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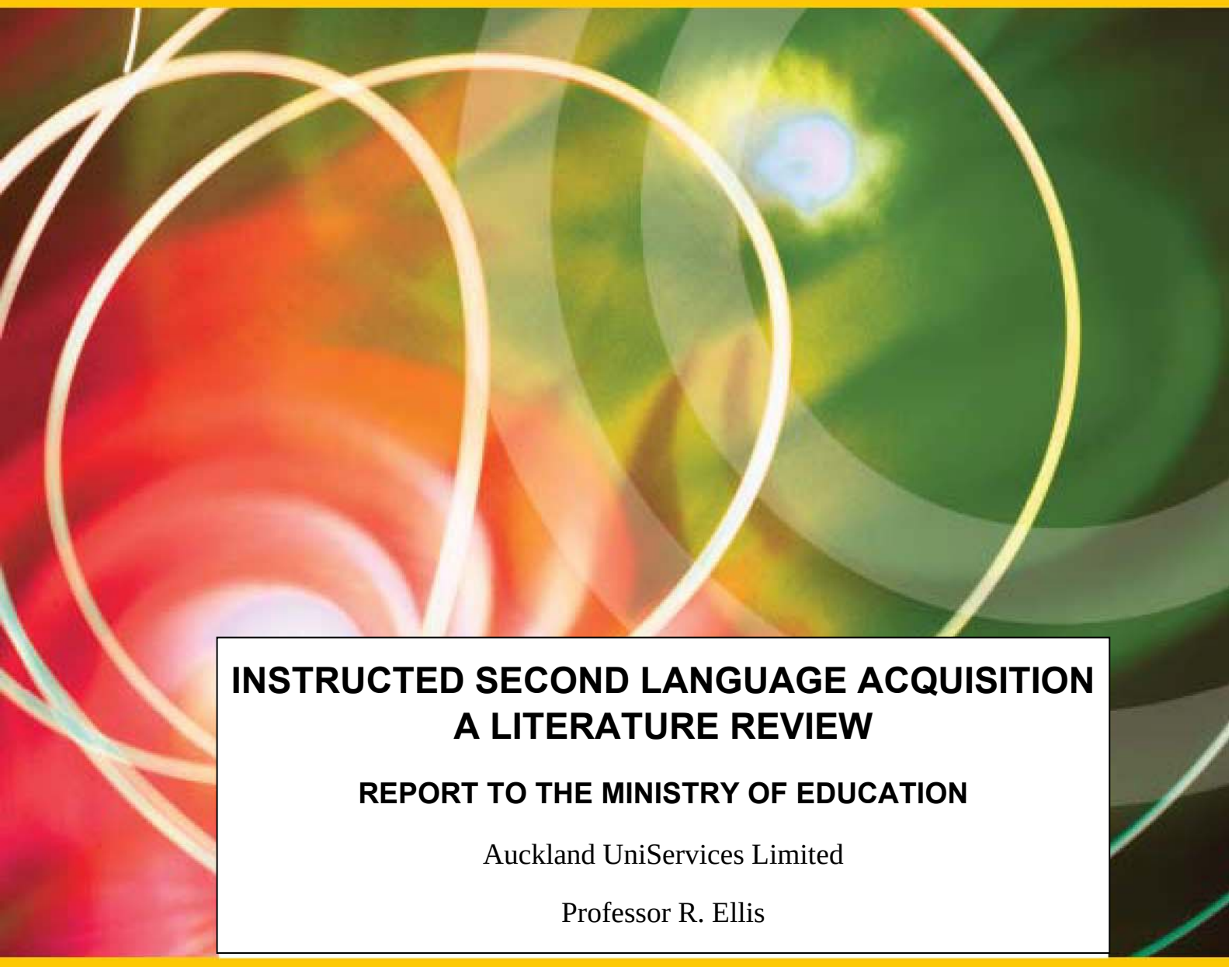

INSTRUCTED SECOND LANGUAGE ACQUISITION A LITERATURE REVIEW

REPORT TO THE MINISTRY OF EDUCATION

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Instructed Second Language Acquisition

A Literature Review

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INTRODUCTION

The purpose of this literature review is to examine theory and research that has addressed what constitutes effective pedagogy for the acquisition of a second language (L2) in a classroom context. In other words, the review seeks to answer the question: How can instruction best ensure successful language learning?

This is not an easy question to answer, both because there are many competing theories offering very different perspectives on how instruction can promote language learning and because the empirical research does not always afford clear cut findings. We will endeavour to reflect the different theoretical viewpoints and findings in the review. To do otherwise would be to misrepresent the current state of research in this field.

However, in order to avoid the pitfalls of complete relativity, we will attempt to identify a number of general principles, based on theory and research, which we believe can provide a guideline for designers of language curricula and for classroom teachers. In proposing these principles we do not wish to adopt a positivist stance. We do not believe that the research findings to date provide definitive specifications for language instruction. Rather we wish to suggest, in line with Stenhouse's (1975) arguments, that the principles be viewed as 'provisional specifications' best operationalised and then tried out by teachers in their own teaching contexts.

The review begins with an examination of the learning theories that underlie three mainstream approaches to language teaching (Section A). From there, it moves on to consider empirical studies of classroom teaching and learning (Section B). Given the vast amount of research that has taken place over the last three decades, the research considered will necessarily be selective, focusing on key theoretical claims and seminal studies. These sections provide the basis for the identification of a set of general principles (Section C). The review concludes with a discussion of how the research can best be utilized by practitioners (Section D).

Inevitably in a review of this nature, readers will be confronted with a number of technical terms. In some cases, where they are of central importance these will be defined in the main text. However, in cases where they are less central, they are defined in the glossary. All terms in bold print can be found in the glossary.

SECTION A: PEDAGOGIC APPROACHES AND GENERAL THEORIES OF LANGUAGE LEARNING

This section will examine a number of general approaches to the teaching of second/ foreign languages and the theories of language learning that support them.

A distinction is commonly made between general-purpose and specific-purpose language teaching. The former relates, in particular, to the kind of 'foreign' language programmes that students typically experience in schools. The latter relates to language programmes designed for specific groups of learners (e.g. students studying Maths and Science through the medium of a second language). It is likely that language curricula for New Zealand schools will involve both approaches, depending on the learners involved. Here, however, for reasons of space, we will focus on general-purpose language pedagogy.

Pedagogic approaches are typically informed by both a theory of language and a theory of language learning (Richards & Rogers, 1986). For example, audiolingualism (Lado, 1964), was informed by a structuralist model of language and by behaviourist learning theory. In this review, however, we will focus on the underlying theories of language learning.

We will discuss three general approaches to the teaching of a second/ foreign language and identify the learning theories that underpin them. The three approaches are (a) the oral-situational approach, (b) the notional-functional approach and (c) the task-based approach. These approaches have been chosen because they are 'mainstream' and thus probably reflect the current practice of language pedagogy in New Zealand. There are other approaches, e.g. various **humanistic approaches** (Moskowitz, 1978), **content-based language teaching** (Brinton, Snow, & Wesche, 1989) and the **lexical approach** (Lewis, 1993), which figure in the literature on language pedagogy and also draw heavily on theories of language learning but which have not figured widely in school-based language teaching. As it is unlikely that these alternative approaches will drive language curricula in New Zealand, they are not considered here.

The Oral-Situational Approach

The oral-situational approach was developed by British applied linguists as an alternative approach to the audiolingual approach promoted in the United States. It resembles the audiolingual approach in being based on a structural syllabus (i.e. a specification of the linguistic structures to be taught) but differs from it in that it emphasizes the meanings realised by the different structures, not just their forms, and also the importance of situational teaching structures (i.e. identifying situational contexts for practising the structures). This approach was dominant in British-influenced teaching contexts from the sixties onwards. It still underlies many textbooks used to teach languages today (Terrell, 2002).

In its original form, the oral-situational approach was based on a **behaviourist learning theory**. This viewed language learning as similar to all other types of learning, involving habit-formation. Habits were formed when learners learned the correct responses to stimuli through repeated practice. According to this theory,

grammar is learned inductively; there is no need for (and no value) in explicit explanations of grammar points.

In its more recent manifestations, the oral-situational approach has drawn on **skill-building theory** (Anderson, 1993). This is based on a distinction between declarative knowledge (knowing that) and procedural knowledge (knowing how). Learning commences with declarative knowledge and then becomes procedural knowledge when it is automatised and restructured through practice. DeKeyser (1998) emphasizes that this practice needs to go beyond 'language-like behaviour' by including opportunities for learners to engage in activities that emphasize form-meaning mappings and that replicate the kinds of conditions of use found in everyday communication. Without such activities full automatisation cannot take place.

In accordance with skill-learning theory, later versions of the oral-situational approach incorporate explicit explanations. The methodology employed is that of present-practise-produce (PPP), where 'present' refers to the provision of explicit information about a grammatical structure (directed at declarative knowledge), 'practise' refers to the use of exercises that involve controlled production of the target structure and 'produce' involves the performance of tasks designed to engage learners in real-life behaviour and to complete automatisation. This approach figures strongly in some of the popular handbooks used to train language teachers (e.g. Harmer, 2001; Hedge, 2000). PPP assumes an interface position on the relationship between **explicit and implicit L2 knowledge** (see later section).

The later version of the oral-situational approach is sometimes referred to as 'communicative' but this is misleading as it is based on a structural syllabus and involves a methodology that is accuracy rather than fluency oriented (see Brumfit, 1984).

The Notional-Functional Approach

The notional-functional approach draws on theories and descriptions of language that emphasize the functional and social aspects of competence (e.g. Hymes' model of communicative competence and Halliday's functional grammar). These afford a clearly defined content for specifying what is to be taught, as in the notional functional syllabuses that began to appear in Britain in the seventies (see, for example, Van Ek, 1976). These syllabuses consist of a list of functions (e.g. apologizing and requesting) and notions (e.g. past time and possibility) together with the linguistic exponents required to realize them in communication. The methodology employed was typically still PPP, i.e. it was accuracy based. Thus, this approach still involves what White (1988) termed a Type A approach, i.e. one where the objectives are defined in advance and that is essentially 'interventionist' and 'other-directed' (p. 31).

The notional-functional approach differs from the oral-situational approach predominantly in terms of the content to be taught. Whereas the oral-situational approach was informed by a theory of linguistic competence (actually, grammatical competence), the notional-functional approach was based on a theory of **communicative competence** (Hymes, 1971) and on functional models of language (e.g. Halliday, 1973). One advantage of this is that it caters more readily to the

teaching of the pragmatic aspects of language, such as the linguistic devices needed to display politeness, and also to the teaching of cultural/ceremonial topics, such as when and how to greet people.

Descriptions of the notional-functional approach have had little to say about learning theory. Richards and Rogers (1986, p. 72) suggest a number of elements implicit in this approach, for example the task principle – 'activities for which language is used for carrying out meaningful tasks to promote learning' (p. 72). However, such principles are more obviously associated with task-based teaching (discussed below) rather than the notional-functional approach. Another element implicit in the underlying learning theory (not mentioned by Richards & Rogers) is that language learning involves the learning of formulaic chunks of language as much as it involves learning rules. Many of the exponents of the functions are formulaic in nature. For example, requesting can be performed by ready-made expressions such as 'Can I have a __?' and 'I would be grateful if you would __'. Studies (e.g. Ellis, 1984a; Myles, Hooper, & Mitchell, 1998; Myles, Mitchell, & Hooper, 1999) have shown that classroom learners, like naturalistic learners, store a large number of such expressions. In this respect, then, the notional-functional approach can be seen as highly compatible with how learners learn a language.

An inspection of early and late textbooks based on a notional-functional approach reveals that the underlying theory is, in fact, still skill-learning theory. *Adesso* (Danesi, 1997), for example, contains a mixture of explicit explanation of language points and practice activities (predominantly of the controlled variety). This textbook also manifests another underlying learning principle, namely that language learning is culture learning; this is reflected in explicit accounts of Italian culture, presented in English (the students' first language).

The notional-functional approach can lay greater claim to being 'communicative', in that it is meaning-centred. However, it reflects what Howatt (1984) has termed a 'weak communicative approach' in that the methodology is still accuracy rather than fluency oriented. The underlying learning theory reflects this.

The Task-Based Approach

In contrast to the two preceding approaches, a task-based approach to language teaching makes no attempt to stipulate the language forms (and associated meanings) to be taught. Instead the content is specified holistically in terms of 'tasks'. Skehan (1996) defines a task as 'an activity in which: meaning is primary; there is some sort of relationship to the real world; task completion has some priority; and the assessment of task performance is in terms of task outcome'. Tasks can involve listening, speaking, reading or writing or any combination of these skills. Two very common types of tasks found in task-based materials are information-gap tasks (e.g. Listen-and-Draw) and opinion-gap tasks (e.g. Balloon Debates). Tasks need to be distinguished from exercises. The latter require a primary focus on form rather than meaning and typically ask learners to manipulate language given to them rather than to attempt to communicate using their own linguistic and non-linguistic resources.

The learning principle underlying the task-based approach is that learners will learn a language best if they engage in activities that have **interactional authenticity** (Bachman, 1990), i.e. require them to use language in ways that closely resemble how

language is used naturally outside the classroom. Whereas more traditional approaches to language teaching (such as the two described above) assume that learners need to be taught some language before they can communicate, task-based teaching is premised on the assumption that learners best learn a language through communicating, as in first language acquisition and naturalistic L2 acquisition. Various learning principles underpin this view. Krashen (1981) proposed that learners will acquire language when they are exposed to 'comprehensible input' and are motivated to attend to the input. Long (1983a; 1996) has argued that acquisition is best served when learners participate in the **negotiation of meaning** (i.e. interactional sequences that arise as a result of some communication problem). Elsewhere (Long & Robinson, 1998) he has suggested that task-based teaching affords opportunities for learners to 'focus-on-form' in the context of attempts to communicate and that this constitutes the ideal condition for acquisition to occur. Other researchers (e.g. Ellis, 2003) have suggested that task-based learning is needed to ensure the development of implicit knowledge. Thus, this approach to teaching has drawn on a variety of theoretical perspectives.

Task-based teaching constitutes what Howatt (1984) has termed a 'strong communicative approach'. This is because it aims not just to teach communication as an object (as is the case in the notional-functional approach) but to engage learners in authentic acts of communication in the classroom. It requires learners to treat the language they are learning as a tool. It gives primacy to 'fluency' over 'accuracy' but also claims that learners can achieve grammatical competence as a result of learning to communicate. Interestingly, however, it does not deny that learners need to attend to language form. For acquisition to take place, this has to occur in a context where attention to meaning is primary.

Summary

Table 1 below summarises the main features of these three approaches and the learning theories that underpin them. It should be noted that many published language teaching materials today do not adhere to a single approach but rather draw eclectically on two or more approaches. Thus, while there are few purely task-based courses available, most modern texts books will attempt to incorporate tasks into either an oral-situational or a notional-functional framework (or both). In this respect, it is useful to distinguish between what Ellis (2003) has called task-based teaching (i.e. teaching based exclusively on meaning-focused tasks) and task-supported language teaching (i.e. teaching that uses tasks to practise pre-selected and presented linguistic forms).

Table 1: The learning theories underlying three approaches to language teaching

Pedagogic Approach	Main features	Learning theory
1. Oral-situational	Based on a structural syllabus; methodology built around present-practise-produce (PPP)	Originally behaviourist; currently skill-learning theory.
2. Notional-functional	Based on a notional-functional syllabus; methodology built around present-practise-produce	Communicative competence; role of formulaic chunks; skill-learning theory.
3. Task-based	Based on a syllabus consisting of holistic tasks; 'deep-end' approach; interactional authenticity	Implicit language learning; Interaction Hypothesis; focus-on-form.

Early research (e.g. Scherer & Wertheimer, 1964) investigating the relationship between teaching and learning sought to compare the relative effectiveness of different pedagogic approaches by examining learning outcomes. However, the results proved inconclusive (Allwright, 1988). This led researchers to focus attention on the actual classroom processes that arise in language instruction (i.e. the teacher and learner behaviours) and to examine the impact that specific processes (e.g. the types of questioning used by the teacher) have on language learning. This research is considered in the following sections.

SECTION B: CLASSROOM-BASED RESEARCH INTO LANGUAGE TEACHING AND LEARNING [1]

In this section we will review empirical studies of classroom teaching and learning, focusing in particular on studies published in the last fifteen years (see Chaudron, 1998 for an extensive review of the earlier research). These studies have adopted a variety of research approaches:

a. Descriptive (i.e. studies that examined the kinds of language produced by teachers and learners in classroom contexts).

b. Experimental (i.e. studies that manipulated the instructional treatment provided to learners and measured the learning outcomes of the different treatments).

c. Ethnographic (i.e. studies based on field observations of classrooms and retrospective and introspective reports from teachers and learners).

d. Correlational (i.e. studies that seek to establish relationships between different sets of variables).

While all these studies have shed light on the kinds of learning opportunities made available to learners through instruction, only the experimental studies address the effects that instruction (in its various modes) has on language learning.

The empirical research has been informed by a number of theoretical perspectives, which can be loosely grouped under two main headings (see Lantolf, 1996); the **computational model** and **sociocultural theory of the mind**. The former views language learning in terms of input-output, specifying the psycholinguistic processes involved in the development of L2 knowledge and in its use in planned and unplanned discourse. Key concepts in this model are **input processing**, **intake**, **interlanguage development**, **output processing**, and **monitoring**. An assumption of this model is that learners have a 'built-in syllabus' which directs how they gradually acquire the linguistic properties of a language (i.e. how their interlanguage develops). The latter views language learning as something that originates in the social interaction; learners collaboratively produce structures that they are unable to perform independently and subsequently internalize them. Key concepts in this theory are **zone of proximal development**, **private speech**, **other regulation**, **self-regulation** and **scaffolding**.

Instruction can be viewed as an attempt to intervene in the process of language learning. This intervention can involve two broad types of **curriculum**. In direct intervention, the instruction specifies what it is that learners will learn and when they will learn it. This is reflected in the oral-situational and notional-functional approaches discussed above, i.e. in a Type A Curriculum. In indirect intervention, the purpose of instruction is to create conditions where learners can learn experientially through learning how to communicate in the L2. This is reflected in the task-based approach, a Type B Curriculum. The review that follows will first consider research related to these two types of intervention. It will then examine studies that have addressed two aspects of language teaching that are currently attracting attention from researchers: corrective feedback and small group interaction. Finally, it will address research that has investigated instruction in relation to individual learner difference factors.

Direct intervention

To date, direct intervention studies have been based almost exclusively on the computational model [2]. They seek to establish whether instruction, defined as the manipulation of input and/or output, results in inter-language development. The key questions here are: (1) Is direct intervention effective in the sense that learners learn what they are taught? and (2) Are some forms of direct intervention more effective than others? These questions can be addressed by examining any level of language (pronunciation, vocabulary, grammar, discourse structure and functions) in any of the four language skills (listening, speaking, reading and writing). For reasons of space, this review will limit consideration to grammar (a traditional focus for direct interventional programs).

Is direct intervention effective?

There is now ample evidence to show that grammar instruction can help learners to perform grammatical features more accurately in experimentally elicited performance. Norris and Ortega (2000) carried out a meta-analysis of some 51 studies that utilized either 'selected response' or 'constrained constructed response' as the measure of learning. They report an effect size of 1.46 and 1.20 respectively for these two types of measure, indicating that, overall, form-focused instruction is effective when the learning outcomes are measured in these ways. Furthermore, the beneficial effects of instruction are also durable, as evident in delayed post-tests. One conclusion to be drawn from the research, then, is that learners can benefit from instruction in specific grammatical features if their goal is to perform well on discrete-point tests like the TOEFL.

The evidence relating to the effects of grammar instruction on learners' ability to use the targeted features in communicative language use (especially unplanned oral language use) is somewhat meagre. This reflects the difficulty researchers have in designing instruments to elicit spontaneous use of specific L2 features (see Loshcky & Bley-Vroman, 1993, for a discussion of this issue). Norris and Ortega could only locate eight studies that included a measure of 'free constructed response'. Instruction appears to have a much reduced effect when the learning outcome is measured in this way, the effect size being less than half of that for 'selected response' and 'constrained constructed response'. They note that 'particular outcome measure types may result in very different observations about the effectiveness of a treatment' (p. 199). Ellis (2002a) examined 11 studies that included a measure of free oral production. Instruction was found to have a significant effect in only six of these. However, this effect was also evident in delayed post-tests and, in fact, in two of the studies, was stronger in these. Two conclusions are in order. First, grammar instruction does not always result in more accurate use of the targeted features in free oral production. Second, when an effect is found it is durable.

Grammar instruction does not enable learners to 'beat' the **natural route of acquisition** (i.e. the order in which learners have been found to acquire specific grammatical features and the stages of development involved in this). Studies comparing instructed and naturalistic learners (e.g. Ellis, 1989; Pica, 1983) report the same order of acquisition for grammatical morphemes and the same sequence of acquisition for syntactic structures such as English relative clauses and German word

order rules. These findings led Pienemann (1985) to advance the 'teachability hypothesis', which states that for instruction to be effective it needs to target features that lie within the developmental stage next to that which the learner has already reached. Pienemann's own research (e.g. Pienemann, 1989) lent support to this hypothesis. However, a more recent study (Spada & Lightbown, 1999) challenges it. Using Pienemann's account of the five developmental stages for English question forms, they exposed learners to an input flood of question forms at Stages 4 and 5, predicting that learners at Stage 3 would be better placed to benefit from this than learners at Stage 2. However, it was the latter that benefited most from the instruction, although only by advancing to Stage 3. This study, then, indicates that instruction does not alter the natural route of acquisition but that it may not be necessary to ensure that it is 'fine-tuned' to the proximate developmental stage of individual learners. This is encouraging to teachers as it suggests that they may not need to engage in the laborious task of identifying learners' precise developmental stages as a basis for instruction. A general conclusion of these studies is that instruction enables learners to progress more rapidly along the natural route.

Finally, the effectiveness of instruction can also be determined by examining learners' metalingual knowledge. Research by Fotos (1993; 1994) indicates that grammar discovery tasks aimed at developing metalingual knowledge are effective as measured by learners' ability to judge the grammaticality of sentences and also their ability to subsequently notice the grammatical features in input. Norris and Ortega (2000), however, found that the magnitude of the effect of instruction when assessed through 'meta-linguistic judgment' was much less than that for 'selected response' or 'constrained constructed response' although notably higher than that for 'free constructed response'. Few studies have investigated the effects of instruction on learners' ability to verbalize grammatical rules so no conclusions can be drawn. However, there would appear to be only a weak relationship between this ability and learners' general language proficiency (Alderson, Clapham, & Steel, 1997). In conclusion, the extent to which instruction can help learners to an explicit understanding of grammatical structures remains uncertain as indeed does the value of instruction directed at this type of L2 knowledge.

To summarise, the research that has addressed whether direct intervention is effective indicates:

1. Grammar instruction results in greater accuracy in test-like performance.
2. However, it is much less likely to lead to improved accuracy in spontaneous oral language use.
3. Grammar instruction does not enable learners to beat the 'natural route' but it is effective in helping them to progress more rapidly along it.
4. It may not be necessary to 'fine-tune' grammar instruction to the learner's developmental stage.
5. Grammar instruction can contribute to learners' metalingual understanding of L2 grammar rules but doubts exist as to the utility of this kind of knowledge.
6. When grammar instruction does have an effect, this effect is generally durable.

Are some forms of direct intervention more effective than others?

To answer this question it is necessary to identify a set of instructional options and then systematically investigate the contribution that specific options make to language learning, typically through experimental studies. Long (1991) distinguishes two broad types of form-focused instruction (FFI), which he refers to as **focus-on-forms** and **focus-on-form**. The former requires a planned approach to FFI (i.e. the prior selection of a specific form for treatment). Learners are required to treat forms as discrete entities that can be accumulated systematically one at a time. Such an approach, Long claims, is incompatible with what is known about the nature of L2 acquisition. In contrast, the latter involves attention to form in tasks, as, for example, when a communication problem arises and attempts are made to negotiate meaning in order to resolve it. As defined by Long, then, focus-on-form is a characteristic of indirect rather than direct instructional intervention. Here, therefore, we will consider only options relating to focus-on-forms, reserving discussion of focus-on-form to later when indirect instruction is considered. Table 2 describes the main focus-on-forms options.

Table 2: The main options in focus-on-forms instruction

Option	Description
1. Explicit instruction	Instruction that requires students to pay deliberate attention to the targeted form with a view to understanding it.
a. Didactic (deductive)	Students are provided with an explanation of the form.
b. Discovery (inductive)	Students are provided with L2 data that illustrate the form and are asked to work out how the form works for themselves.
2. Implicit instruction	Instruction that requires learners to infer how a form works without awareness.
	Students are asked to memorize L2 data that illustrate the form.
a. Non-enhanced input	The L2 data is presented to the students without any special attempt to draw their attention to the targeted form.
b. Enhanced input	The targeted form is highlighted in some way (e.g. using italics) to induce noticing.
3. Structured input	Instruction requires learners to process L2 data that has been specially designed to induce 'noticing' of the targeted form and that can only be comprehended if the targeted form has been processed.
4. Production practice	Instruction requires learners to produce sentences containing the targeted form.
a. Controlled	Students are given guidance in producing sentences containing the targeted form (e.g. by filling in blanks in sentences or transforming sentences).
b. Functional	Students are required to produce their own sentences containing the targeted form in some kind of situational context.
5. Corrective feedback	Instruction consists of feedback responding to students' efforts to produce the targeted structure.
a. Implicit	The feedback models the correct form without explicitly indicating that the student has made an error.
b. Explicit	The feedback makes it clear to the student that an error has been made.

Instruction typically involves combinations of options. For example, a fairly typical grammar lesson might begin by asking learners to read a dialogue in which examples of the form have been italicized (Implicit Instruction/ Enhanced Input). This might be followed with a formal presentation of the form to be taught (i.e. Explicit Instruction/Didactic). The students could be asked to complete a number of exercises of the fill-in-the-blank kind (Production Practice/ Controlled) before finally attempting a role-play to provide an opportunity to use the form they have been practising in free production (Production Practice/ Functional). In the production

stages of the lesson the teacher might point out and correct any errors the students make (Negative Feedback/Explicit). However, in researching the effects of FFI, it is desirable to try to isolate the different options in order to evaluate their contribution to learning. Unfortunately, as Norris and Ortega (2000) point out, this has not always been the way that researchers have proceeded, making it difficult to draw firm conclusions about the effectiveness of specific instructional options.

A number of studies have sought to compare the relative effectiveness of explicit and implicit instruction. These were examined in Norris and Ortega's meta-analysis, with instructional treatments being coded as 'explicit' if 'rule explanation comprised any part of the instruction' and as 'implicit' when 'neither rule presentation nor directions to attend to particular forms were part of the treatment' (p. 167). Explicit instruction proved to be significantly more effective than implicit instruction. However, they note that the measurement of learning outcomes in many of the studies favored explicit learning (i.e. in 90% of the studies they examined learners' knowledge of the targeted structures was measured through experimentally elicited responses rather than in communicative use). They also note that the implicit treatments were typically operationalised in very restrictive ways (e.g. through instructions to learners to memorize a set of sentences) whereas the explicit treatment often involved other instructional options. For these reasons caution needs to be exercised in concluding that explicit instruction is more effective than implicit.

There is also the important question of how best to provide explicit instruction. Table 2 suggests a distinction between 'didactic' and 'discovery' based approaches. The former involves the direct explanation of grammar points and thus reflects a deductive approach. The latter involves the use of various types of **consciousness-raising tasks** (Ellis, 1991) that guide learners into discovering a grammatical rule by providing them with L2 data to analyze and instructions about how to set about this. Thus, this approach to explicit instruction is inductive. A number of studies have compared these two approaches. Fotos and Ellis (1991) found that while both were effective in promoting understanding of a grammatical rule, as measured by a grammaticality judgment test, the didactic option worked best. However, they speculated that this might be because the students in this study were unfamiliar with working in groups, as was required by the discovery option. Fotos (1993) conducted a more extensive study with learners who were well-rehearsed in group work. She found that both approaches worked equally well. She argues that the discovery option is preferable because it also affords opportunities for students to communicate in the target language when they do the tasks in groups. Another reason for preferring discovery tasks is that learners find them more intrinsically motivating (Mohamed, 2001). However, as Ellis (1991) has pointed out, consciousness-raising tasks have their limitations. Because they are directed at 'understanding' grammar, not using it, their utility rests on claims that explicit knowledge of the L2 facilitates the acquisition of implicit knowledge, which, while theoretically defensible, has not been empirically demonstrated. Also, talking about grammar may not appeal to all learners (e.g. young children).

The relative effectiveness of structured input and production practice has also attracted the attention of researchers. VanPatten (1996) argues that interlanguage development occurs as a response to learners processing input and not from their efforts at production, although the latter may help them to automatize forms they have

already internalized. He proposes that attempts to intervene directly in interlanguage development be accomplished through **input processing instruction**. This consists of (1) explicit instruction directed at helping learners overcome 'default' processing strategies (e.g. treating the first noun in a sentence like 'The dog was bitten by Mary' as the agent of the verb) and (2) structured input as described in Table 2.

VanPatten and his co-researchers carried out a number of studies designed to compare the effects of input processing instruction and 'traditional instruction' involving production practice. Learners receiving input-processing instruction outperformed those receiving traditional instruction on comprehension post-tests and did as well on production post-tests. Furthermore, the effectiveness of input processing instruction owed more to the structured input component than to the explicit instruction (VanPatten & Oikennon, 1996). Subsequent studies (e.g. Allen, 2000) have failed to show a clear advantage for structured input over production practice, while others (e.g. Erlam, 2003) have found that production practice that forces attention to form-meaning mappings can be more effective. VanPatten (2002), however, argues that studies that have failed to demonstrate an advantage for input-processing instruction did so either because they failed to address structures subject to default processing strategies or were methodologically flawed. Irrespective of whether input-processing instruction is superior, the research does show that the structured input option is effective in promoting learning, whether this is measured in terms of comprehension or production. This finding suggests the need to revise current approaches to grammar teaching to make fuller use of this option. In particular, structured input would seem to be an appropriate option for computer-delivered instructional materials.

Of all the options described in Figure 1, **functional grammar teaching** receives the strongest empirical support. Studies by Harley (1989), Day and Shapson (1991), Lyster (1994) and Muranoi (2000) all testify to the effectiveness of this option. Furthermore the effectiveness is evident in measures of learning derived from both test-like and more communicative performance. Also, the success of the instruction does not appear to be dependent on the choice of target form. Hawkins and Towell (1996) argue that form-focused instruction is likely to be more effective if the targeted feature is 'simple and easily-explained' (p. 208) but, in fact, in some of the studies cited above, the target structure was highly complex. For example, Day and Shapson investigated French hypothetical conditionals and Muranoi targeted English articles, both of which are notoriously complex and difficult to learn, even as explicit L2 knowledge. Some caveats are in order, however. In many of the studies, functional production practice was combined with explicit explanation. In the case of Muranoi, functional instruction with and without explicit explanation was compared, with the former proving the more effective. Also, a feature of most of these studies is that the instruction provided was very intensive in nature. In Harley's study, for example, the instruction lasted 8 weeks and in Day and Shapson 5-7 weeks. In most teaching contexts it is difficult to imagine that teachers will have so much time to devote to a single grammatical feature.

The role of **corrective feedback** in L2 acquisition is controversial. Truscott (1999), for example, has argued that correcting learners' errors has no effect on learners' acquisition of new L2 forms. Negative feedback has been examined in both descriptive and experimental studies. Seedhouse (2001) offers a comprehensive account of the various strategies teachers employ to repair learners' linguistic errors.

He reports that teachers show a strong dis-preference for direct and overt negative feedback and instead opt for various forms of indirect, mitigated feedback. In other words, teachers prefer 'implicit' to 'explicit' feedback (see Table 2). This raises the important question as to the relative effectiveness of these two options. Seedhouse argues that teachers would do better to choose the explicit option. He comments:

> Teachers are avoiding direct and overt negative evaluation of learners' linguistic errors with the best intentions in the world, namely to avoid embarrassing and demotivating them. However, in doing so, they are interactionally marking linguistic errors as embarrassing and problematic. (p. 368-369).

However, there is growing evidence that corrective feedback can influence acquisition. This evidence is considered in the section dealing with corrective feedback below.

Any conclusions relating to the effectiveness of different instructional options must be tentative. In summary, the research indicates the following:

1. Explicit instruction may be more effective than implicit instruction when learning is measured in test-like performance.
2. Consciousness-raising tasks catering for discovery-based explicit instruction are as effective as didactic explicit instruction at developing explicit L2 knowledge and also afford opportunities for meaning-centered communication if performed in the L2.
3. Irrespective of whether input-processing instruction is more effective than production-based instruction, structured input clearly contributes to L2 learning and may prove a useful option for introducing new structures and for the development of self-instructional materials.
4. Functional grammar teaching results in learning whether this is measured in test-like or more communicative performance.
5. Disagreement exists regarding whether corrective feedback contributes to learning.

Final comment on direct intervention

Much of the research discussed above was carried out to test the claims of different theories of L2 acquisition and only secondarily to address practical issues to do with teaching. As Mitchell (2000) points out this is problematic in the current educational climate, where outcome-driven educational models predominate and policy-makers want to be told what 'works'. In such a context, research that provides evidence that can be used as a basis for making instructional decisions is required. In this respect, Mitchell concludes that research that has investigated direct intervention through focus-on-forms does not measure up very well:

> …applied linguists are not at present in a position to make firm research-based prescriptions about the detail of 'what works' in FL grammar pedagogy. There has been considerable research activity …. However, the research has been

> diverse in its theoretical foundations and procedures, patchy in scope, and has led to some mixed patterns of findings. (p. 296).

Borg (1998) reaches a similar conclusion but argues that the problem lies with the reliance on experimental research. He proposes that research efforts be redirected at teachers' craft beliefs about grammar teaching and their actual teaching practices. While such an approach may provide valuable insights into what constitutes 'good practice' (as teachers understand this) it will not tell us what works. For that, as Mitchell emphasizes, we need carefully designed process-product studies.

Indirect intervention

This section will examine research that has investigated task-based language teaching.

The goal of task-based research is to identify 'psycholinguistically motivated task characteristics' which 'can be shown to affect the nature of language produced in performing a task in ways which are relevant to SL processing and SL learning' (Crookes, 1986). Research based on the Interaction Hypothesis (Long, 1996) aims to find out which types of tasks are most likely to lead to the kind of meaning negotiation hypothesized to promote language acquisition. Researchers have investigated a variety of task variables and have been able to show that tasks that are two-way as opposed to one-way (Pica & Doughty, 1985), that have split rather than shared input (Newton, 1991), and where the outcome of a task is closed rather than open (Crookes & Rulon, 1985) and divergent rather than convergent (Duff, 1986) result in higher levels of meaning negotiation. Other research has focused on the nature of the learner's participation in a task, examining whether tasks performed in small groups or in lockstep with a teacher led to greater meaning negotiation (Pica & Doughty, 1985). More recently, researchers have turned their attention to tasks that require learners to produce output. Drawing on Swain's (1985) **Output Hypothesis**, Izumi (2002), for example, conducted a study that found that learners who engaged in a reconstruction task requiring them to produce English relative clause constructions were more likely to notice these constructions and learn them than learners who completed a comprehension task where the same constructions were graphically enhanced.

An alternative approach to investigating tasks has drawn on theories of language competence and of speech production. Skehan (1998) has suggested that language competence is comprised of lexis, including formulaic expressions such as 'I don't know', and grammatical rules. Native speakers make use of these two different types of knowledge by means of a 'dual processing system', drawing on both lexicalized and grammatical processing but varying in which type they rely on in a given activity according to the communicative pressure they experience and their need to be precise. Skehan argues that when required to perform spontaneously L2 learners are likely to depend on lexicalized processing but when required to formulate messages more precisely they will utilize their rule-based knowledge. He suggests that it may be possible to identify the design features that lead learners to place a differential emphasis on fluency (i.e. performance free of undue pauses and false starts), complexity (i.e. the use of a wide range of grammatical structures) and accuracy (i.e. the correct use of grammatical structures). Variables so far investigated include the familiarity of the information to be communicated, whether the task is dialogic or monologic, the degree of structure of the information, the complexity of the outcome and the extent to which

information has to be transformed from one form to another (Skehan, 2001). Dialogic tasks produce greater accuracy than monologic tasks. Tasks with a complex outcome promote greater complexity. Tasks where the information to be conveyed is clearly structured promote fluency.

Some researchers have based their research on Levelt's model of speech production (Levelt, 1989). This identifies three stages in speech production: (1) conceptualization, when the purpose and semantic content of a message is determined, (2) formulation, when the speaker maps grammatical and phonological features onto the preverbal message, and (3) articulation, when the phonetic plan produced by (2) is converted into actual speech. Wendel (1997) has used this model to distinguish two types of planning - **strategic or off-line planning** (i.e. the planning that takes place when learners are given time to plan a task prior to performing it) and **on-line planning** (i.e. the planning that occurs while learners are actually performing the task). Thus, strategic planning, according to Wendel, involves conceptualization; on-line planning, in contrast, is directed at formulation and articulation and manifests itself through monitoring. Bygate (1996) also utilizes Levelt's model to account for what effect asking learners to repeat a task has on task performance.

The contribution that strategic, pre-task planning makes to task-based performance has been examined in a number of studies. In an early study, Ellis (1987) found that this kind of planning resulted in increased accuracy in the use of English regular (but not irregular) past tense forms. Other studies (e.g. Crookes, 1989), however, suggest that the effects of strategic planning are more evident in enhancing fluency and complexity than accuracy. Ortega (1999) reviews a number of planning studies, concluding that the evidence that planning contributes to greater accuracy is mixed. Her own study of learners of L2 Spanish found a positive effect for noun-modifiers but not for articles. One explanation for these mixed findings is that strategic planning only leads to greater accuracy if learners have time to monitor their actual performance of the task, as suggested by Wendel (1997). Yuan and Ellis (2003) investigated this hypothesis in a study that compared the effects of strategic and on-line planning on oral production in a narrative task. They found that strategic planning resulted in greater fluency and complexity while on-line planning led to increased accuracy and complexity. Ellis and Yuan found similar results for written production on a narrative task. It would seem, then, that there is trade-off between fluency and accuracy, with learners prioritizing one or the other, depending on the kind of planning they engage in.

Not all task-based research has been motivated by theories based on a computational model of L2 learning. A number of recent studies have drawn on sociocultural theory of the mind. These view learning as socially constructed and have led to task-based studies that investigate 'scaffolding' and 'collaborative dialogue', the supportive interactions that arise when learners communicate with others (e.g. Swain, 2000) and also to studies that demonstrate how the task-as-workplan is interpreted and reshaped by learners in actual performance (Coughlan & Duff, 1994). There have also been attempts to show how learners and native speaker interlocutors vary in the way they perform a single task depending on the learners' developmental stage (Aljaafreh & Lantolf, 1994; Nassaji & Swain, 2000). Platt and Brooks (2002) discuss the notion of 'task engagement' within a sociocultural theoretical framework, arguing that this enhances learners' motivation to accomplish a task and results in 'transformation' when they switch from relatively

undirected to more focused activity and, thereby, create a context in which learning can take place.

The above review of task-based research addressed unfocused tasks (i.e. tasks designed to elicit general communicative use of the L2). However, there have also been a number of studies that have investigated focused tasks (i.e. tasks designed to elicit communicative use of specific L2 features). Newton and Kennedy (1996), for example, provide evidence to suggest that it is possible to predict the linguistic forms that will be used when particular tasks are performed. They found that the discourse genre (i.e. description versus persuasion) elicited by tasks influenced the linguistic forms used. Bygate (1999) has also demonstrated that the processing involved in performing a narrative and an argumentation task led to learners making different linguistic choices.

In summary, task-based research affords information about how the design of tasks can affect learner performance:

1. The negotiation of meaning is enhanced if the information provided by the task is split and the outcome required is closed or convergent.
2. Task design can influence whether learners rely primarily on their lexicalized or rule-based knowledge of the L2 with the result that either fluency or complexity is prioritized.
3. Task design can also influence the specific linguistic forms that learners employ when they perform a task.
4. Providing opportunities for the strategic planning of a task promotes fluency and complexity of language use. In contrast, providing time for on-line planning (monitoring) leads to greater accuracy.

It should be noted, however, that the research summarised above has investigated language use not acquisition. Researchers extrapolate from use to acquisition on the basis of various theoretical arguments.

It is widely accepted that although task-based teaching needs to ensure that learners are principally focused on meaning, it must also find ways of helping learners to attend to form. Attention to form can be induced through the design of tasks (as discussed above) and also methodologically (e.g. by providing opportunities for strategic and on-line planning). In the section that follows we consider in detail one particular methodological device for inducing attention to form - corrective feedback.

Corrective feedback

The corrective feedback supplied by teachers and, to a lesser extent, by students has attracted considerable attention from researchers. The theoretical motivation for this interest lies in the claim that L2 learning (unlike L1 learning) requires negative evidence as well as positive evidence (i.e. learners need to be shown what is NOT correct as well as provided with examples of what IS correct). Further theoretical support for corrective feedback can be found in Schmidt's (1994) claim about the importance of **noticing** and **noticing-the gap** in L2 acquisition. Corrective feedback may help learners to notice linguistic forms that they might otherwise ignore and to identify how their deviant utterances differ from the linguistic norms of the language. Corrective feedback, then, is hypothesized to play an important role in developing

accuracy in the L2. The bulk of the studies, however, have been descriptive; that is, they have not attempted to show that correcting learners' errors results in acquisition.

Early research demonstrated the complexity of error correction. It showed that teachers are more likely to correct some errors than others, that they vary greatly in how frequently they correct errors and also in the manner in which they correct them. In general, teachers' correction is characterised by imprecision and inconsistency. They have been observed to use the same overt behaviour (e.g. 'repetition') to both correct an error and to reinforce a correct student response. Nystrom (1983) noted that 'teachers typically are unable to sort through the feedback options available to them and arrive at an appropriate response'. Inconsistency is evident in the fact that teachers correct some students but not others (even for the same error). Allwright (1975), however, noted that this may reflect teachers' attempts to cater to individual differences among the students.

Recent studies (e.g. Ellis, Basturkmen, & Loewen, 2001; Loewen, 2003; Lyster & Ranta, 1997; Panova & Ranta, 2002; Sheen, 2004) have focused on the frequency with which specific corrective strategies are used in communicative classrooms. These strategies vary in terms of how explicitly the correction is performed. Examples of explicit strategies are 'Explicit Correction' (e.g. 'Oh you mean ...' or 'You should say ...') and Metalinguistic Feedback (e.g. 'No, it's masculine). Examples of implicit strategies are Recasts (i.e. the teacher reformulates all or part of the student's utterance minus the error) and Clarification Requests (e.g. Pardon?). These studies have also looked at student **uptake** (i.e. whether the student responds in some way to the correction) and whether uptake involves repair (i.e. the student corrects his/ her original error). Ohta (2001) has shown that, in Japanese as a foreign language classrooms, students use corrective feedback not just for uptake. They frequently respond to correction through private speech rather than overt uptake. Also, Ohta's study shows, importantly, that students can benefit from corrective feedback addressed to other students. In fact, Ohta notes, some students may be better able to take advantage of corrective feedback when they are out of the spotlight.

Two general findings of these descriptive studies are that teachers tend to prefer recasts to other corrective strategies and that the level of uptake and repair following recasts is lower than that following more explicit strategies. However, recasts themselves vary in terms of how explicitly they draw attention to the learner's error (Nicholas, Lightbown, & Spada, 2001). For example, a short, partial recast that is repeated is likely to be more salient to students than a long, complete recast performed just once. Two advantages of recasts are that they provide learners with a model of the correct linguistic form and they do not interfere unduly with the communicative flow of an activity. Thus, in general, students are more likely to attend to the feedback if it is explicit (see, for example, Samuda, 2001).

A few experimental studies have examined the effects of corrective feedback on language learning. Carroll and Swain (1993) found that feedback in the form of metalinguistic comment resulted in significantly better learning of dative alternation structures than implicit correction strategies. Carroll, Swain and Roberge (1992) investigated the effects of corrective feedback on learners' ability to distinguish French nouns ending in *–age* and *–ment.* The found that treatment was effective with regard to the nouns actually taught but did not result in the students' ability to generalise to new

nouns. Nobuyoshi and Ellis (1993) and Ellis and Takashima (1999) demonstrated that it is possible to push learners into using a particular grammatical form (past tense) if they receive requests to clarify utterances containing an error in this structure and that this has a beneficial effect on subsequent performance. Requests for clarification, however, are only likely to help learners become more accurate in the use of structures they have already partially learned; they will not enable them to acquire completely new structures.

Several experimental studies have investigated **recasts**. Long, Inagaki and Ortega (1998) found that recasts were more effective for some target structures than 'models' (i.e. positive evidence provided to learners before they speak). Mackey and Philp (1998) showed that interaction that included recasts was more effective than interaction without recasts. However, both of these studies were laboratory studies. Doughty and Varela (1998) report a classroom study that examined the effect of 'corrective recasts' (i.e. repetitions of the student utterance with emphasis on the incorrect item followed by a reformulation) directed at English past tense forms in the context of reporting science experiments. They found that this treatment resulted in both improved accuracy in the use of the past tense and in movement along the sequence of acquisition for this structure. Current research is directed at discovering how recasts aid acquisition. Leeman (2003), for example, conducted a laboratory study that suggested that it is the enhanced salience of specific forms that recasts afford rather than the negative evidence following errors that is important for learning. This study (and Doughty & Varela's) supports the general conclusion above, namely, that for corrective feedback to have any effect in the classroom it has to be sufficiently explicit for students to notice what is being corrected.

In all of these experimental studies, the corrective feedback was intensive in nature; that is, it was directed at a pre-selected linguistic feature. Corrective feedback also arises in lessons where there is no specific linguistic target (i.e. the kind of incidental feedback that occurs in an immersion classroom or in task-based language teaching). A feature of this incidental focus-on-form is that it is extensive rather than intensive in nature. That is, within the context of a single communicative task, a number of different linguistic forms (phonological, lexical, grammatical or discoursal) are likely to be attended to but each focus-on-form episode is only very brief. Loewen (2002) has provided evidence to suggest that extensive, incidental focus on form can result in learning. He showed that individual learners who demonstrated problems with specific linguistic features that were the topic of form-focused episodes and received corrective feedback were subsequently able to perform the same linguistic features accurately in tailor-made tests.

Summary

1. Teachers' corrective feedback is often ambiguous and inconsistent.
2. Teachers demonstrate a general preference for the use of recasts, a relatively implicit form of feedback; this is possibly because it is less socially threatening and intrusive; recasts, however, vary in form and can be salient to students.
3. Corrective feedback is potentially of value to all students, not just to the particular student who receives it.
4. Explicit forms of feedback (including more explicit recasts) result in higher levels of uptake and repair.

5. Intensive, explicit feedback can contribute to learning.
6. Extensive corrective feedback can also assist learning.

Small Groupwork

Building on Long and Porter's (1985) account of the advantages of group/pair work for language pedagogy, Jacobs (1998) provides a comprehensive list of ten potential advantages (see Table 3), comparing the typical characteristics of groupwork with those of teacher-centred instruction.

Table 3: Ten potential advantages of group activities in language instruction (based on Jacobs 1998)

Advantage	Comment
1. The quantity of learner speech can increase	In teacher-fronted classrooms, the teacher typically speaks 80% of the time; in groupwork more students talk for more of the time.
2. The variety of speech acts can increase	In teacher-fronted classrooms, students are cast in a responsive role, but in groupwork they can perform a wide range of roles, including those involved in the negotiation of meaning.
3. There can be more individualization of instruction	In teacher fronted-lessons teachers shape their instruction to the needs of the average student but in groupwork the needs of individual students can be attended to.
4. Anxiety can be reduced	Students feel less nervous speaking in an L2 in front of their peers than in front of the whole class.
5. Motivation can increase	Students will be less competitive when working in groups and are more likely to encourage each other.
6. Enjoyment can increase	Students are 'social animals' and thus enjoy interacting with others in groups; in teacher-fronted classrooms student-student interaction is often proscribed.
7. Independence can increase	Group activities help students to become independent learners.
8. Social integration can increase	Group activities enable students to get to know each other.
9. Students can learn how to work together with others	In typical teacher-fronted classrooms students are discouraged from helping each other; group work helps students to learn collaborative skills.
10. Learning can increase	Learning is enhanced by groupwork because students are willing to take risks and can scaffold each other's efforts.

Early studies of groupwork (e.g. Pica & Doughty, 1985; Porter, 1986) focused on the opportunities it provides for the negotiation of meaning, which according to Long's **Interaction Hypothesis** (Long 1983a, 1996) fosters acquisition. These studies showed that, with the right task, groupwork resulted in extensive negotiation of

meaning. In this respect, it contrasts with teacher-fronted instruction, where typically little interactional modification takes place. Other research (e.g. Donato, 1994) has drawn on sociocultural theory to show how learners are adept at scaffolding each other's contributions, so that what they are able to achieve collectively in the L2 exceeds what they can do as individuals. However, these studies do not demonstrate that groupwork results in acquisition; only that it affords the interactional conditions hypothesized to promote acquisition.

The value of group work has also not gone unchallenged. An obvious danger is that in monolingual groups the learners will resort to their L1 when talking to each other. Students are not always favourably disposed towards groupwork. Willing (1987) reports that the ESL learners in Australia that he surveyed included 'pairwork and language games' among the activities they liked the least. Nunan (1989) suggests that learners often tend to favour 'traditional' over 'communicative' activities, showing a preference for teacher-centred over learner-centred participatory structures. Group/ pairwork has also been challenged on the grounds that it does not ensure the conditions needed to achieve satisfactory task outcomes or language learning. Wells (1999) points out that the ephemeral nature of spoken discourse makes it difficult for the participants to pursue a line of reasoning so that they can be sure progress has been made and can understand the nature of that progress. He comments 'memory for the exact words spoken is extremely short and, without recourse to a definitive text of what is said, it is difficult to work systematically to improve it and the understanding that it embodies' (p. 115).

Prabhu (1987) did not incorporate groupwork into the methodology of the Communicational Language Project (a task-based teaching project carried out in secondary school classrooms in southern India) on the grounds that it was less likely that students would be exposed to the 'good models' of English needed to promote interlanguage development than if the pre-tasks were performed with the teacher:

> Since differences between the internal systems of different learners are much smaller than those between the internal systems of the learners as a group and that of the teacher, sustained interaction between learners is likely to provide much less opportunity for system-revision. (p. 81)

According to this view, student-student interaction may result in pidginized use of the L2 and concomitant interlanguage **fossilization**. Prabhu also advances an affective argument against groupwork. Contrary to Jacob's view that groupwork can help to reduce anxiety, Prabhu suggests that some students find it more humiliating to make mistakes in front of their peers than in front of the teacher. Perhaps this is an area where there are marked cultural differences.

There is another reason why group/pairwork may be less effective for language learning than is often claimed. The importance of students attending to form during the performance of a task has been noted earlier. Such activity has been found to occur regularly when the teacher performs a task with the students. Does 'noticing' arise in student-student interaction? There is very little research that has addressed this issue. However, a study by Williams (2001) suggests that groupwork may not be conducive to students paying attention to form. Williams found that beginner and intermediate proficiency learners rarely focused on form while performing

communicative tasks and when they did so it was only when the teacher was in attendance. Advanced level learners addressed form more frequently. The actual forms attended to by learners, irrespective of their proficiency, were lexical; there were very few occasions when they addressed grammatical or phonological problems. However, the tasks in Willams' study were entirely oral in nature. Groupwork produces greater attention to form when a pre-task activity directs learners' attention to form and the outcome is a written product, as in Swain and Lapkin (2001).

How can we reconcile the potential advantages of groupwork with the possible problems? The answer probably lies in the extent to which groupwork results in cooperative learning through collaborative dialogue. Social interaction between students does not by itself guarantee either a successful outcome for the task or the conditions that promote language learning. It is not enough to simply put students into groups to complete a task. What counts is the quality of the interaction, whether this enables students to engage effectively with the task and to support each other's language learning. A key to using group/pair work, then, lies in ensuring that students are able to work together effectively. Studies undertaken from a sociocultural theoretical perspective afford important clues as to how this can be achieved.

Storch (2001) bears witness to the importance of collaborative activity in groupwork for achieving results. Storch investigated student-student interactions in a group task that required the learners to produce a written text in pairs. This study showed that the students did not always work collaboratively but that when they did so it had a beneficial effect on task performance. Storch identified the following characteristics of collaborative interaction:

1. Predominance of first person plural pronouns.
2. Few, or absence, of directives.
3. Text co-constructed (i.e. each student adding to or extending his/her partner's contributions).
4. Language related episodes initiated by means of a request.
5. Interactive responses that are often incorporated.
6. Evidence of scaffolding.

Storch concludes by suggesting that it is the students' attitude to working together that may be crucial.

Wells (1999) draws on and extends Bereiter's (1994) notion of 'progressive discourse' to describe what is required for collaborative knowledge building to occur. He outlines the commitments the participants need to make to achieve such discourse:

1. To work toward a common understanding satisfactory to all.
2. To frame questions and propositions in ways that allow evidence to be brought to bear on them.
3. To expand the body of collectively valid propositions.
4. To allow any belief to be subjected to criticism if it will advance the discourse.

5. To work collaboratively to improve a knowledge artefact. (Wells, 1999, pp. 112-3).

From the perspective of a sociocultural theory of the mind, the activity of 'coming to know' through conversation depends crucially on the participants being able to utilize each other's utterances as objects that can be extended, questioned or rejected. As we have seen this can be accomplished much more easily if the 'knowledge artefact' that the task requires students to construct is written rather than oral. When constructing a written text, students are able to focus on an 'improvable object' and, importantly, have the time and space to treat language itself as an object, thus achieving the focus on form considered crucial for acquisition. In tasks that afford such 'improvable objects', the quality of the interaction is enhanced, with longer and more grammaticalized utterances apparent, as illustrated in the task performances in Swain's research involving dictogloss tasks [3] (see, for example, Swain, 2000; Swain & Lapkin, 2001). Thus again we can see that the extent to which students achieve effective collaboration depends on the nature of the task, as much as on their own efforts.

There are, however, a number of more practical matters that teachers can attend to in order to foster student cooperation in group/pair work. It should be noted, however, that there is little L2 research available that has directly addressed these issues. They include:

1. *Students' orientation to the task*

   For groupwork to be effective students need to be convinced that the task is worthwhile and not simply an opportunity for some 'fun' (as Foster (1998) suggests was the case in the learners she investigated – see Chapter 6). Students, then, need to be serious and committed towards obtaining the best outcome possible for the task.

2. *Individual accountability*

   Each student needs to be made accountable for his/her own contribution to the completion of the task. One way in which this can be achieved is by giving each group member a specific role to perform (Jacobs, 1998). Another is by asking each student to make an explicit comment on their personal contribution in the post-task report.

3. *Group composition*

   The key questions here concern size and membership. Jacobs points out that many books of cooperative learning recommend groups of four, which can be subsequently divided into pairs. Mixed groups (in terms of ethnicity and proficiency) are considered to work better than homogeneous groups, although we know of no study that has demonstrated this.

4. *Distribution of information*

   In one-way information gap tasks involving students of differing proficiency levels, collaborativeness is enhanced if the student with the lower proficiency is put in charge of the information to be exchanged (Yule, Powers, & McDonald, 1992).

5. *Physical arrangement of students*

   Jacobs (1998) proposes that students need to be seated in a way that they can easily talk together and maintain eye contact, share resources, talk quietly and take up less space.

6. *Collaborative skills*

   Teachers can provide training in the strategies needed to engage in effective collaboration (e.g. how to disagree and how to negotiate meaning). The extent to which students are able to use these strategies in groupwork needs to be constantly monitored.

7. *Group permanence and cohesion*

   Cooperative learning requires that students have time to consider how their group is functioning and find ways of working together effectively. If groups are constantly changing, students will not have the opportunity to develop the 'positive interdependence' (Johnson, Johnson, & Holubec, 1993) considered essential for group cohesion. The ability to work effectively with others is a process that requires time.

8. *Teacher's role*

   Jacobs (1998) mentions a number of possible roles for the teacher: modelling collaboration, observing and monitoring the students' performance, and intervening when a group is experiencing obvious difficulty. Also a teacher can function as a task participant, sitting with students to do the task. The problem with this latter role, however, is that many students find it difficult to react to the teacher as a group member rather than as an instructor.

In summary, group work, while important to language acquisition, is not essential, and carries with it some notable disadvantages. However, strong theoretical arguments have been advanced to support the claim that engaging students in the 'progressive discourse' that arises out of cooperative endeavour will foster acquisition. To achieve such discourse is a challenge, however. It depends in part on the choice of task and in part on ensuring that the conditions that make cooperation possible have been met.

Individual Differences and Instruction

While L2 acquisition undoubtedly involves psycholinguistic processes of a general nature, it is also highly varied, especially with regard to the rate of learning and ultimate level of proficiency achieved. In the previous sections we focused on the universal properties of classroom learning; in this section we will consider individual learner differences. We will first examine research relating to two factors have been consistently shown to affect learning – language aptitude and motivation. We will then discuss research that has investigated the interaction between instruction and individual difference factors.

Individual difference research has a considerable history. Horwitz (2000), reviewing publications in *The Modern Language Journal* from the 1920s up to the end of the 1970s documents how interest in L2 learners' differences evolved over the decades. She notes a marked change in the labels used to refer to individual differences:

> The terms *good and bad, intelligent and dull, motivated and unmotivated* have given way to a myriad of new terms such as *integratively and instrumentally motivated, anxious and comfortable, field independent and field sensitive, auditory and visual*' (p. 532).

Thus, whereas earlier learners were seen in absolute terms, as either innately endowed with or lacking in language learning skills, in more recent research they are characterized in more relative terms, as possessing different kinds of abilities and predispositions that influence learning in complex ways.

This change of perspective over the years reflects a development in the role of individual difference research in applied linguistics. In earlier periods, the primary concern was to provide a basis for selecting which learners should be chosen to receive foreign language instruction. To this end, the main purpose of individual difference research was to predict which learners would succeed. This led ultimately to the development of tests of language aptitude such as the Modern Language Aptitude Battery (Carroll & Sapon, 1959). More recent research, however, has sought to explain why some learners succeed more than others and has been seen as complementary to mainstream research on L2 acquisition.

Language Aptitude

Language aptitude is one of the 'big two' individual difference factors (the other being motivation). Research based on tests such as the Modern Language Aptitude Test (MLAT) has revealed consistent correlations with language achievement in the order of .40 or higher (see Carroll, 1990 and Skehan, 1989 for reviews of the earlier research). For example, in a recent study, Sparks, Ganschow and Patton (1995) found that language aptitude measured by the MLAT was one of the two best predictors of the grades achieved by school foreign language learners, the other being native language (English) grades.

Carroll's early research into language aptitude identified four aspects of language aptitude:

1. Phonemic coding ability (i.e. the ability code foreign sounds in a way that they can be remembered later).
2. Grammatical sensitivity (i.e. the ability to recognize the grammatical functions of words in sentences).
3. Inductive learning ability (i.e. the ability to identify patterns of correspondence and relationships involving form and meaning).
4. Rote learning ability (i.e. the ability to form and remember associations between stimuli).

Although this model of language aptitude was designed at a time when the prevailing instructional approach was audiolingual in nature it has withstood the test of time remarkably well, the MLAT (or tests based on a very similar model of language aptitude) continuing to be the preferred instrument in current research. More recently, however, Skehan (2002) has suggested how a model of L2 acquisition might be used

to identify additional aptitudinal aspects, in particular the ability to attend to form in the input and to access language material from memory.

Studies have shown that aptitude scores are related to both formal, test-like measures of L2 proficiency and to more informal measures based on communicative performance. Horwitz (1987), for example, found that MLAT scores correlated significantly with scores on a discrete-point grammar test and with scores derived from relatively spontaneous oral production. A number of recent experimental studies have examined the relationship between language aptitude and implicit/explicit learning. In these studies, implicit learning was operationalized as exposure to sentences exemplifying a specific structure with the instruction to memorize the sentences, while explicit learning involved asking learners to actively look for the rule or, in some cases, to process the sentences after they have received an explanation of the rule. Robinson (1997) found that language aptitude is implicated in both types of learning [4].

It is possible, however, that different aspects of language aptitude are involved in informal and formal learning. For example, if, as Grigorenko, Sternberg and Ehrman (2000) suggest, intelligence is a factor in explicit learning, we might expect measures of linguistic-analytic ability to be important here, while the phonemic-coding and memory abilities may play a bigger role in informal learning.

Robinson (2002) argues for a research program that systematically examines the interactions between task demands, language aptitude and language learning. He suggests that 'the information processing demands of tasks draw differentially on cognitive abilities' (p. 386) and that we need to discover how this affects learning outcomes. However, there have been surprisingly few studies that have examined language aptitude in relation to specific pedagogical tasks as opposed to general achievement. Nagata, Aline and Ellis (1999) examined learners' performance on a one-way information gap task involving listening to and carrying out instructions that contained new L2 words – a task directed at incidental acquisition. They reported moderate but statistically significant correlations between measures of sound-symbol association, grammatical-semantic sensitivity and memory for words on the one hand and comprehension of the instructions on the other. In contrast, only memory for words was systematically related to post-test measures of the acquisition of the new words. This study suggests that different aspects of language aptitude may be implicated in different kinds of language processing.

There have been proposals for new models of language aptitude. Skehan (1998) suggests that Carroll's original four-part model can be collapsed into a three-part one by incorporating grammatical sensitivity and inductive language learning ability into a single 'language analytic ability'. He argues that these three aptitudes operate differently during the course of adult language learning. Language analytic ability, which is closely related to general intelligence, is involved throughout, while phonemic-coding ability plays a major role only in the early stages. Memory ability is involved in all stages but in the case of exceptional learners it is enhanced allowing them to achieve a more or less native-like level of proficiency. In a later publication Skehan (2002) suggests the need to relate different components of aptitude to four macro stages in language acquisition; noticing (e.g. phonemic coding and working

memory), patterning (e.g. language analytic ability), controlling (memory retrieval processes) and lexicalising (e.g. memory abilities).

Finally, Sternberg (2002) suggests that the theory of 'successful intelligence' he has developed through general research on native speaking students may also be applicable to L2 learning. This theory distinguishes three types of aptitude: analytical intelligence (i.e. the ability to analyze, compare and evaluate), creative intelligence (i.e. the ability to produce novel solutions to problems) and practical intelligence (i.e. the capacity to adapt to, to shape and to select environments suited to one's abilities). Sternberg argues that tests have generally targeted analytic and, to a lesser extent, creative intelligence, largely because teaching methods have typically emphasized these.

Motivation

Motivation accounts for only slightly less of the variance in learners' achievement scores than language aptitude. Not surprisingly teachers recognize the importance of motivation, both with regard to the motivation that students bring to the language classroom (extrinsic motivation) and the motivation that is generated inside the classroom through the choice of instructional activities (intrinsic motivation). Similarly, motivation has attracted increasing attention from researchers, reflected in a growing number of theoretical models of L2 motivation and in consequent research studies.

The serious study of motivation in language learning began with Lambert and Gardner's work on the social psychology of language learning in the bilingual context of Canada. The theory they developed and the research it spawned is described fully in Gardner (1985). Crucial to understanding the socio-psychological perspective is the distinction between 'orientation' and 'motivation'. 'Orientation' refers to the long-range goals that learners have for learning a language. Two broad types of orientation were distinguished: an 'integrative orientation' involving a wish to develop an understanding of and possibly become part of the target language culture and an 'instrumental orientation' consisting of a felt need to learn the target language for some functional purpose (e.g. obtain a job). 'Motivation' was defined primarily in terms of 'motivational intensity' (i.e. the effort learners were prepared to make to learn a language and their persistence in learning). Thus learners might demonstrate particular orientations but be weakly and strongly motivated to achieve their goals. Lambert and Gardner's early work in Canada suggested that integrative motivation correlated most strongly with measures of L2 achievement but subsequent research has shown that in some teaching contexts (e.g. the Philippines or India) an instrumental motivation was more important. In his later publications, Gardner acknowledges that both motivations are important and that they can co-exist in the same learner population. Subsequent research (e.g. Belmachi & Hummel, 1998) has shown that learners' orientations are varied, depending on the situational and temporal context, and are also dynamic. What may be important is not what orientation individual learners have but rather the extent to which each learner is prepared to pursue the learning goal (i.e. motivational intensity and perseverance).

During the 1990s the socio-psychological perspective on motivation was challenged for a number of reasons. First, it was seen as failing to acknowledge the resultative

dimension of motivation. Gardner viewed motivation as causative (i.e. it led to L2 achievement) but a number of studies indicated that, in some learners, motivation resulted from success in learning. Second, related to this point, it was seen as presenting motivation in too static a way, failing to acknowledge that motivation was dynamic, shifting all the time as a result of learners' learning experiences and, no doubt, countless other purely personal factors. Third, and from a pedagogic perspective, the socio-psychological perspective was seen as too deterministic – motivation was treated as something that learners brought to the task of learning a L2 that determined their success. It did not allow for the possibility that learners could develop intrinsic interest in the process of their attempts to learn. For this reason, in particular, the theory was seen as lacking in pedagogic relevance (Crookes & Schmidt, 1991).

With regard to recent developments in theories of L2 motivation, two proposals are of particular interest. The first concerns an attempt to build a theory that acknowledges the dynamic, multi-dimensional nature of motivation. Dornyei's (2001) process model of learning motivation for the L2 classroom distinguishes a 'preactional stage' involving 'choice motivation', which relates closely to the idea of orientation, an 'actional stage' involving 'executive motivation', which concerns the effort the learner is prepared to invest to achieve the overall goal and is heavily influenced by the quality of the learning experience, and a 'postactional stage' involving 'motivational retrospection', where the learner forms attributions out of the learning experience which influence the preparedness to continue. Such a model is able to account for how motivation changes over time and, as such, is far superior to the static models of motivation that dominated earlier research.

The second development concerns the important distinction between extrinsic and intrinsic motivation. Noels, Pelletier, Clement and Vallerand (2000) provide a detailed model for these two types of motivation. They define extrinsically motivated behaviours as 'those actions carried out to achieve some instrumental end' (p. 61). Intrinsic motivation is defined as 'motivation to engage in an activity because it is enjoyable and satisfying to do so' (p. 61). Noels et al. also consider amotivation, i.e. the absence of any motivation to learn. A factor-analytic study based on responses to a questionnaire by Anglophone learners of L2 French in Canada largely confirmed this model of motivation, clearly distinguishing the extrinsic and intrinsic motivations. As expected, amotivation was negatively correlated with measures of perceived competence and intention to continue study. Interestingly, the measures of intrinsic motivation were more strongly correlated with the criterion measures of learning than the measures of extrinsic motivation. Noels et al. interpret the results in terms of self-determination theory, arguing that the more self-determined a learner's motivation is, the greater the achievement.

Most studies have examined the relationship between motivation and general measures of achievement (e.g. course grades) or language proficiency. There have been relatively few studies that have examined motivation in relation to specific instructional activities. An exception is Kormos and Dornyei (2000), who investigated motivation in relation to oral performance on an argumentative task. They report a significant correlation between individual students' willingness to communicate, their overall attitudes to the course and their attitudes to the particular task on the one hand and amount of speech produced on the other. However, when they divided the

students into those with high and low task attitudes, they found that willingness to communicate only correlated with the production measures for the high attitude students. This study suggests that task-based research needs to include consideration of individual difference factors.

The interaction between instruction and individual differences

The key idea underlying research into what has become known as **Aptitude-Treatment Interaction** (ATI) (Cronbach & Snow, 1977) is that for instruction to be maximally effective it needs to be matched to the way learners learn. Matching can be achieved in two principal ways: (1) by making the instruction suit the learner and (2) by helping the learner to adapt to the instruction.

The models of language aptitude discussed above afford a number of possibilities for matching instruction to learners' abilities. A good example of the kind of research to be found is Wesche's (1981) study. Wesche used language aptitude tests to identify two types of students: Type A had high overall scores on the tests while Type B manifested a high level of analytical ability but demonstrated problems with phonemic coding. Wesche matched Type A students with an audio-visual, inductive approach and Type B with a deductive, analytical approach. There were no significant differences in the achievement of these two types of students at the end of the course. In a follow up study, Wesche provided both matched and complementary instruction to both types of students in a standard ATI design. Students in the matched conditions demonstrated greater achievement than those in the complementary condition. This study supports Sternberg's (2002) contention that instruction needs to be matched to the particular type of ability a learner is strong in. Sternberg argues that in the case of most learners this is 'practical ability' rather than 'analytical ability' and notes that this is precisely the type of ability that is neglected by both testers and teachers.

Whereas it is difficult to see how teachers could set about trying to match their instruction to their students' motivational orientations, it is much easier to envisage them influencing their executive motivation by providing the conditions that promote intrinsic motivation. But how exactly are they to achieve this? One of the most promising recent advances in the study of motivation from an applied perspective is the attention being paid to how teachers can motivate their students. Drawing on this research (and perhaps even more so on his commonsense), Dornyei (2001) proposes thirty-five strategies for the language classroom. These are divided into strategies for developing the basic motivational conditions (e.g. 'create a pleasant and supportive atmosphere in the classroom'), for generating initial motivation (e.g. 'increase the students' expectancy of success in particular tasks and in learning in general'), for maintaining and protecting motivation (e.g. 'make learning stimulating and enjoyable for the learners by enlisting them as active task participants') and for encouraging positive self-evaluation (e.g. 'offer rewards of a motivational nature'). Dornyei emphasizes that although the efficacy of many of these strategies remains to be confirmed, 'there is no doubt that student motivation can be consciously increased by using creative techniques' (p. 144).

Attempts to assist learners to adapt to the type of instruction on offer involve learner training (or, to use the preferred term, learner development). Training has focused on identifying the learning strategies likely to result in successful learning. Studies of the

'good language learner' (e.g. Naiman, Fröhlich, Stern, & Todesco, 1978; Reiss 1985) have indicated that there are five major aspects of successful language learning: (1) a concern for language form, (2) a concern for communication (functional practice), (3) an active task approach, (4) an awareness of the learning process and (5) a capacity to use strategies flexibly in accordance with instructional requirements. Pedagogic intervention is directed at training learners to use the specific strategies associated with these five aspects. How successful is this training? Chamot (2001) reviews the research to date. The results are mixed and tend to show that strategy use depends on contextual factors and is necessarily relative. Thus, whereas there is support for teaching the use of some strategies, such as the key-word method for learning vocabulary, there is also evidence to suggest that learners will resist using the strategies they are taught if they feel their existing strategies are effective. Further, there may be developmental constraints on learners' ability to learn new strategies. In general, more proficient learners make greater use of strategies than less proficient learners. This is often interpreted as indicative of the role that learning strategies play in advancing proficiency. But an alternative view is that it is learners' proficiency that dictates the strategies they are able to use. Halbach (2000), in a qualitative study based on learner diaries, found that it was the better students that benefited from strategy training, leading her to question the value of such training for weaker students.

The general idea that the effect that instruction has on language learning is mediated by individual learner differences related to such factors as language aptitude and motivation is a powerful one that resonates with most teachers. However, it is probably true to say that, to date, research has not been able to demonstrate how this can be achieved in a practical manner.

SECTION C: GENERAL PRINCIPLES FOR SUCCESSFUL INSTRUCTED LEARNING

In the previous sections we examined a range of research that has explored instruction in relation to L2 acquisition. We considered the theories of learning that underlie three mainstream approaches to language teaching and we reviewed studies that have addressed how instruction can create the kinds of conditions needed for successful classroom learning. We have drawn on research that has investigated classroom learning from the perspective of general, universalist theories of acquisition and that has studied the ways in which learners differ in their approach to learning and how instruction can accommodate these differences. We have also emphasized (and do so again now) that the research does not provide a definitive account of how to ensure that instructed language learning is successful. Nevertheless, we believe, it provides a number of generalisations that can constitute a broad basis for 'evidence-based practice' (see Lightbown, 1985 and 2000 for an alternative set of generalisations). In this section we will attempt to express these in terms of a set of ten general principles – as a guideline for effective instructional practice.

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 caters 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 internalising and then analyzing fixed sequences. Classroom studies by Ellis (1984a) and Myles et al. (1998, 1999), referred to earlier, 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. This involves the focus-on-forms approach discussed earlier. While such an approach certainly receives support from the research that has investigated direct intervention in interlanguage development (see earlier section), 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. This should 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 proposed by Ellis (2002b). 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.

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). This type of meaning is addressed in the oral-situational approach and in the notional-functional approach. 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 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. 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 & Swain, 1997). However, in advocating this principle, we 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.

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

The previous sections have demonstrated 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 [5].

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 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 realises 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. See Table 2 for a summary of the different options. 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 and that have been discussed in earlier sections are: (a) the provision of time for strategic and on-line planning, and (b) corrective feedback.

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 (as in a lesson based on an unfocused task). 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 prétérite 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 a 6 month 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 attended. Also, more likely than not, many of the structures will be addressed 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. 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, instruction needs to be conceived of in terms of both approaches.

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 goal of any instructional programme. How then can it be developed? As we have seen, 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, 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, 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-centred 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 proceduralised. 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. It is neutral, however, as to how this is to be achieved.

Principle 5: Instruction needs to take into account learners' '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 en 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, 1983b) and (3) examine whether attempts to teach specific grammatical structures resulted in their acquisition (Ellis, 1984b). These studies showed that, by and large, the order of acquisition was the same for instructed and naturalistic learners; 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 that it was taught in a way that was compatible with the natural processes of acquisition. Subsequent research has borne out Long's claim (see earlier discussion).

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 Type B curriculum (e.g. 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 [6].

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 labour-intensive 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 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 (in press) 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 New Zealand schools), 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 (in press) 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).
2. Create opportunities for students to receive input outside the classroom. This can be achieved most easily be 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 centres 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.

We assert 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.

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

The extent to which learners learn by processing linguistic input or by actually producing (i.e. speaking or writing) the language is controversial. 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) summarises the contributions that output can make:

1. Learner 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 through the feedback they obtain when they make errors.

4. It helps to automatise 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. Exercises (especially the more controlled type) typically result in output that is limited in terms of length and complexity. It does not afford students opportunities for the kind of sustained output that theorists argue is necessary for interlanguage development. (See p. 12 for the distinction between 'tasks' and 'exercises'). Research (e.g. Allen, Swain, Harley, & Cummins, 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 tasks that require both oral and written language.

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 (1978a) 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 automatising 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 (see 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 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. As we noted above, when students interact amongst themselves, acquisition-rich discourse is more likely to ensue. However, as we also noted, there are a number of dangers in groupwork which may militate against this (e.g. excessive use of the L1 in monolingual groups).

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

We have seen that although 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. 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 study (see earlier discussion). 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 & Sinclair, 1989) designed to make students more aware of their own approaches to learning and to develop awareness of alternative approaches. The good language learner studies 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, 2001). 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 [7].

Dornyei's research has shown the kinds of teaching strategies that teachers can employ to develop and maintain their students' **intrinsic motivation** (see p. 21 for examples). Dornyei (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 is their responsibility to ensure that their students are motivated and stay motivated and not bewail the fact that students lack motivation. 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.

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-focused 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.
2. Selected response (e.g. multiple choice).
3. Constrained constructed response.
4. Free constructed response.

As we have seen, 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 (i.e. tasks 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. Robinson and Ross (1996) provide further examples of direct performance-referenced tasks of this kind.

CONCLUSION: MAKING USE OF THE RESEARCH

Finally, we will briefly consider ways in which theory and research can inform language pedagogy.

Many L2 acquisition researchers have often been hesitant to apply the results of their investigations to language pedagogy. Early on, Hatch (1978b) recognized the need for caution, pointing to the 'incredible leap of logic' involved in offering advice based on the results of research. Others have felt that L2 acquisition research does afford insights of value to pedagogy but warn against forming 'great expectations' (Lightbown, 1985). Lightbown suggests that the results of research may be of little value in 'teacher training' (concerned with the development of practical teaching skills) but is of value in 'teacher education' (i.e. by understanding what can and cannot be accomplished in the classroom). Some fifteen years later, she has not changed her position, commenting 'SLA research findings do not constitute the only or even the principal source of information to guide teachers in their daily practice' (Lightbown, 2000, p. 454).

Other researchers, however, have been less reticent. Long (1990), for example, felt sufficiently confident to list as set of 'well attested facts' that could be applied to pedagogy. Krashen (1989) has argued that the research findings relating to extended reading indicate that it demonstrates there is no need for guided instruction in L2 vocabulary learning. Truscott (1999) claims that the research on error correction demonstrates conclusively that it does not work and should be avoided. There are two major problems with such a position. The first is that the research relating to either pleasure reading or error correction is nothing like as conclusive as Krashen and Truscott suggest. Indeed, as the foregoing review should have made clear, there is scarcely a single area of L2 acquisition research that is not still open to controversy, fed by both conflicting theories of learning and mixed research results. The second is that whereas research seeks out general truths, pedagogy must be necessarily contingent and local. Thus, research findings based on one particular context of learning may have little relevance to the particular classroom contexts that individual teachers find themselves working in.

What then are the possible uses of L2 acquisition research? One is to adopt the kind of positivist stance inherent in Krashen and Truscott's prohibitions. But, as we have just argued, this is not appropriate. Research cannot be used to tell teachers what to do and not to do. Another suggestion, advanced by Krashen (1983) is to use the research to develop a theory and then to base pronouncements about pedagogy on this theory. This, by and large, is how Krashen has proceeded. The problem here is that there is no single, agreed theory of L2 acquisition. A further problem is that theories invite acts of faith rather than critical appraisal. The third approach – the one we wish to support – is to view research (and theory) as affording what Stenhouse (1975) has called 'provisional specifications' – that is, ideas, possibilities, hunches that teachers can elect to try out in their own classroom if they consider them relevant to the specific situation in which they work. Such an approach views teachers as 'insider researchers' who draw on research (and other sources of information such as shared practical experience) as a basis for curricular action. This approach acknowledges that whether particular research-based proposals are acted on must always depend on the professional judgement of the individual teacher.

It follows that the purpose of a literature review such as this is not to prescribe or proscribe what teachers should do to ensure effective learning in their classrooms but to stimulate reflection on the complex phenomenon of instructed language learning and a willingness to experiment with new approaches in accordance with their local conditions.

Notes

1. A distinction can be drawn between 'classroom-based' and 'classroom-oriented' research (Seliger & Long, 1983). The former collects data from within actual classroom settings. The latter addresses research questions relevant to classroom learning but collects data in laboratory settings. This review will only consider classroom-based studies.
2. See, however, Nassaji and Swain (2000), which was informed by a sociocultural theory of the mind. This study demonstrated that acquisition can occur when learners receive corrective feedback that is finely tuned to their zone of proximal development.
3. A dictogloss task (Wajnryb, 1990) consists of a short text, designed to contain multiple exemplars of a specific linguistic feature. This is read twice to students at normal speed while they take notes. The students then work collaboratively in groups to reconstruct the text from their notes.
4. It could be argued, however, that the implicit learning condition in Robinson's (and other) studies does not correspond to the kind of implicit learning found in a natural environment. The 'incidental' condition in Robinson's (1997) study, where the learners were instructed to just try to understand the sentences they were exposed to, is closer perhaps to a natural learning situation. Interestingly, correlations between MLAT and the learning that occurred in this condition were much lower and statistically non-significant.
5. The extent to which attention to form is necessary for learning remains controversial however. A number of researchers (e.g. Williams, in press) 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).
6. 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.
7. 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'.

GLOSSARY

Behaviourist learning theory

Behaviourist learning theory is a general theory of learning. It views learning as the formation of habits. These are formed when the learner is responds to specific stimuli and receives feedback in the form of a reward or a correction. Behaviourist theory emphasizes environmental factors as opposed to internal, mental factors.

Communicative competence

The knowledge that users of a language have internalized to enable them to understand and produce messages. Most models of communicative competence recognize that this knowledge involves both linguistic knowledge (e.g. knowledge of grammatical rules) and pragmatic competence (e.g. knowledge of what constitutes appropriate linguistic behaviour in a particular situation).

Comprehensible input

Input that has been made comprehensible to learners either by simplifying it by using the situational context to make the meaning clear, or interactionally though the **negotiation of meaning**.

Computational model

This refers to the model of language learning that underlies a number of different theories. It views language learning as analogous to the way a computer processes information; that is in terms of input processing, an internal programme, and output.

Consciousness-raising task

A task that engages learners in thinking and communicating about language (often grammar). Thus, a language point becomes the topic that is talked about.

Content-based language teaching

An approach that involves teaching language through the teaching of subject content. Thus, a programme based on this approach consists of a series of thematic units linked to a subject content relevant to the learners.

Corrective feedback

Feedback that a teacher or another learner provides in response to a learner utterance containing an error. The feedback can be implicit as in the case of **recasts** or explicit as in the case of direct correction or metalingual explanation.

Curriculum

In this report, curriculum refers to the design of a language programme. The curriculum specifies the content to be taught, which in the case of a language curriculum might take the form of a set of linguistic items, functions, topics or tasks. A curriculum often makes assumptions about the nature of the methodology to be used.

Explicit knowledge

This consists of knowledge about language (e.g. knowledge about the rule for making nouns plural in English) and is potentially verbalizable.

Extrinsic motivation

This is the motivation that a learner brings initially to the classroom. It consists of the reasons the learner has to learn the language together with the effort the learner is prepared to put into trying to learn. Integrative and instrumental motivation can be viewed as types of extrinsic motivation.

Focus-on-form

The cognitive processes by which learners attend to form incidentally when comprehending or producing communicative messages. Long (1991) uses the term to refer to instruction that engages learners' attention to form while they are primarily focused on message content.

Focus-on-forms

Long (1991) uses this term to refer to instruction directed at teaching pre-selected linguistic items in activities where the students' primary focus of attention is on form rather than meaning.

Fossilization

Researchers have noted that most learners fail to reach target-language competence. Some learners do not progress past a stage when their speech resembles that of a pidgin language.

Functional grammar teaching

This consists of the use of a variety of situational grammar activities designed to provide communicative practice of specific forms in relation to the functions they realize.

Humanistic approaches

An approach to language teaching that emphasises tasks involving the development of human values and sensitivity to the feelings and emotions to others.

Implicit knowledge

This is the intuitive knowledge of language that underlies the ability to communicate fluently in the L1. It manifests itself in actual language performance and is only verbalizable if it is converted into **explicit knowledge**.

Input processing instruction

VanPatten (1996, p. 60) defines this as instruction that is designed 'to alter the processing strategies that learners take to the task of comprehension and to encourage them to make better form-meaning connections than they would if left to their own devices'.

Intake

The portion of the input that learners notice and therefore take into working memory. Intake may or may not be subsequently accommodated in the learner's interlanguage (i.e. become part of long-term memory).

Interactional authenticity

Bachman (1990) uses this term to refer to tasks that result in the kind of discourse of the kind found in naturalistic settings. Interactional authenticity is not the same as situational authenticity (which requires that tasks mirror the actual kinds of situations learners will experience in real life).

Interaction Hypothesis

The hypothesis advanced by Long (1980). It states that learners acquire new linguistic forms as a result of attending to them in the process of negotiating for meaning in order to address a communication problem.

Interface Hypothesis

This claims that **explicit knowledge** can be converted into **implicit knowledge** as a result of practising specific features of the L2. It provides a clear justification for teaching explicit linguistic knowledge.

Interlanguage development

The term, coined by Selinker (1972), refers to (1) the system of L2 knowledge that a learner has built at a single stage of development ('an interlanguage) and (2) the interlocking systems that characterize L2 acquisition ('the interlanguage continuum').

Lexical approach

The lexical approach concentrates on developing learners' proficiency with words and word combinations. It is based on the idea that an important part of language acquisition is the ability to comprehend and produce lexical phrases as unanalyzed wholes, or "chunks," and that these chunks become the raw data by which learners perceive patterns of language traditionally thought of as grammar (Lewis, 1993, p. 95).

Monitoring

The process by which learners attend to aspects of their own production and modify it with a view to making it more grammatical or acceptable. Monitoring involves self-correction and is distinguished from modified output in that it is triggered by learners themselves rather than by feedback from another task participant.

Natural route of development

Studies have shown that grammatical structures are acquired in a relatively fixed order (e.g. English plural –s is acquired before possessive –s) and also that many structures (e.g. interrogatives) are acquired in a series of well-defined stages. For example, learners typically first use intonation questions (e.g. 'Your name is Keiko?), then master yes/ no questions (e.g. 'Is your name Keiko?') and finally WH questions (e.g. 'What is your name?')

Negotiation of meaning

The process by which two or more interlocutors identify and then attempt to resolve a communication breakdown. However, negotiation of meaning may or may not result in mutual understanding.

Noticing

A cognitive process that involves attending to linguistic form in the input learners receive and the output they produce. Schmidt (1994) argues that noticing is necessarily a conscious process and is a prerequisite for learning to take place.

Noticing-the-gap

A cognitive process that involves learners comparing forms that have been noticed in the input with their current representation of these forms in their interlanguages. As with **noticing**, Schmidt (1990) claims this is a conscious process.

On-line planning

The process by which learners attend to form while planning speech acts or in order to monitor their output. On-line planning takes place while learners are performing a task. It contrasts with **strategic planning.**

Other-regulation

A term used in socio-cultural theory to refer to activity that is governed by another person. Other-regulation serves as a means of overcoming object-regulation. Thus it constitutes an intermediate stage in the development of higher-order mental activity. See also **self-regulation**.

Output hypothesis

Swain (1985) argues that L2 acquisition is promoted by learners being pushed to produce language that is accurate and precise. She sees this hypothesis as an addition not as an alternative to the Input Hypothesis.

Private speech

Ohta (2001) defines private speech as 'audible speech not adapted to an addressee' (p. 16). She suggests that it can take a number of forms including imitation, vicarious response (i.e. responses that a classroom learner produces to questions the teacher has addressed to another learner) and mental rehearsal.

Pushed output

Output that reflects what learners can produce when they are pushed to use the target language accurately and concisely. Pushed output may or may not contain modified output.

Recast

An utterance that rephrases a preceding utterance 'by changing one or more of its sentence components (subject, verb or object) while still referring to its central meanings' (Long, 1996, p. 436).

Scaffolding

Scaffolding involves the interactive work participants engage in to accomplish a task collaboratively. Through scaffolding the participants construct **zones of proximal development** and thereby foster learning.

Self-regulation

A term used in **socio-cultural theory** to refer to the ability of an individual to regulate his or her own mental activity. It constitutes the final stage in the development of higher-order skills. See also **other-regulation**.

Skill-building theory

Skill-building theory views knowledge as originating in an explicit form and gradually being proceduralized into an implicit form through practice. See also **interface hypothesis.**

Strategic planning

The process by which learners plan what they are going to say or write before commencing a task. Pre-task planning can attend to prepositional content, to the organization of information or to the choice of language. Strategic planning is also referred to as pre-task planning.

Sociocultural theory of mind

A theory of learning derived from the work of Vygotsky that emphasises the role played by mediated learning in enabling learners to exercise conscious control over such mental activities as attention, planning and problem-solving.

Uptake

The output that learners produce as a result of the feedback they receive on their preceding utterance. Uptake may or may not consist of modified output.

Zone of proximal development

This term is used in **sociocultural theory of the mind** to explain how participants in a task interact in order to enable learners to perform functions that they would be incapable of performing independently. It refers to the learner's potential as opposed to actual level of development.

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