Chapter 1

Theoretical background

1. Introduction

This chapter is concerned with the theoretical background of language learning strategies. In this respect, it discusses relevant second language (L2) acquisition theories representing linguistic, cognitive, and interactionist accounts of language acquisition while it takes into consideration whether or not they recognise the learner's contribution to the process of language learning or the social context in which language learning takes place. However, there is no intention to provide a detailed critical review of such theories, but simply to note whether they are compatible with the notion of learning strategies as these are approached in the present book.

2. The behaviourist theory

The behaviourist theory views language acquisition in the same way that it does any other type of learning, that is, as the formation of *habits* which are the consequence of *stimulus-response-reinforcement*. When concerned with L2 acquisition, such habits are influenced by language habits formed in the learner's first language (L1) which *interfere* with those required for the L2. Any linguistic form or structure in the L2 that is different from the learner's L1 is believed to be difficult and, for this reason, teaching should concentrate basically on such areas of difference and engage learners in drilling exercises and learning through endless repetitions. Learners are not allowed to deviate from such a norm and express themselves more freely in

case their L1 habits interfere with the production of L2 structures. They must be nurtured so that they copy and memorise behaviours they encounter in the surrounding environment – the teacher and the classroom environment. In such a language acquisition theory, there is no room for the learners' contribution to the learning process as their views, preferences, biological maturation, cognitive development, and decision making are not taken into consideration. Their role is not active in the language learning process and, consequently, language learning strategies, which by definition are generated by the learner (Cohen, 1998; Chamot, 1987; O'Malley and Chamot, 1990, 1994; Oxford, 1989, 1990; Rubin, 1975), have no place in a behaviourist theory of language learning.

3. The innatist theory

The assumption of the innatist theory, which is mainly represented by the American psychologist and linguist Noam Chomsky, is that human language is too complex to be learnt exclusively from the degenerate performance data that are available to the child, and its structure makes it distinct from any other cognitive skill because there exist different principles that apply to it (i.e., principles and parameters). Human beings are endowed with an innate mechanism which allows them to acquire language. It comes in the form of inborn abstract knowledge about how natural languages are structured, which provides any young child with a framework of what to expect when s/he is exposed to natural speech. This abstract knowledge has been known as *Universal Grammar* (UG) and it allows learners to know more about language than they might learn by mere exposure to linguistic input. Chomsky's account of language acquisition initially had an impact on the study of L1 acquisition, but subsequently it has had a powerful effect on the study of Second Language Acquisition (SLA) as well.

Innatists' research looks for evidence which supports the existence of UG. UG accepts the notion of an ideal native speaker who has linguistic knowledge, called *competence,* of a particular natural language. Initial analyses of a learner's competence were mainly concerned with syntax. More recently UG theorists have extended their interest from the acquisition of L2 narrow syntax and the grammatical features of the lexicon to the interfaces, namely, the syntax-discourse/pragmatics interface (external), the syntax-semantics inter-

face (internal), and the syntax morphophonology interface (internal), in order to account for existing inconsistency in adult L2 learners who exhibit 'variability' in their L2 linguistic behaviour (Tsimpli, 2005; Sorace, 2005).

The theory calls for the existence of *modularity* in the human mind, which involves distinctive mechanisms operating on different types of knowledge according to Fodor (1983), Smith and Tsimpli (1995) and Lorenzo and Longa (2003). There is not a general agreement between generativists, however, as to whether second language learners (SLLs) continue to have access to this specialist language module after the acquisition of their L1 in early childhood, or it ceases to be operable; and if the latter takes place, whether the way learning of the L1 took place is 'copied' and acts as a model for subsequent L2 learning, or is replaced by some other mechanism.

The concept of a distinctive language module in the mind views the development of cognition and language separately, and it thus justifies the investigation of language independently from cognitive processes (Wong-Fillmore and Swain, 1984, as cited in O'Malley and Chamot, 1990). In other words, it does not agree with the view that the mind is a single, flexible organism which makes use of the same set of procedures for learning and storing different types of knowledge and skills, but maintains that language processes do not need to make reference to cognitive processes. Such theoretical developments in language acquisition view learners as processors of language in similar ways, and the emphasis remains "on language as the object of study rather than on the speaker or learner as a social being, and the focus is on what is universal within the mind" (Mitchell and Myles, 2004: 94). UG is not concerned with what triggers linguistic development in individuals and how this development proceeds from early to advanced language proficiency. Similarly to the previous view (1.2), it does not accept the learners' intervening role in the learning process and, as a consequence, their employment of learning strategies to improve the language learning ability, which is especially required in formal L2 learning contexts (O'Malley and Chamot, 1990).

4. Dell Hymes' 'communicative' competence

The attention drawn by generativists to the ideal speaker and the linguistic competence without considering the socially conditioned aspects of language was challenged by Dell Hymes (1972: 278) who wrote: "There are

rules of use without which the rules of grammar will be useless". Hymes introduced the term *communicative* competence to cover communicative as well as linguistic knowledge of language under the assumption that effective linguistic behaviour is determined by conditions that extend deep innate linguistic structures (Cohen and Macaro, 2007). In their seminal article, Canale and Swain (1980) elaborated on the term communicative competence and proposed a framework of four components that teachers of an L2 should help learners develop. These components are described below:

Grammatical competence "will be understood to include knowledge of lexical items and of rules of morphology, syntax, sentence-grammar semantics, and phonology" (p. 29). This type of knowledge intends to provide learners with knowledge of how to understand and produce *accurate* L2 utterances.

Sociolinguistic competence specifies "the ways in which utterances are produced *appropriately*… within a given sociocultural context depending on contextual factors such as topic, role of participants, setting, and norms of interaction" (p. 30). This type of knowledge enables L2 learners to select language elements and use them appropriately in their interactions.

Discourse competence concerns knowledge of rules "in terms of *cohesion* (i.e., grammatical links) and *coherence* (i.e., appropriate combination of communicative functions) of groups of utterances" (p. 30). Rules of discourse are also concerned with the notions of *topic* (what is being talked about) and *comment* (what is said about the topic). Discourse competence intends to provide understanding and production of language beyond the sentence level.

Strategic competence is "made up of verbal and non verbal communication strategies that may be called into action to compensate for breakdowns in communication due to performance variables or to insufficient competence" (p. 30). The employment of strategies in order to overcome problems of communication was thus officially recognised, and soon became established as a concept in applied linguistics.

In order to develop communicative competence, therefore, learners need to engage in realistic interactions which involve language that is meaningful and contextualised. Their efforts can be assisted by learning and communication strategies which have knowledge of communicative competence as their broad goal. Specifically, Oxford (1990: 9) has demonstrated how particular strategies can play a role in all four components of communicative competence.

5. Krashen's Monitor theory

Krashen's SLA theory (1982, 1985) draws primarily from the theory of innate linguistic knowledge, but some aspects of his theory (i.e., the distinction between implicit and explicit knowledge) are definitely cognitive (Ellis, 1994). What is more, the affective aspect of his theory moves further away from a purely linguistic view of SLA although Krashen himself subscribes to the innatist tradition.

Krashen based his theory on a set of five hypotheses:

1. The *acquisition-learning* hypothesis
2. The *monitor* hypothesis
3. The *natural order* hypothesis
4. The *input* hypothesis
5. The *affective filter* hypothesis

A brief outline of each of these will show a relation with the notion of learning strategies as well.

5.1 The 'acquisition-learning' hypothesis

According to Krashen, learners possess two types of knowledge, *acquired* and *learnt*. The former is the result of an implicit, unconscious process, called *acquisition*, which takes place when learners are exposed to input of the second language without paying conscious attention to form or structure, in the same way that children pick up their first language. The latter is the result of *learning*, an explicit process in which the learner pays conscious attention to language items in order to memorise them. The terms conscious-unconscious and implicit-explicit create the acquisition-learning dichotomy in Krashen's theory, but also create a connection with learning strategies which, as we will see in chapter 2, help learners to make language knowledge unconscious and automatic after conscious effort and practice.

Krashen put more importance on acquisition and, as a consequence, on meaningful communication, as for him learning cannot lead to acquisition but can only function as a backup, a *monitor*, for conscious application and modification of output.

5.2 The 'monitor' hypothesis

The above function of learning to act only as a Monitor (or Editor) after an utterance has been initiated by the acquired system brings us to the second hypothesis of the theory. The monitor can operate when there is sufficient time, the language user focuses on form, and has knowledge of the grammatical rule required.

Krashen used this hypothesis to account for individual differences in second language learners in the sense that some learners may 'overuse' the monitor but then their speech may be hesitant and non-fluent, or others may 'underuse' it without caring much about their errors but appearing more fluent. Finally, the 'optimal' users manage to use the monitor more consistently and successfully when it does not interfere with communication (Mitchell and Myles, 2004). As we will see, such an account is too limited to cater for individual differences.

Attempts to test the predictions of the monitor hypothesis have failed as it is impossible to test empirically when a learner applies a rule consciously or not. What concerns us here however is that, within the learning strategy framework, *monitoring* is one of the core metacognitive strategies and, as we will see in the following chapters, its employment may activate a number of other more specific strategies for better comprehension and production of the L2.

5.3 The 'natural order' hypothesis

According to this hypothesis, acquisition of the rules follows a predictable order. This hypothesis is the outcome of the 'morpheme' studies of the 60s and 70s, in which it was found that certain grammatical structures or morphemes are acquired before others both in first and second language acquisition. In L2 contexts the order does not seem to be affected by the order in which grammar rules are taught (Krashen, 1985).

This hypothesis has been criticised as being too strong because it ignores the cases of language transfer and of individual variability in L2.

5.4 The 'input' hypothesis

The input hypothesis claims that acquisition progresses when the learner receives *comprehensible input*. Comprehensible input is the second language

input which is just one step beyond the learner's current stage of competence, the "I + 1" stage (where I is the current stage and I + 1 is the immediately following stage). This hypothesis is linked with the previous one as the input becomes comprehensible because it follows a natural order. Krashen (1985: 2) claims that "if input is understood and there is enough of it, the necessary grammar is automatically provided", but he does not provide a clear definition of what exactly comprehensible input consists of. Moreover, the processes of comprehension and acquisition are not identical or related, as comprehension of language does not necessarily guarantee acquisition (Sharwood Smith, 1986). Besides, according to another theoretical strand, learner output is what promotes acquisition (see, for instance, Swain's (1985) 'pushed output' in her *comprehensible output hypothesis*).

5.5 The 'affective filter' hypothesis

For Krashen, comprehensible input can be internalised only when the learner's affective state allows it to become such. In other words, in each learner there is an 'affective filter' which has to do with his/her emotions, motives, needs, and attitudes. When the learner is angry, unmotivated, anxious, or embarrassed, his/her affective filter is high and blocks or impedes input that is necessary to acquisition. In contrast, when the learner is calm, motivated, relaxed, or feels successful, the filter is low and allows input to pass through and acquisition to take place. Although Krashen's affective filter is a challenging hypothesis, it was rather vague and had not been empirically tested at the time.

Admittedly there is a general agreement that affective variables play an important role in SLA, and the hypothesis is particularly attractive to classroom practitioners because its implications help them explain why some learners are more successful and progress to a more advanced level than others. Research on the role of affective variables in SLA and learning strategies has been quite substantial. Furthermore, as we shall see, leading language learning strategy specialists (O'Malley and Chamot, 1990; Oxford, 1990) have described a whole category of *affective strategies,* which may help learners lower their affective filter during L2 learning.

6. Interlanguage theory

Interlanguage theory is the first theory to consider the process of SLA from a cognitive perspective, as it is concerned with the mental processes that a learner employs in order to internalise input. Far from considering learner language as a defective version of the target language (TL), the theory sets out to establish it as a language system in its own right. Its proponents (Adjemian, 1976; Corder, 1967; Eckman, 1991; Selinker, 1972) claim that at any moment during language learning learners possess a system which is neither that of the TL nor that of their mother tongue, but contains elements from both and also elements that the learners themselves have created. The system is constantly revised, hence dynamic, with learners continuously testing their hypotheses about the rules of the new language system. In this way, they confirm their hypotheses if they find supportive evidence in the input or reject them if the evidence is negative. The modifications take place gradually along an interlanguage continuum which moves toward the TL competence. Within such a theory, learners' errors are not considered manifestations of incomplete knowledge but instances of hypotheses testing, taken as manifestations that the system is in operation.

Selinker (1972) coined the term *interlanguage* to refer to the successive mental grammars that learners construct during language development. By stating this, it is accepted that learners play an important role in their language development, as it is also accepted that the language they produce reflects the strategies they employ during their attempts to process the target language system. The role of strategies is thus recognised and seen as central because several elements of the interlanguage are attributed to the learners' selection of learning strategies. Thus, according to Selinker (1972), five principle cognitive processes apply during L2 acquisition, which we can call learning and communication strategies, affected by the learner's L1, the TL being learnt, the way(s) it is learnt, and the learner's attempts to communicate in the TL:

1. language transfer
2. transfer of training
3. strategies of second language learning
4. strategies of second language communication
5. overgeneralisation of target language material

Despite the emergence of some problems from the above list, interlanguage theory was a significant attempt to specify that mental processes are responsible for L2 acquisition, and it initiated subsequent work on 'learning strategies' aiming to determine what language learners do in order to facilitate their own learning (Griffiths and Parr, 2001).

7. Second language acquisition as a cognitive skill

This section reviews theories and models of skill acquisition within the framework of cognitive psychology which is concerned with the way people process information and the role cognitive processes play in learning, among others. Language learning constitutes one aspect of learning, and therefore whatever is said about perception, processing, storage, and retrieval of information also applies to language learning. In this theory L2 acquisition is considered a complex cognitive skill which requires the operation of cognitive systems such as perception, memory, and information processing.

The cognitive systems work as follows: We perceive new information from the outside world through our sense receptors, and our memory mechanisms store information in two stages. To begin with, *short-term memory,* which has been replaced by the concept of *working memory,* stores modest amounts of information for a short period of time, but to do so conscious effort and attention are required. New information is then transferred to our *long-term memory* which has larger storage capacity. Short-term or working memory is believed to operate in a serial way and to act in manifold ways. First of all, for comprehension, it distinguishes what is important to be retained and what is not, while for language production, it stores temporarily material retrieved from long-term memory in order to be used for interaction with new information.

New information is encoded through a process involving four stages (Weinstein and Mayer, 1986): *selection*, *acquisition, construction, integration*. In the first stage, selection, learners pay attention to specific information found in the environment and transfer it temporarily into their working memory. During the second stage, acquisition, they transfer this temporally stored information from working to their long-term memory for permanent storage. During construction, internal connections are established between new information contained in the working memory as well as already existing information in the long-term memory in such a way that new ideas are

organised into schemata for maximum retention. Finally, in the fourth stage, integration, learners reverse the acquisition process by actively searching for their stored information in the long-term memory and transferring it to their working memory to be used accordingly. The theory assigns an important role to learning strategies which are viewed as assisting the processing mechanisms of the brain when it deals with new second language information.

One advantage to viewing L2 acquisition as a complex cognitive skill is that it allows for the possibility of improving the language learning ability, and this is especially interesting for formal language learning contexts (O'Malley and Chamot, 1990). The cognitive approach does not look simply at learning itself, but looks at how individual learners approach learning and what processes they use. For cognitivists, even when learning takes place in highly similar situations, there is the assumption that individuals construct their own reality and acquire different types of knowledge in different ways (Williams and Burden, 2001). This view accepts the existence of individual differences among learners (see chapters 3 and 4), and promotes pedagogical implications for L2 teachers who should identify and understand significant individual differences among their learners if they are to conduct effective teaching (Oxford and Ehrman, 1993).

Before finishing this account of the information processing theory, a description of two such models that are complementary in their nature will be provided: (a) McLaughlin's *information-processing model* (1987, 1990), and (b) Anderson's *Adaptive Control of Thought (ACT) Model* (1983, 1985). They both have adapted the theory to language processing. Furthermore, the models allow for the incorporation of learning strategies as components facilitating the language learning process.

7.1 McLaughlin's information-processing model

McLaughlin (1987) states that SLA is a complex cognitive skill. At first, processing of information is *controlled* but gradually through practising of the skill it becomes *automatic*. Automatisation is reached with constant *restructuring* of the learner's interlanguage system. Let us describe how the model works.

Information processing at first is *controlled*. This happens because learners can process limited amounts of information at a time, due to the limitations of their short-term memory and the demands of the task at hand. Because they are not capable of paying attention to all the information included

in the input, they pay selective attention only to some of its parts while they use peripheral attention to others. To achieve maximum processing ability, learners have to routinise their controlled processes through practice. During controlled practising the activation of information nodes in memory is temporary and works in a sequence of one node at a time (McLaughlin, Rossman, and McLeod, 1983). For example, to form a question in the present tense in English, a beginner learner has to think which form of the ***do*** auxiliary (*do* or *does*) a particular context requires (i.e., third-person singular).

Through practice, controlled processing becomes *automatic*, involving the simultaneous activation of several nodes in memory each time the appropriate input is available. This is possible because nodes are stored in long-term memory as units which can be rapidly accessed without requiring the learner's attentional control. Therefore, when a skill has become automatic, the short-term memory is not involved in its production. When automatic processing is reached in the formation of present tense questions in English, for example, learners do not have to think of how to proceed in a step-by-step fashion as they did before.

Qualitative changes in the learner's interlanguage take place through *restructuring*, which is a continuous movement from controlled to automatic processing. Restructuring accounts for existing variability in the learner's interlanguage, as structures which seem to have been previously acquired become temporarily destabilised and errors make their appearance, e.g., the *U-shaped behaviour*, which is manifested in the temporary regularisation of irregular verbs in the past tense – **goed, *knowed* – when the past tense of regular verbs becomes automatised. This happens because during restructuring, the representation of knowledge in the mind changes from being exemplar-based to rule-based. However, when processes become automatised they are difficult to be deleted or modified. Therefore, if they become automatic prematurely, before they take a native-like form, the phenomenon of *fossilisation* (i.e., non-native-like structures) is possible to make its appearance in the second language learner's interlanguage.

Despite its limitations (as discussed in Ellis 1994: 391), McLaughlin's information processing model provides a useful account of how language learning proceeds, and also allows for learning strategies to function. During restructuring, learning strategies play a facilitative role by helping learners become more flexible in the changes of their interlanguage, as their knowledge moves from the controlled to the automatic stage.

7.2 Anderson's ACT Model

Anderson (1983, 1985) distinguishes two types of knowledge represented in memory, namely, *declarative knowledge* (i.e., know *about* something) which is 'static', and *procedural knowledge* (i.e., know *how* to do something) which is 'dynamic'. Anderson believes that declarative and procedural knowledge are stored in long-term memory differently. The model applies to all types of learning (e.g., learning how to drive a car) but here we will be concerned only with the application of the model to SLA.

Declarative knowledge consists of internalised L2 rules and memorised chunks of language, factual information about the L2 that has not yet been integrated or automatised. Examples of declarative knowledge are definitions of words, facts, and rules, temporal strings in our memory – which things came earlier and later in our lives – or our memory about the arrangement of furniture in our living room. It can be acquired suddenly when we receive a message, and can also be verbalised. Procedural knowledge, on the other hand, is acquired gradually and only with extensive opportunities for practice. We cannot talk about our procedural knowledge as we do about our declarative knowledge.

In SLA the notions of declarative and procedural knowledge apply as follows: If we take the example of the rule concerning the formation of interrogative and negative sentences with present tense verbs in English, the classroom learner might initially know, in the sense that s/he has consciously learnt the rule, that s/he has to use a form of the *do* auxiliary. However, that same learner might not necessarily be able to consistently produce the right interrogative or negative form in a conversation in real time. This is because this particular learner has declarative knowledge of that rule which has not yet been proceduralised. After much practice, this knowledge will hopefully become more proceduralised, and the right structure will be supplied when the context requires it.

Anderson's model views L2 acquisition as a process that involves three stages: *cognitive, associative, and autonomous*.

7.2.1 The cognitive stage

During this stage, learners observe how a competent user performs a task, are shown how to do the task themselves, or try to induce its details on their own. Learners are consciously involved in the activity and the knowledge they

acquire is declarative, which means that they can describe it. This is the case when, in the above example, they know that to form interrogative and negative sentences in English they have to use the *do* auxiliary. Besides grammar rules, learners can memorise vocabulary or unanalysed language formulas either through instruction or by observing TL material in the same way that they can memorise any other set of facts. Learners can describe this knowledge but they cannot use it adequately to perform skillfully in the target language. During performance they have to think about what to do or how to say something, and may also make errors.

7.2.2 The associative stage

During this stage, learners gradually detect their errors and try to correct them by connecting the elements or components they have stored in their declarative knowledge so that their skill is strengthened. In other words, actions (e.g., using the *do aux* in questions and negations) are associated with the corresponding declarative knowledge and learners are able to perform the skill more efficiently than they did during the cognitive stage. The associative stage is the intermediate stage when declarative knowledge is turned into procedural. However, the rules of grammar that learners learn during the cognitive stage are not completely forgotten at this stage, therefore, although they become more fluent in the TL, they may occasionally make errors and their performance may halt.

7.2.3 The autonomous stage

At this stage, performance of the skill becomes automatic and errors eventually disappear. The skill is used without much effort, and demands on working memory or consciousness are eliminated. Learners use the L2 without consciously applying rules as their performance reaches high proficiency. Skilled performance, however, develops gradually and skillful acquisition of a L2 requires a long period of practice.

7.2.4 The ACT model and learning strategies

Anderson's ACT model is discussed extensively in O'Malley and Chamot (1990) who adopt it as a framework for their analysis of language learning strategies, cautioning about its limitations at the same time. Strategies are

represented as procedural skills which in the early stages of learning may be conscious and later on they are employed without the learner's awareness (see chapter 2 for more elaboration on this issue). O'Malley and Chamot identify a number of cognitive and metacognitive strategies that operate during Anderson's three processing stages. For example, metacognitive strategies such as selective attention, planning, and monitoring are involved respectively in the cognitive and autonomous stages; cognitive strategies such as imagery, organisation, inferencing, elaboration, deduction, and transfer (in their taxonomy) can be found in Anderson's descriptions of cognitive and associative processes.

7.3 Limitations of the models

Both of the information processing models described above provide a partial theoretical basis for the treatment of language learning strategies as these have been presented in well-known taxonomies. As O'Malley and Chamot admit (1990), Anderson's model does not cover the presence of affective and social strategies in their taxonomy. A good justification of such an inclusion in her own taxonomy is provided by Oxford (1990: 11) who states that:

> "Language learning strategies are not restricted to cognitive functions, such as those dealing with mental processing and manipulation of the new language. Strategies also include… emotional (affective), social, and other functions as well… language learning is indisputably an emotional and interpersonal process as well as a cognitive and metacognitive affair".

Oxford's position in the above statement has been adopted throughout this book.

8. The interactionist view

Interactionists view L2 development as being affected by the environment in which the L2 is used. In other words, they put emphasis on the input the L2 learner receives, the type of L2 output s/he produces, and the interaction in the L2 between the learner and another, usually more proficient, con-

versational partner (preferably a native speaker). They maintain that, for learning to take place, the language data available to L2 learners must be appropriately contextualised in order to become comprehensible. These claims originated from Krashen's 'input' hypothesis (5.4 above), but interactionists were concerned mainly about *how* input becomes comprehensible to L2 learners, which is possible, according to Long (1983), by offering 'modified interaction'. Modified interaction involves not only simplification but also other types of conversational adjustments by the members of the interaction, such as comprehension checks, repetition, gesturing, slower speech rate, paraphrasing, clarification requests, etc. Thus Long put forward his *interaction hypothesis* which instigated research on how meaning is negotiated and how conversational partners repair their speech (Gass and Varonis, 1994; Hatch, 1992; Mackey, 1999; Pica, Young, and Doughty, 1987). This research also showed that for interaction to lead to acquisition, more elements such as *noticing, consciousness-raising, attention,* etc., should be made available to the learner, especially in formal settings.

Another interesting aspect advanced by Swain (1985, 1995) is the *output hypothesis*, which puts emphasis on learners' output for the increase of L2 fluency and the development of their interlanguage, as the effort to produce output 'pushes' them to become aware of the gaps in their current L2 system. Swain proposed that the functions of *noticing, conscious-raising, hypothesis-testing,* and *reflection* are to be activated by learners in order to develop their interlanguage system effectively. The amount of *attention* they pay to interaction and particularly to language form can turn new language which is processed sufficiently into *intake* (Schmidt, 1994).

While a lot of interesting outcomes have shown that 'negotiation of meaning' between interlocutors and repeated opportunities to 'focus-on-form' can have significant advantages to L2 learning, more specified research is needed to make more powerful predictions about the usefulness of interaction in understanding differences in language development between L2 learners. In relation to the central topic of this book, however, the interactionists' position allows for language strategies to facilitate L2 learning as a number of such strategies (e.g., repetition, gesturing, paraphrasing, clarification requests, attention, interaction with native speakers, elaboration) are an integral part of the input, output, and interaction hypotheses.

9. The socio-cultural theory

A somehow different perspective of social interaction between individuals and its role in SLA is based on Vygotsky's (1978) socio-cultural theory of cognitive development, who maintained that language – which is one of the symbolic tools "created by human culture(s) over time and are accessible to succeeding generations" (Lantolf, 2000: 80) – develops as a result of supportive social interaction between a child and a more capable (caretaker, parent, older sibling, peer, or teacher) individual. For the proponents of the socio-cultural theory, language is seen as being controlled by the same general learning mechanisms that apply to other forms of knowledge and skill development, similarly to cognitive accounts of language acquisition (section 7 above). However, in contrast to the cognitive aspect, the theory emphasises the social aspect of learning initially (inter-mental) which afterwards may become individual (intra-mental). Thus, the earliest uses of language are social and interpersonal, language develops in the individual first as *private speech*, where learners talk to and for themselves (private monologues). Eventually it becomes *inner speech* which is used by the individual to regulate his/her inner thoughts without external articulation.

What is very central in the theory is the *Zone of Proximal Development,* which refers to the help provided by the knowledgeable individual to the learner, who is not yet capable of functioning in an autonomous way (self-regulation). Through collaborative activity adults direct and support children in their efforts to pay attention to significant features of the environment, rehearse information, formulate plans, articulate steps to be taken, solve problems. This process has been known as *scaffolding* (Wood, Bruner, and Ross, 1976).

The socio-cultural theory is relatively new in the field of SLA. However, it has created an interest among educators especially as relevant research has been concerned with classroom learning. The concepts of private speech, inner speech, the Zone of Proximal Development, scaffolding, problem solving, and collaborative speech activity provide appealing interpretations of how second language learning develops. They also reserve a place for learning strategies which are operable during the stages of language development: repetition and rehearsal of new language items during private speech, planning, rehearsal, manipulating of material, comparing and contrasting during inner speech, cooperation with peers and the teacher, requesting clarifica-

tions, noticing, and problem-solving during scaffolding, testing of hypotheses, paying selective attention to different components of the TL during speech production, are some of the strategies that are available to the learners.

10. Summary

This introductory chapter has provided descriptions of some prominent SLA theories in order to examine their relevance or irrelevance to the language learning strategy field. As has been shown, behaviourist accounts are too restrictive for learners to decide how they will approach their language learning process; the innate aspect views language acquisition as separated from cognition and, therefore, it is believed that language acquisition takes place because of an innate predisposition which is not affected by cognitive processes and social factors; Hymes has opposed this view with his communicative competence model which, besides grammatical, also accounts for sociolinguistic, discoursal, and strategic aspects that shape up language knowledge; Krashen's view has been included as an interesting case of accepting primarily an innatist view of language acquisition which also assigns an important role to the affective domain; cognitive accounts of language acquisition which consider language as a complex cognitive skill within the framework of information processing have been described, as they offer a background for the role of learning strategies in language learning; finally, the interactionist view and Vygotsky's socio-cultural theory have been added as representations of the influence societies exert on the individual learner, and of their mediating role in his/her L2 learning.

Conclusively, although the above theories and the research that accompanies them have made important contributions to SLA, no single theory can fully incorporate the whole spectrum of language learning strategies. The ones that more readily offer support to them are the cognitive theory, the interactionist view, and the socio-cultural theory, as learning strategies affect the cognitive, social, and affective domains of language learning.