empirical effort in illustrating these. However, the language learning documented in much sociocultural research is local, individual and short-term, and what actually counts as learning is not uncontroversial, as we have seen:

Unlike the claim that comprehensible input leads to learning, we wish to suggest that what occurs in collaborative dialogues is learning. That is, learning does not happen outside performance; it occurs in performance. Furthermore, learning is cumulative, emergent and ongoing. (Swain and Lapkin, 1998, p. 321)

Ohto's year-long case study of L2 Japanese learners remains unusual in the field. She developed a very full account of language learning which integrates a range of sociocultural concepts with cognitive ideas about learning processes (2001). The length of her study and detailed nature of her analysis means she can offer rich exemplification in support of her specific detailed claims.

Compared with other traditions which have addressed the issues of rates and routes of learning very centrally, the Vygotskian tradition may be best described as agnostic. There are some suggestions (Storch, 2002; Nassaj and Swain, 2000) that people who receive timely and effective scaffolding/means of mediation learn faster than those who are denied this help. But varying positions are held regarding the existence/non-existence of common learning routes. Lantolf (2011) notes that the logic of SCT is to challenge 'the existence of a natural syllabus' (p. 42), and calls for empirical studies using concept-based instruction designed to test this. Song and Kellogg (2011) positively reject the concept of orderly L2 developmental routes, but cite evidence relating to vocabulary learning only; overall, as we concluded in an earlier edition of this book, a research gap continues on this issue.

8.4.4 Overall conclusion

SCT has established itself as a vigorous player in the field of second language learning research, making a range of ambitious theoretical claims, and supporting these with diverse if uneven empirical activity. Its central ideas have undoubted appeal for educators, and concepts such as the ZPD, scaffolding and activity theory provide appealing alternative interpretations of the L2 learning and developmental opportunities afforded by classroom basics such as teacher–student interaction, problem-solving and communicative tasks, learner strategy training, focus on form and corrective feedback. The recent concentration on concept-based instruction, and acknowledgement of the 'artificiality' of classroom second language learning (Lantolf and Poehner, 2009), should initiate a more focused agenda and more sustained empirical investigation of key ideas.