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Principles of instructed language learning [☆]

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Abstract

This article represents an attempt to draw together findings from a range of second language acquisition studies in order to formulate a set of general principles for language pedagogy. These principles address such issues as the nature of second language (L2) competence (as formulaic and rule-based knowledge), the contributions of both focus on meaning and on form, the need to develop both implicit and explicit second language knowledge, the problems posed by the learner's 'built-in syllabus', the roles of input, output and interaction in learning, the importance of catering to individual differences in learners, and the need to assess language learning in terms of both free and controlled production. The principles draw on a variety of theoretical perspectives and are offered as 'provisional specifications' for a learning-centered language pedagogy. © 2005 Elsevier Ltd. All rights reserved.

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1. Introduction

Second Language Acquisition (SLA), as sub-discipline of applied linguistics, is still a very young field of study. While it may not be possible to identify its precise

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starting point, many researchers would agree that the late 60s marked the onset of an intense period of empirical and theoretical interest in how second languages are acquired. Much of this research has been directed at understanding and contributing to more effective instructed language learning. In addition to the numerous studies that have investigated the effects of instruction on learning (Norris and Ortega's meta-analysis published in 2000 identified 79 studies), much of the theorizing about L2 instruction has been specifically undertaken with language pedagogy in mind, for example Krashen's Monitor Model (Krashen, 1981), Long's Interaction Hypothesis (Long, 1996), DeKeyser's skill-learning theory (DeKeyser, 1998), VanPatten's input processing theory (VanPatten, 1996, 2002) and my own theory of instructed language learning (Ellis, 1994) all address the role of instruction in L2 acquisition.

However, the research and theory do not afford a uniform account of how instruction can best facilitate language learning. There is considerable controversy (see Ellis, 2006). In particular, there is no agreement as to whether instruction should be based on a traditional focus-on-forms approach, involving the systematic teaching of grammatical features in accordance with a structural syllabus, or a focus-on-form approach, involving attention to linguistic features in the context of communicative activities derived from a task-based syllabus or some kind of combination of the two. Nor is there agreement about the efficacy of teaching explicit knowledge or about what type of corrective feedback to provide or even when explicit grammar teaching should commence. These controversies reflect both the complexity of the object of enquiry (instructed language acquisition) and also the fact that SLA is still in its infancy.

Given these controversies, it might be thought unwise to attempt to formulate a set of general principles of instructed language acquisition. Hatch's (1978a) warning – 'apply with caution' – is as pertinent today as it was some thirty years ago.

Nevertheless, I think there is a need to try to draw together a set of generalizations that might serve as the basis for language teacher education, and I am not alone in this, for Lightbown (1985, 2000) has felt and responded to a similar need. If SLA is to offer teachers guidance there is a need to bite the bullet and proffer advice, so long as this advice does not masquerade as prescriptions or proscriptions (and there is always a danger that advice will be so construed) and so long as it is tentative, in the form of what Stenhouse (1975) called 'provisional specifications'. I have chosen to present my own provisional specifications in the form of 'principles'. I do not expect that all SLA researchers or all language teachers will agree with them. I hope, though, that they will provide a basis for argument and for reflection.

2. Principle 1: Instruction needs to ensure that learners develop both a rich repertoire of formulaic expressions and a rule-based competence

Proficiency in an L2 requires that learners acquire both a rich repertoire of formulaic expressions, which caters to fluency, and a rule-based competence consisting of knowledge of specific grammatical rules, which cater to complexity and accuracy

(Skehan, 1998). There is now widespread acceptance of the importance played by formulaic expressions in language use. Native speakers have been shown to use a much larger number of formulaic expressions than even advanced L2 learners (Foster, 2001). Formulaic expressions may also serve as a basis for the later development of a rule-based competence. N. Ellis (1996), for example, has suggested that learners bootstrap their way to grammar by first internalizing and then analyzing fixed sequences. Classroom studies by Ellis (1984), Myles et al. (1998, 1999) and Myles (2004) demonstrate that learners often internalize rote-learned material as chunks, breaking them down for analysis later on.

Traditionally, language instruction has been directed at developing rule-based competence (i.e., knowledge of specific grammatical rules) through the systematic teaching of pre-selected structures – what Long (1991) has referred to as a focus-on-forms approach. While such an approach certainly receives support from the research that has investigated direct intervention in interlanguage development, curriculum designers and teachers need to recognize that this type of instruction is as likely to result in students learning rote-memorized patterns as in internalizing abstract rules (Myles, 2004). This need not be seen as an instructional failure however as such patterns are clearly of value to the learner. It points instead to an acknowledgement of what can be realistically achieved by a focus-on-forms approach, especially with young, beginner learners.

If formulaic chunks play a large role in early language acquisition, it may pay to focus on these initially, delaying the teaching of grammar until later, as I have proposed in Ellis (2002). A notional–functional approach lends itself perfectly to the teaching of prefabricated patterns and routines and may provide an ideal foundation for direct intervention in the early stages. Clearly, though, a complete language curriculum needs to ensure that it caters to the development of both formulaic expressions and rule-based knowledge.

3. Principle 2: Instruction needs to ensure that learners focus predominantly on meaning

The term ‘focus on meaning’ is somewhat ambiguous. It is necessary to distinguish two different senses of this term. The first refers to the idea of semantic meaning (i.e., the meanings of lexical items or of specific grammatical structures). The second sense of focus on meaning relates to pragmatic meaning (i.e., the highly contextualized meanings that arise in acts of communication). To provide opportunities for students to attend to and perform pragmatic meaning, a task-based (or, at least, a task-supported) approach to language teaching is required. It is clearly important that instruction ensures opportunities for learners to focus on both types of meaning but, arguably, it is pragmatic meaning that is crucial to language learning.

There is an important difference in the instructional approaches needed for semantic and pragmatic meaning. In the case of semantic meaning, the teacher and the students can treat language as an object and function as pedagogues and learners. But in the case of pragmatic meaning, they need to view the L2 as a tool

for communicating and to function as communicators.¹ In effect, this involves two entirely different orientations to teaching and learning.

The opportunity to focus on pragmatic meaning is important for a number of reasons:

1. In the eyes of many theorists (e.g., Prabhu, 1987; Long, 1996), only when learners are engaged in decoding and encoding messages in the context of actual acts of communication are the conditions created for acquisition to take place.
2. To develop true fluency in an L2, learners must have opportunities to create pragmatic meaning (DeKeyser, 1998).
3. Engaging learners in activities where they are focused on creating pragmatic meaning is intrinsically motivating.

In arguing the need for a focus on pragmatic meaning, theorists do so not just because they see this as a means of activating the linguistic resources that have been developed by other means but because they see it as the principal means by which the linguistic resources themselves are created. This is the theoretical position that has informed many highly successful immersion education programmes around the world (see Johnson and Swain, 1998). However, in advocating this principle, I do not wish to suggest that instruction needs to be directed exclusively at providing learners with opportunities to create pragmatic meaning, only that, to be effective, instruction must include such opportunities and that, ideally, over an entire curriculum, they should be predominant.

4. Principle 3: Instruction needs to ensure that learners also focus on form

There is now a widespread acceptance that acquisition also requires that learners attend to form. Indeed, according to some theories of L2 acquisition, such attention is necessary for acquisition to take place. Schmidt (1994), for example, has argued that there is no learning without conscious attention to form.²

Again, though, the term 'focus on form' is capable of more than one interpretation. First, it might refer to a general orientation to language as form. Schmidt (2001) dismisses this global attention hypothesis, arguing that learners need to attend

¹ It is also possible to teach pragmatic meaning as an 'object'. That is, specific pragmatic meanings (e.g., requesting or apologizing) can be identified and instructional materials developed to teach learners the linguistic means for performing these strategies. See Kasper and Rose (2002) for examples of studies that have investigated the effectiveness of this approach. Such an approach constitutes a version of 'focus-on-forms', discussed on p. 3. Here, however, I wish to emphasize the need to create materials that allow students to create their own pragmatic meanings through communication.

² The extent to which attention to form is *necessary* for learning remains controversial however. A number of researchers (e.g., Williams, 2005) have provided evidence to demonstrate that some learning takes place without awareness. Schmidt (2001) has modified his position somewhat to allow for the possibility of non-conscious registration of linguistic form, arguing only that 'more attention results in more learning' (p. 30).

to *specific* forms. Second, it might be taken to suggest that learners need to attend only to the graphic or phonetic instantiations of linguistic forms. However, theorists such as Schmidt and Long are insistent that focus on form refers to form-function mapping (i.e., the correlation between a particular form and the meaning(s) it realizes in communication). Third, 'focus on form' might be assumed to refer to awareness of some underlying, abstract rule. Schmidt, however, is careful to argue that attention to form refers to the noticing of specific linguistic items, as they occur in the input to which learners are exposed, not to an awareness of grammatical rules.

Instruction can cater to a focus on form in a number of ways:

1. Through grammar lessons designed to teach specific grammatical features by means of input- or output processing. An inductive approach to grammar teaching is designed to encourage 'noticing' of pre-selected forms; a deductive approach seeks to establish an awareness of the grammatical rule.
2. Through focused tasks (i.e., tasks that require learners to comprehend and process specific grammatical structures in the input, and/or to produce the structures in the performance of the task).
3. By means of methodological options that induce attention to form in the context of performing a task. Two methodological options that have received considerable attention from researchers are (a) the provision of time for strategic and on-line planning (Yuan and Ellis, 2003; Foster and Skehan, 1996) and (b) corrective feedback (Lyster, 2004).

Instruction can seek to provide an *intensive* focus on pre-selected linguistic forms (as in a focus-on-forms approach or in a lesson built around a focused task) or it can offer incidental and extensive attention to form through corrective feedback in task-based lessons. There are pros and cons for both intensive and extensive grammar instruction. Some structures may not be mastered without the opportunity for repeated practice. Harley (1989), for example found that Anglophone learners of L2 French failed to acquire the distinction between the preterite and imparfait past tenses after hours of exposure (and presumably some corrective feedback) in an immersion programme but were able to improve their accuracy in the use of these two tenses after intensive instruction. However, intensive instruction is time consuming (in Harley's study the targeted structures were taught over an 8 week period!) and thus there will be constraints on how many structures can be addressed. Extensive grammar instruction, on the other hand, affords the opportunity for large numbers of grammatical structures to be addressed. Also, more likely than not, many of the structures will be attended to repeatedly over a period of time. Further, because this kind of instruction involves a response to the errors each learner makes, it is individualized and affords the skilled teacher on-line opportunities for the kind of contextual analysis that Celce-Murcia (2002) recommends as a basis for grammar teaching. Ellis et al. (2001) reported that extensive instruction occurred relatively frequently in communicative adult ESL lessons through both pre-emptive (i.e., teacher or student-initiated) and reactive (i.e., corrective feedback) attention to form. Loewen (2002) showed that learners who experienced such momentary form-focused episodes

demonstrated subsequent learning of the forms addressed in both immediate and delayed tests. However, it is not possible to attend to those structures that learners do not attempt to use (i.e., extensive instruction cannot deal with avoidance). Also, of course, it does not provide the in-depth practice that some structures may require before they can be fully acquired. Arguably, then, instruction needs to be conceived of in terms of both approaches.

5. Principle 4: Instruction needs to be predominantly directed at developing implicit knowledge of the L2 while not neglecting explicit knowledge

Implicit knowledge is procedural, is held unconsciously and can only be verbalized if it is made explicit. It is accessed rapidly and easily and thus is available for use in rapid, fluent communication. In the view of most researchers, competence in an L2 is primarily a matter of implicit knowledge. Explicit knowledge 'is the declarative and often anomalous knowledge of the phonological, lexical, grammatical, pragmatic and socio-critical features of an L2 together with the metalanguage for labelling this knowledge' (Ellis, 2004). It is held consciously, is learnable and verbalizable and is typically accessed through controlled processing when learners experience some kind of linguistic difficulty in the use of the L2. A distinction needs to be drawn between explicit knowledge as analysed knowledge and as metalingual explanation. The former entails a conscious awareness of how a structural feature works while the latter consists of knowledge of grammatical metalanguage and the ability to understand explanations of rules.

Given that it is implicit knowledge that underlies the ability to communicate fluently and confidently in an L2, it is this type of knowledge that should be the ultimate goal of any instructional programme. How then can it be developed? There are conflicting theories regarding this. According to skill-building theory (DeKeyser, 1998), implicit knowledge arises out of explicit knowledge, when the latter is proceduralized through practice. In contrast, emergentist theories (Krashen, 1981; N. Ellis, 1998) see implicit knowledge as developing naturally out of meaning-focused communication, aided, perhaps, by some focus on form. Irrespective of these different theoretical positions, there is consensus that learners need the opportunity to participate in communicative activity to develop implicit knowledge. Thus, communicative tasks need to play a central role in instruction directed at implicit knowledge.

The value in teaching explicit knowledge of grammar has been and remains today one of the most controversial issues in language pedagogy. In order to make sense of the different positions relating to the teaching of explicit knowledge it is necessary to consider two separate questions:

1. Is explicit knowledge of any value in and of itself?
2. Is explicit knowledge of value in facilitating the development of implicit knowledge?

Explicit knowledge is arguably only of value if it can be shown that learners are able to utilize this type of knowledge in actual performance. Again, there is controversy. One position is that this is very limited. Krashen (1982) argues that learners can only use explicit knowledge when they ‘monitor’ and that this requires that they are focused on form (as opposed to meaning) and have sufficient time to access the knowledge. Other positions are possible. It can be argued that explicit knowledge is used in both the process of formulating messages as well as in monitoring and that many learners are adroit in accessing their explicit memories for these purposes, especially if the rules are, to a degree, automatized. However, this does require time. Yuan and Ellis (2003) showed that learners’ grammatical accuracy improved significantly if they had time for ‘on-line planning’ while performing a narrative task, a result most readily explained in terms of their accessing explicit knowledge.

Irrespective of whether explicit knowledge has any value in and of itself, it may assist language development by facilitating the development of implicit knowledge. This involves a consideration of what has become known as *interface hypothesis*, which addresses whether explicit knowledge plays a role in L2 acquisition. Three positions can be identified. According to the non-interface position (Krashen, 1981), explicit and implicit knowledge are entirely distinct with the result that explicit knowledge cannot be converted into implicit knowledge. This position is supported by research that suggests that explicit and implicit memories are neurologically separate (Paradis, 1994). The interface position argues the exact opposite. Drawing on skill-learning theory (DeKeyser, 1998), it argues that explicit knowledge becomes implicit knowledge if learners have the opportunity for plentiful communicative practice. The weak interface position (Ellis, 1993) claims that explicit knowledge primes a number of key acquisitional processes, in particular ‘noticing’ and ‘noticing the gap’ (Schmidt, 1994). That is, explicit knowledge of a grammatical structure makes it more likely learners will attend to the structure in the input and carry out the cognitive comparison between what they observe in the input and their own output. These positions continue to be argued at a theoretical level.

The three positions support very different approaches to language teaching. The non-interface position leads to a ‘zero grammar’ approach, i.e., one that prioritizes meaning-centered approaches such as task-based teaching. The interface position supports PPP – the idea that a grammatical structure should be first presented explicitly and then practised until it is fully proceduralized. The weak interface position has been used to provide a basis for consciousness-raising tasks (Ellis, 1991) that require learners to derive their own explicit grammar rules from data they are provided with.

This principle, then, asserts that instruction needs to be directed at developing *both* implicit and explicit knowledge, giving priority to the former. However, teachers should not assume that explicit knowledge can be converted into implicit knowledge, as the extent to which this is possible remains controversial.

6. Principle 5: Instruction needs to take into account the learner's 'built-in syllabus'

Early research into naturalistic L2 acquisition showed that learners follow a 'natural' order and sequence of acquisition (i.e., they master different grammatical structures in a relatively fixed and universal order and they pass through a sequence of stages of acquisition on route to mastering each grammatical structure). This led researchers like Corder (1967) to suggest that learners had their own 'built-in syllabus' for learning grammar as implicit knowledge. Krashen (1981) famously argued that grammar instruction played no role in the development of implicit knowledge (what he called 'acquisition'), a view based on the conviction that learners (including classroom learners) would automatically proceed along their built-in syllabus as long as they had access to comprehensible input and were sufficiently motivated. Grammar instruction could contribute only to explicit knowledge ('learning').

There followed a number of empirical studies designed to (1) compare the order of acquisition of instructed and naturalistic learners (e.g., Pica, 1983), (2) compare the success of instructed and naturalistic learners (Long, 1983) and (3) examine whether attempts to teach specific grammatical structures resulted in their acquisition (Ellis, 1984). These studies showed that, by and large, the order and sequence of acquisition was the same for instructed and naturalistic learners, a finding supported by later research (e.g., Ellis, 1989; Pienemann, 1989); that instructed learners generally achieved higher levels of grammatical competence than naturalistic learners and that instruction was no guarantee that learners would acquire what they had been taught. This led to the conclusion that it was beneficial to teach grammar but that it was necessary to ensure it was taught in a way that was compatible with the natural processes of acquisition.

How, then, can instruction take account of the learner's built-in syllabus? There are a number of possibilities:

1. Adopt a zero grammar approach, as proposed by Krashen. That is, employ a task-based approach that makes no attempt to predetermine the linguistic content of a lesson.
2. Ensure that learners are developmentally ready to acquire a specific target feature. However, this is probably impractical as teachers have no easy way of determining where individual students have reached and it would necessitate a highly individualized approach to cater for differences in developmental level among the students. Also, as we noted earlier, such fine-tuning may not be necessary. While instruction in a target feature may not enable learners to 'beat' the built-in syllabus it may serve to push them along it as long as the target structure is not too far ahead of their developmental stage.
3. Focus the instruction on explicit rather than implicit knowledge as explicit knowledge is not subject to the same developmental constraints as implicit knowledge. While it is probably true that some declarative facts about language are easier to master than others, this is likely to reflect their cognitive rather than their

developmental complexity, which can more easily be taken into account in deciding the order of instruction. Traditional structural syllabuses, in fact, are graded on the basis of cognitive complexity.³

7. Principle 6: Successful instructed language learning requires extensive L2 input

Language learning, whether it occurs in a naturalistic or an instructed context, is a slow and laborious process. Children acquiring their L1 take between two and five years to achieve full grammatical competence, during which time they are exposed to massive amounts of input. Ellis and Wells (1980) demonstrated that a substantial portion of the variance in speed of acquisition of children can be accounted for by the amount and the quality of input they receive. The same is undoubtedly true of L2 acquisition. If learners do not receive exposure to the target language they cannot acquire it. In general, the more exposure they receive, the more and the faster they will learn. Krashen (1981, 1994) has adopted a very strong position on the importance of input. He points to studies that have shown that length of residence in the country where the language is spoken is related to language proficiency and other studies that have found positive correlations between the amount of reading reported and proficiency/literacy. For Krashen, however, the input must be made 'comprehensible' either by modifying it or by means of contextual props. Researchers may disagree with Krashen's claim that comprehensible input (together with motivation) is all that is required for successful acquisition, arguing that learner output is also important (see Principle 7 below) but they agree about the importance of input for developing the highly connected implicit knowledge that is needed to become an effective communicator in the L2.

How can teachers ensure their students have access to extensive input? In a 'second' language teaching context, learners can be expected to gain access to plentiful input outside the classroom, although, as Tanaka (2004) has shown in a study of adult Japanese students learning English in Auckland, not all such learners are successful in achieving this. In a 'foreign' language teaching context (as when French or Japanese is taught in schools in the United Kingdom or United States), there are far fewer opportunities for extensive input. To ensure adequate access, teachers need to:

1. Maximise use of the L2 inside the classroom. Ideally, this means that the L2 needs to become the medium as well as the object of instruction. A study by Kim and Elder (2005) revealed that foreign language teachers of French, German, Japanese and Korean in Auckland secondary schools varied enormously in the extent to which they employed the L2 in the classroom (i.e., between 88% and 22% of the total input).

³ A good example of where 'cognitive complexity' and 'developmental complexity' can be distinguished is subject-verb agreement in English. This is typically introduced very early in structural courses but it is invariably only mastered at a very advanced stage of development.

2. Create opportunities for students to receive input outside the classroom. This can be achieved most easily by providing extensive reading programmes based on carefully selected graded readers, suited to the level of the students, as recommended by Krashen (1989). Elley (1991) reviewed studies that showed that L2 learners can benefit from both reading and from being read to. Also, ideally, if more resources are available, schools need to establish self-access centers which students can use outside class time. Successful FL learners seek out opportunities to experience the language outside class time. Many students are unlikely to make the effort unless teachers (a) make resources available and (b) provide learner-training in how to make effective use of the resources.

It can be claimed with confidence that, if the only input students receive is in the context of a limited number of weekly lessons based on some course book, they are unlikely to achieve high levels of L2 proficiency.

8. Principle 7: Successful instructed language learning also requires opportunities for output

Contrary to Krashen's insistence that acquisition is dependent entirely on comprehensible input, most researchers now acknowledge that learner output also plays a part. Skehan (1998) drawing on Swain (1995) summarizes the contributions that output can make:

1. Production serves to generate better input through the feedback that learners' efforts at production elicit.
2. It forces syntactic processing (i.e., obliges learners to pay attention to grammar).
3. It allows learners to test out hypotheses about the target language grammar.
4. It helps to automatize existing knowledge.
5. It provides opportunities for learners to develop discourse skills, for example by producing 'long turns'.
6. It is important for helping learners to develop a 'personal voice' by steering conversation on to topics they are interested in contributing to. Ellis (2003) adds one other contribution of output:
7. it provides the learner with 'auto-input' (i.e., learners can attend to the 'input' provided by their own productions).

The importance of creating opportunities for output, including what Swain (1985) has called pushed output (i.e., output where the learner is stretched to express messages clearly and explicitly), constitutes one of the main reasons for incorporating tasks into a language programme. Controlled practice exercises typically result in output that is limited in terms of length and complexity. They do not afford students opportunities for the kind of sustained output that theorists argue is necessary for interlanguage development. Research (e.g., Allen et al., 1990) has shown that extended talk of a clause or more in a classroom context is more likely to occur when

students initiate interactions in the classroom and when they have to find their own words. This is best achieved by asking learners to perform oral and written tasks.

9. Principle 8: The opportunity to interact in the L2 is central to developing L2 proficiency

While it is useful to consider the relative contributions of input and output to acquisition, it is also important to acknowledge that both co-occur in oral interaction and that both computational and sociocultural theories of L2 acquisition have viewed social interaction as the matrix in which acquisition takes place. As Hatch (1978b) famously put it ‘one learns how to do conversation, one learns how to interact verbally, and out of the interaction syntactic structures are developed’ (p. 404). Thus, interaction is not just a means of automatizing existing linguistic resources but also of creating new resources. According to the Interaction Hypothesis (Long, 1996), interaction fosters acquisition when a communication problem arises and learners are engaged in negotiating for meaning. The interactional modifications arising help to make input comprehensible, provide corrective feedback, and push learners to modify their own output in uptake. According to the sociocultural theory of mind, interaction serves as a form of mediation, enabling learners to construct new forms and perform new functions collaboratively (Lantolf, 2000). According to this view, learning is first evident on the social plane and only later on the psychological plane. In both theories, while social interaction may not be viewed as necessary for acquisition, it is viewed as a primary source of learning.

What then are the characteristics of interaction that are deemed important for acquisition? In general terms, opportunities for negotiating meaning and plenty of scaffolding are needed. Johnson (1995) identifies four key requirements for interaction to create an acquisition-rich classroom:

1. Creating contexts of language use where students have a reason to attend to language.
2. Providing opportunities for learners to use the language to express their own personal meanings.
3. Helping students to participate in language-related activities that are beyond their current level of proficiency.
4. Offering a full range of contexts that cater for a ‘full performance’ in the language.

Johnson suggests that these are more likely to occur when the academic task structure (i.e., how the subject matter is sequenced in a lesson) and the social participation structure (i.e., how the allocation of interactional rights and obligations shapes the discourse) are less rigid. Once again, this is more likely to be provided through ‘tasks’ than through exercises. Ellis (1999) suggests that a key to ensuring interaction beneficial to acquisition is giving control of the discourse topic to the students. This, of course, is not easily achieved, given that teachers have a duty to

ensure that classroom discourse is orderly, which, in turn, is most easily achieved by taking control of the discourse topic by means of IRF (teacher initiate–student respond–teacher feedback) exchanges. Thus creating the right kind of interaction for acquisition constitutes a major challenge for teachers. One solution is to incorporate small group work into a lesson. When students interact amongst themselves, acquisition-rich discourse is more likely to ensue. However, there are a number of dangers in group work which may militate against this (e.g., excessive use of the L1 in monolingual groups).

10. Principle 9: Instruction needs to take account of individual differences in learners

While there are identifiable universal aspects of L2 acquisition, there is also considerable variability in the rate of learning and in the ultimate level of achievement. In particular, learning will be more successful when:

1. The instruction is matched to students' particular aptitude for learning.
2. The students are motivated.

It is probably beyond the abilities of most teachers to design lessons involving the kind of matching instruction employed in Wesche's (1981) study, which used language aptitudes tests to identify different learning styles and then sought to match the kind of instruction provided to the learners' preferred approach to learning. However, teachers can cater to variation in the nature of their students' aptitude by adopting a flexible teaching approach involving a variety of learning activities. They can also make use of simple learner-training materials (e.g., Ellis and Sinclair, 1989) designed to make students more aware of their own approaches to learning and to develop awareness of alternative approaches. Good language learner studies (e.g., Naiman et al., 1978) suggest that successful language learning requires a flexible approach to learning. Thus, increasing the range of learning strategies at learners' disposal is one way in which teachers can help them to learn. Such strategy training needs to foster an understanding that language learning requires both an experiential and an analytical approach and to demonstrate the kinds of strategies related to both approaches. School-based students often tend to adopt an analytical approach to learning (even if this does not accord with their natural aptitude) as this is the kind of approach generally fostered in schools (Sternberg, 2002). They may have greater difficulty in adopting the kind of experiential approach required in task-based language teaching. Some learner-training, therefore, may be essential if learners are to perform tasks effectively.⁴

⁴ Foster (1998) reports that the adult ESL learners she investigated engaged in very little negotiation of meaning when performing tasks because they failed to take them seriously. They viewed them as 'games' and eschewed negotiation because it would detract from the 'fun'.

Dörnyei's research has shown the kinds of teaching strategies that teachers can employ to develop and maintain their students' intrinsic motivation. Dörnyei (2001) also makes the obvious point that 'the best motivational intervention is simply to improve the quality of our teaching' (p. 26). He points in particular to the need for 'instructional clarity' and refers to Wlodkowski's (1986) checklist for achieving this. This includes such obvious recipes as 'explain things simply' and 'teach at a pace that is not too fast and not too slow'. Teachers also need to accept that it is *their* responsibility to ensure that their students are motivated and stay motivated and not bewail the fact that students do not bring any motivation to learn the L2 to the classroom. While it is probably true that teachers can do little to influence students' extrinsic motivation, there is a lot they can do to enhance their intrinsic motivation.

11. Principle 10: In assessing learners' L2 proficiency it is important to examine free as well as controlled production

Norris and Ortega's (2000) meta-analysis of studies investigating form-focussed instruction demonstrated that the extent of the effectiveness of instruction is contingent on the way in which it is measured. They distinguished four types of measurement:

1. Metalinguistic judgement (e.g., a grammaticality judgement test).
2. Selected response (e.g., multiple choice).
3. Constrained constructed response (e.g., gap filling exercises).
4. Free constructed response (e.g., a communicative task).

They found that the magnitude of effect was greatest in the case of (2) and (3) and least in (4). Yet, arguably, it is (4) that constitutes the best measure of learners' L2 proficiency, as it is this that corresponds most closely to the kind of language use found outside the classroom. The ability to get a multiple choice question right amounts to very little if the student is unable to use the target feature in actual communication.

Free constructed responses are best elicited by means of tasks. The performance elicited by means of tasks can be assessed in three ways (Ellis, 2003); (1) a direct assessment of task outcomes, (2) discourse analytic measures and (3) external ratings. (2) is not practical for busy classroom teachers as it requires transcribing speech and then painstakingly calculating such measures as number of error free clauses and clause complexity. (3) is practical but it requires considerable expertise to ensure that the ratings of learner performance are valid and reliable. (1) holds out the most promise. However, it is only possible with closed tasks (an, i.e., task for which there is a single correct outcome). An example would be a Spot the Difference Task where learners are asked to interact in order to find a specified number of differences in two similar pictures. In this task, assessment would consist of establishing whether they were able to successfully identify the differences.

12. Conclusion

These general principles have been derived from my understanding of SLA. I have drawn on a variety of theoretical perspectives, although predominantly from what Lantolf (1996) refers to as the computational model of L2 learning. I am aware that this model has its limitations and is open to criticism, in particular that it is not socially sensitive because it fails to acknowledge the importance of social context and social relations in the language learning process (see Block (2003) for an extended critique along these lines). It would be clearly useful to attempt to formulate a set of principles based on the broader conceptualization of SLA of the kind advocated by Block and others but this was not my aim here. There will always be a need for a psycholinguistic account of how learners internalize new linguistic forms and how they restructure their linguistic knowledge in the process of acquisition. Language use is *not* language acquisition, only a means to it. To my mind, the computational model provides a solid foundation for developing a set of principles that articulate the relationship between language use and acquisition. It also constitutes a metaphor that teachers can easily relate to.

References

- Allen, P., Swain, M., Harley, B., Cummins, J., 1990. Aspects of classroom treatment: toward a more comprehensive view of second language education. In: Harley, B., Allen, P., Cummins, J., Swain, M. (Eds.), *The Development of L2 Proficiency*. Cambridge University Press, Cambridge, pp. 57–82.
- Block, D., 2003. *The Social Turn in Second Language Acquisition*. Edinburgh University Press, Edinburgh.
- Celce-Murcia, M., 2002. What it makes sense to teach grammar through context and through discourse. In: Hinkel, E., Fotos, S. (Eds.), *New Perspectives on Grammar Teaching in Second Language Classrooms*. Lawrence Erlbaum, Mahwah, NJ, pp. 119–134.
- Corder, S.P., 1967. The significance of learners' errors. *International Review of Applied Linguistics* 5, 161–169.
- DeKeyser, R., 1998. Beyond focus on form: cognitive perspectives on learning and practicing second language grammar. In: Doughty, C., Williams, J. (Eds.), *Focus on Form in Classroom Second Language Acquisition*. Cambridge University Press, Cambridge, pp. 42–63.
- Dörnyei, Z., 2001. *Motivational Strategies in the Language Classroom*. Cambridge University Press, Cambridge.
- Elley, W., 1991. Acquiring literacy in a second language: the effect of book-based programs. *Language Learning* 41, 375–411.
- Ellis, G., Sinclair, B., 1989. *Learning to Learn English*. Cambridge University Press, Cambridge.
- Ellis, N., 1996. Sequencing in SLA: phonological memory, chunking, and points of order. *Studies in Second Language Acquisition* 18, 91–126.
- Ellis, N., 1998. Emergentism, connectionism and language learning. *Language Learning* 48, 631–664.
- Ellis, R., 1984. *Classroom Second Language Development*. Pergamon, Oxford.
- Ellis, R., 1989. Are classroom and naturalistic acquisition the same. A study of the classroom acquisition of German word order rules. *Studies in Second Language Acquisition* 11, 305–328.
- Ellis, R., 1991. *Second Language Acquisition and Language Pedagogy*. Multilingual Matters, Clevedon.
- Ellis, R., 1993. Second language acquisition and the structural syllabus. *TESOL Quarterly* 27, 91–113.
- Ellis, R., 1994. A theory of instructed second language acquisition. In: Ellis, N. (Ed.), *Implicit and Explicit Learning of Languages*. Academic Press, London, pp. 79–114.

- Ellis, R., 1999. Making the classroom acquisition-rich. In: Ellis, R. (Ed.), *Learning a Second Language through Interaction*. John Benjamins, Amsterdam, pp. 211–229.
- Ellis, R., 2002. The place of grammar instruction in the second/foreign language curriculum. In: Hinkel, S., Fotos, S. (Eds.), *New Perspectives on Grammar Teaching in Second Language Classrooms*. Lawrence Erlbaum, Mahwah, NJ, pp. 17–34.
- Ellis, R., 2003. *Task-based Language Learning and Teaching*. Oxford University Press, Oxford.
- Ellis, R., 2004. The definition and measurement of explicit knowledge. *Language Learning* 54, 227–275.
- Ellis, R., 2006. Controversies in grammar teaching. *TESOL Quarterly*.
- Ellis, R., Basturkmen, H., Loewen, S., 2001. Learner uptake in communicative ESL lessons. *Language Learning* 51, 281–318.
- Ellis, R., Wells, G., 1980. Enabling factors in adult-child discourse. *First Language* 1, 46–82.
- Foster, P., 1998. A classroom perspective on the negotiation of meaning. *Applied Linguistics* 19, 1–23.
- Foster, P., 2001. Rules and routines: a consideration of their role in task-based language production of native and non-native speakers. In: Bygate, M., Skehan, P., Swain, M. (Eds.), *Language Tasks: Teaching, Learning and Testing*. Longman, London, pp. 75–97.
- Foster, P., Skehan, P., 1996. The influence of planning on performance in task-based learning. *Studies in Second Language Acquisition* 18 (3), 299–324.
- Harley, B., 1989. Functional grammar in French immersion: a classroom experiment. *Applied Linguistics* 10, 331–359.
- Hatch, E., 1978a. Apply with caution. *Studies in Second Language Acquisition* 2, 123–143.
- Hatch, E., 1978b. Discourse analysis and second language acquisition. In: Hatch, E. (Ed.), *Second Language Acquisition*. Newbury House, Rowley, Mass.
- Johnson, K., 1995. *Understanding Communication in Second Language Classrooms*. Cambridge University Press, Cambridge.
- Johnson, K., Swain, M., 1998. *Immersion Education: International Perspectives*. Cambridge University Press, Cambridge.
- Kasper, G., Rose, K.R., 2002. *Pragmatic Development in a Second Language*. Blackwell, Oxford.
- Kim, S., Elder, C., 2005. The relationship between teachers' language choice and pedagogic functions in foreign language classrooms. *Language Teaching Research* 9.
- Krashen, S., 1981. *Second Language Acquisition and Second Language Learning*. Pergamon, Oxford.
- Krashen, S., 1982. *Principles and Practice in Second Language Acquisition*. Pergamon, Oxford.
- Krashen, S., 1989. We acquire vocabulary and spelling by reading: additional evidence for the input hypothesis. *Modern Language Journal* 73, 440–464.
- Krashen, S., 1994. The input hypothesis and its rivals. In: Ellis, N. (Ed.), *Implicit and Explicit Learning of Languages*. Academic Press, London.
- Lantolf, J., 1996. Second language theory building: letting all the flowers bloom! *Language Learning* 46, 713–749.
- Lantolf, J., 2000. Second language learning as a mediated process. *Language Teaching* 33, 79–96.
- Lightbown, P., 1985. Great expectations in second language acquisition research and classroom teaching. *Applied Linguistics* 6, 263–273.
- Lightbown, P., 2000. Anniversary article: classroom SLA research and second language teaching. *Applied Linguistics* 21, 431–462.
- Loewen, S., 2002. The occurrence and effectiveness of incidental focus on form in meaning-focused ESL lessons. Unpublished PhD Thesis, University of Auckland, New Zealand.
- Long, M., 1983. Does second language instruction make a difference. A review of the research. *TESOL Quarterly* 17, 359–382.
- Long, M., 1991. Focus on form: a design feature in language teaching methodology. In: de Bot, K., Ginsberg, R., Kramsch, C. (Eds.), *Foreign Language Research in Cross-cultural Perspective*. John Benjamin, Amsterdam, pp. 39–52.
- Long, M., 1996. The role of the linguistic environment in second language acquisition. In: Ritchie, W., Bhatia, T. (Eds.), *Handbook of Second Language Acquisition*. Academic Press, San Diego, pp. 413–468.

- Lyster, R., 2004. Differential effects of prompts and recasts in form-focused instruction. *Studies in Second Language Acquisition* 26, 399–432.
- Myles, F., 2004. From data to theory: the over-representation of linguistic knowledge in SLA. *Transactions of the Philological Society* 102, 139–168.
- Myles, F., Mitchell, R., Hooper, J., 1998. Rote or rule. Exploring the role of formulaic language in classroom foreign language learning. *Language Learning* 48, 323–363.
- Myles, F., Mitchell, R., Hooper, J., 1999. Interrogative chunks in French L2: a basis for creative construction? *Studies in Second Language Acquisition* 21, 49–80.
- Naiman, N., Fröhlich, M., Stern, H., Todesco, A., 1978. *The Good Language Learner*. Research in Education Series No. 7. The Ontario Institute for Studies in Education, Toronto.
- Norris, J., Ortega, L., 2000. Effectiveness of L2 instruction: a research synthesis and quantitative meta-analysis. *Language Learning* 50, 417–528.
- Paradis, M., 1994. Neurolinguistic aspects of implicit and explicit memory: implications for bilingualism and SLA. In: Ellis, N. (Ed.), *Implicit and Explicit Learning of Languages*. Academic Press, London, pp. 393–420.
- Pica, T., 1983. Adult acquisition of English as a second language under different conditions of exposure. *Language Learning* 33, 465–497.
- Pienemann, M., 1989. Is language teachable? Psycholinguistic experiments and hypotheses. *Applied Linguistics* 10, 52–79.
- Prabhu, N.S., 1987. *Second Language Pedagogy*. Oxford University Press, Oxford.
- Schmidt, R., 1994. Deconstructing consciousness in search of useful definitions for applied linguistics. *ALLA Review* 11, 11–26.
- Schmidt, R., 2001. Attention. In: Robinson, P. (Ed.), *Cognition and Second Language Instruction*. Cambridge University Press, Cambridge.
- Skehan, P., 1998. *A Cognitive Approach to Language Learning*. Oxford University Press, Oxford.
- Stenhouse, L., 1975. *An Introduction to Curriculum Research and Development*. Heinemann, London.
- Sternberg, R., 2002. The theory of successful intelligence and its implications for language aptitude testing. In: Robinson, P. (Ed.), *Individual Differences and Instructed Language Learning*. John Benjamins, Amsterdam, pp. 13–43.
- Swain, M., 1985. Communicative competence: some roles of comprehensible input and comprehensible output in its development. In: Gass, S., Madden, C. (Eds.), *Input and Second Language Acquisition*. Newbury House, Rowley, MA, pp. 235–252.
- Swain, M., 1995. Three functions of output in second language learning. In: Cook, G., Seidhofer, B. (Eds.), *For H.G. Widdowson: Principles and Practice in the Study of Language*. Oxford University Press, Oxford.
- Tanaka, K., 2004. *Language learning beliefs and language proficiency of Japanese learners of English in New Zealand*. Doctoral thesis, University of Auckland.
- VanPatten, B., 1996. *Input Processing and Grammar Instruction in Second Language Acquisition*. Ablex, Norwood, NJ.
- VanPatten, B., 2002. Processing instruction: an update. *Language Learning* 52, 755–803.
- Wesche, M., 1981. Language aptitude measures in streaming, matching students with methods, and diagnosis of learning problems. In: Diller, K. (Ed.), *Individual Differences and Universals in Language Learning Aptitude*. Newbury House, Rowley, MA.
- Williams, J., 2005. Learning without awareness. *Studies in Second Language Acquisition* 27, 2.
- Wlodkowski, R., 1986. *Enhancing Adult Motivation to Learn*. Jossey-Bass, San Francisco, CA.
- Yuan, F., Ellis, R., 2003. The effects of pre-task planning and on-line planning on fluency, complexity and accuracy in L2 oral production. *Applied Linguistics* 24, 1–27.