1 Investigating Classroom Language Learning

Introduction

The question which this book tries to answer is 'How does second language (L2) learning take place in a classroom?' The primary aim of the book is to explore learning rather than teaching. It is concerned with how classroom learners construct the mental grammar that underlies their use of an L2, not with how teachers teach. This focus on learning has been motivated by the belief that it is necessary to understand as fully as possible the processes by which learners internalize a knowledge of a L2. Such an understanding will contribute to L2 acquisition research and will also serve as a basis for pedagogic recommendations. The focus on learning is additionally motivated by the conviction that a theory of classroom learning needs to be *explicitly* formulated so that statements about how learners learn and how teachers ought to teach can be subjected to critical scrutiny.

Of course, a book which sets out to examine how classroom L2 learning takes place cannot ignore teaching – for the obvious reason that what distinguishes the classroom from a naturalistic setting is the attempt to teach the L2. It is this which makes the study of classroom L2 learning such a fascinating subject of enquiry.

Classroom Language Learning

A good starting point, then, is to try to define 'classroom language learning'. The term exists in opposition to 'naturalistic language learning'. The difference between the two types of learning can be examined from a sociolinguistic, a pyscholinguistic and an educational viewpoint.

Sociolinguistically, the distinction between **classroom** and **naturalistic** L2 learning can be viewed as one of **domain** (Fishman, 1964). Domains are constellations of factors that affect the way language is used. The domains of classroom and naturalistic learning can be distinguished with reference to such factors as location, participants, topics and purposes. The differences on

each of these dimensions is fairly self-evident and needs little comment. In general, the domain of classroom language learning is circumscribed in comparison to that of naturalistic language learning. The latter is likely to be characterized by a greater range of settings, participants, topics and purposes, although it is possible to envisage exceptional cases of each type of learning where the reverse applies – the classroom can provide the richer, more diverse learning experiences.

Psycholinguistically, the key distinction is between **formal** and **informal** language learning (Krashen and Seliger, 1976; d'Anglejan, 1978). Formal learning involves some kind of studial activity on the part of the learner – for example an attempt to learn *about* the language by obtaining information about explicit rules of grammar. Informal learning takes place through observation and direct participation in communication – learning is a process of discovery which takes place spontaneously and automatically providing certain conditions have been met. It would be a mistake to equate classroom and formal learning on the one hand and naturalistic and informal learning on the other. The fact is that classroom learning can and does involve informal learning – for instance when learners have the opportunity to engage in meaning-focused communication. Advocates of the communicative method (e.g. Brumfit, 1984) emphasize the importance of teaching activities designed to encourage informal learning. Similarly, naturalistic learning can involve formal learning, for example when a learner asks a question about a linguistic form in the middle of a conversation. However, it is probably true to say that the classroom setting affords more opportunities for formal learning and naturalistic settings more opportunities for informal learning. The psycholinguistic difference between classroom and naturalistic learning may not be absolute but it is nevertheless significant.

Educationalists often distinguish the idea of formal training and apprenticeship.[1] Formal training typically occurs in classrooms. It involves some deliberate attempt to shape the learning experiences in the belief that by so doing the learner will be able to acquire knowledge more efficiently. Thus Stern (1983:19) defines classroom language learning as 'learning which has been induced or influenced by some form of deliberately planned social intervention'.[2] The intervention need not be designed to cater for formal language learning. Instruction that seeks to provide opportunities for learning through natural communication is also an attempt at social intervention. After all, it is the teacher who supplies the materials for an information-gap activity and who instructs the learners to get into groups. Apprenticeship involves learning by doing. No deliberate attempt is made to shape the learning environment by devising a syllabus or providing special activities. The learner-apprentice works side by side with the master-craftsman and 'picks-up' skills through observation and practice. It should be noted, however, that the learning environment provided by apprenticeship is possible in the classroom, and formal training can occur in a naturalistic setting. But classrooms are ideally suited to formal training, while naturalistic settings tend to give rise to apprenticeship.

In many respects the distinction between classroom and naturalistic language learning is a crude one. It presupposes that it is possible to generalize about the characteristics of each domain and the types of learning and teaching that take place. In reality, there are many different types of classrooms and natural settings are multifarious. Nevertheless, providing that the inherent variety of both settings is borne in mind, the distinction is an important one. In studying classroom language learning, we are trying to discover how a typical constellation of social factors leads to attempts on the part of the teacher to control the environment in order to provide opportunities for language learning. The central questions are 'Does intervention promote L2 learning?' and 'What kind of intervention is most effective?' These are important question to ask both for theory building in L2 acquisition research and for language pedagogy.

Building a Theory of Classroom Language Learning: Three Approaches

How can we develop our understanding of classroom language learning? How can we build a theory of the way in which classroom learners acquire an L2? There are three basic approaches that have been used.

One way is to assume that classroom language learning is just like any other kind of learning and can be explained with reference to a general theory of learning. According to this view it is not necessary to build a separate theory of classroom language learning. All that is required is to demonstrate the applicability of a general theory to instructed L2 learning and to show how the hypotheses that comprise the theory can be applied to it. Such an approach has proved popular in the past and continues to do so today. It is, however, contentious, for not everyone agrees that language learning is the same as other kinds of learning. Chomsky (1965; 1986), for instance, has argued strongly that language constitutes a separate mental faculty and is not acquired in the same way as other knowledge systems.[3] Irrespective of whether Chomsky is right or wrong, it can be argued that extrapolating from a general theory is a hazardous undertaking on the grounds that important facts relating to both the nature of language and the classroom setting can be overlooked. It is significant that those applied linguists who have turned to a general theory of learning to explain classroom learning have rarely bothered to collect data from inside the classroom to test the claims of the theory. The process is one-way only; extrapolation occurs, but there is no attempt at falsification.[4]

A second way of building a theory of classroom language learning is to assume that instructed L2 learning proceeds in the same way as naturalistic language learning. This approach has also proved popular. It takes two forms, depending on whether the starting point is child L1 acquisition or naturalistic L2 acquisition. Clearly the degree of extrapolation to the classroom setting is greater in the case of the former than the latter. The claim that classroom language learning is identical (or similar) to L1 acquisition involves an accept-

ance of the L2 – L1 hypothesis. It also implies a belief that adults can acquire an L2 in the same way as children. It is possible to question both assumptions (cf. Bley-Vroman, 1988 and Long, 1988a) and very difficult to prove either. The claim that naturalistic L2 learning and classroom language learning have many features in common is a much safer one. It is also a claim that can be subjected more readily to empirical enquiry.

Neither of the first two approaches involves going inside the classroom to try to discover what actually happens when teachers 'intervene' in the learning process. This is one reason why they have proved popular. It is much easier to draw on the work of other researchers who have investigated the nature of learning in general or who have studied naturalistic acquisition than to enter the 'black box' and begin the messy business of trying to find out how learners learn a language there. The reluctance to engage in classroom research can be explained by the natural inclination not to undertake unnecessary work. Why study the classroom if it can be argued that classroom language learning is like other kinds of learning or like naturalistic language learning?

One reason why it proved necessary to research the language classroom was precisely because there was radical disagreement about the theories of classroom language learning which were derived respectively from a general learning theory and from comparisons with naturalistic language learning. This research – like all research – has been of two broad kinds: (1) exploratory–interpretative research and (2) hypothesis-testing research. The former makes use of a non-experimental design, collects qualitative data and provides an interpretative analysis (Grotjahn, 1987). The latter makes use of an experimental or quasi-experimental design, employs quantitative data and offers statistical analysis. There are also various mixed forms of research.

There tends to be a certain tension between the advocates of the two research paradigms. A number of researchers (e.g. Mitchell, 1988a; Van Lier, 1988) argue that an exploratory–interpretative approach is required in order to unravel the complexities of behaviour in the language classroom. They argue that in order to understand these behaviours it is necessary to study them in depth and in context. They emphasize the social nature of classroom activity and see the study of the interactions that occur between the classroom participants as the principal object of enquiry. Such an approach, they suggest, also has the advantage that it presents results in a form that makes them easily understood by teachers. They are advocates of a 'research-then-theory' approach (Reynolds, 1971). That is, although they are interested in theory-building, they do not feel the need to base their research on a strong and explicit theory. Rather they feel that the theory will evolve as understanding becomes more complete. The principal tool of this branch of research is ethnography. The emphasis is on describing and understanding classroom processes rather than on testing what has been learnt.

Other researchers (e.g. Long, 1985a; 1988b) have argued in favour of a 'theory-then-research' approach. That is, they believe that 'true experiments' should be designed to test hypotheses based on a well-grounded theory.

Hypothesis-testing research, it is claimed, is the principal way of understanding cause – effect relationships. Thus experimental research is necessary to investigate whether instruction actually results in learning. Long (1985a: 391) writes: 'The theory-then-research strategy and the related causal-process form of theory allow for more efficient research. This is because the theory governing the research at any point in time tells the researcher which the relevant data are, which is the crucial experiment to run.' Researchers like Long talk frequently about **explanation**. They point out that the qualitative study of classroom processes may help us to understand how events take place and what motivates them but they are unable to explain how the events contribute to language learning. To do this it is necessary to set up a controlled experiment.

The debate over the two research paradigms is an age-old one. It is also a sterile one. For a start much of the research that has taken place is of a mixed form. An experimental design does not preclude the collection of qualitative data and interpretative analysis. Ethnographic research can be combined with attempts to manipulate the learning environment in specific ways in order to observe what happens. Second, given the complexity of the task facing the researcher it would seem wise to employ as many and as varied strategies of research as are available. Third, it would seem to me that the real issue is not so much how the research is carried out as what is done with the results of the research. The danger of much classroom research is to try to apply the results directly to teaching by advocating specific methods or techniques. This danger exists quite independently of whether the research is ethnographic or scientific. Classroom research should be directed at building a theory of language learning – a goal which both types of research can help to meet. The theory can then serve as a basis for pedagogical advice. The piecemeal application of the results of classroom research should be avoided.

Figure 1.1 shows the three ways of building a theory of classroom L2 learning which have now been discussed in broad outline. Two points are

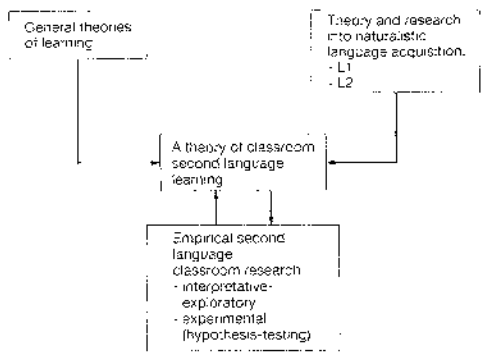

Figure 1.1 Three approaches for developing a theory of classroom second language learning

worth emphasizing. The first is that a general distinction can be drawn between theory-building that proceeds without direct reference to classroom behaviour – as occurs when extrapolation from a general learning theory or from naturalistic language learning occurs – and theory-building that results from attempts to research classroom activities. The second point is that the theories that have resulted from the different approaches have not always been coherent or even fully explicit. This is because the teaching–learning relationship has been viewed predominantly from the perspective of how to teach rather than from how learning takes place. One of the aims of this book is to remedy this by adopting a learning perspective.

Extrapolating from General Learning Theory

Now that the three ways of building a theory of classroom language learning have been outlined, we can begin to examine each one in a little more detail. We start with the attempts that have been made to extrapolate from general learning theory. This makes a convenient starting point as this was the initial approach adopted.[5]

In the fifties and sixties there was no field of enquiry that could be labelled 'second language acquisition'. In order to determine the views about classroom language learning which prevailed during that period it is necessary to examine what language teaching methodologists had to say. There was no attempt to develop an explicit theory of classroom language learning; rather views of learning were invoked to lend support to a set of claims regarding how language teaching should take place.

Ideas about language teaching during this period were derived in part from linguistic theory and in part from a general theory of learning. The linguistic theory was that propounded by structuralist linguists. A language was seen as a set of formal patterns that could be described rigorously without reference to meaning. The learning theory was that propounded by behaviourist psychologists. Learning was treated as a process of habit-formation that could be described in a terms of stimulus-response associations, often linked together in complex chains. Methodologists such as Brooks (1960) and Lado (1964) drew extensively on both structuralist and behaviourist theories in developing an approach to language teaching that became known as audiolingualism.

According to audiolingual principles the goal of classroom learning was the acquisition of the habits that comprised the target language. A habit consisted of the ability to perform a particular linguistic feature (a sound, a word, a grammatical pattern) automatically, i.e. without having to pay conscious attention to it. This ability entailed being able to link a particular response to a particular stimulus. It was acquired through massive practice of a mechanical nature. The teacher supplied the stimulus, the learner supplied the response. The teacher then reinforced correct responses or corrected erroneous re-

sponses. Ideally, errors were to be avoided because they were believed to have a negative effect on learning. A major source of errors was the learner's first language (L1). This interfered with the acquisition of the L2 because the learner tended to transfer the habits of her native language into the target language. These views on classroom language learning – derived entirely from a theory of general learning – were articulated with conviction and came to be accepted as received opinion by a large number of teachers.

It is easy to overemphasize the role played by behaviourist learning theory in audiolingualism. As Howatt (1984) points out, the progenitors of the method – Fries and Bloomfield – made little mention of behaviourist psychology but drew instead on structuralist descriptions of language as a basis for pattern-practice. However, there can be little doubt that behaviourist theories were used to underpin recommended instructional techniques. There was, for instance, a clear link between Skinner's theory of operant conditioning, which described how complex behaviours can be systematically shaped, and programmed language learning.

It is important to understand audiolingual learning theory and to subject its assumptions to careful scrutiny. There are two good reasons why. First, the theory addressed some key issues – issues which need to be addressed in any theory of classroom language learning. It dealt with the difference between explicit knowledge of a L2 (i.e. **knowledge about** the L2) and implicit knowledge (i.e. the knowledge that underlies the **ability to use** the L2) and made statements about which kind of knowledge should be the goal of learning. It considered the cause of learner errors and the role they play in learning. It articulated in some detail the kind of classroom behaviours which were needed to ensure successful L2 learning. Second, the theory has had a tremendous impact on teachers' popular conceptions about how L2 learning takes place in a classroom. This impact is still evident today, many years after the theory has been rejected as an adequate account of classroom language learning. One reason for this, perhaps, is that in audiolingual learning theory L2 learning is treated like any other learning and, therefore, the task of teaching a L2 can be seen as essentially the same as that of teaching any other school subject.

Audiolingual learning theory is not the only classroom language learning theory to have been based on a general theory of learning – although it has, perhaps, been the most influential. Currently considerable attention is being paid to cognitive theory (J. Anderson, 1980; McLaughlin, 1978b and 1987).[6] This exists in direct opposition to behaviourist learning theory as it emphasizes the role of internal mental processing rather than external behaviour. Cognitive theory seeks to explain three main aspects of learning: (1) how knowledge is established, (2) how knowledge becomes automatic and (3) how new knowledge is integrated into the learner's existing cognitive system. It draws extensively on research into information processing. A key distinction is that between **declarative** and **procedural knowledge.** Applied to language learning, the theory claims that the process by which new linguistic knowledge is internalized

is different from the process by which control over this knowledge is achieved. New knowledge is 'declarative' (i.e. it involves 'knowing that'). Automated knowledge is 'procedural' (i.e. it involves 'knowing how'). Learners typically progress from declarative to procedural knowledge as they develop control. Many of the errors that learners produce are not the result of a lack of declarative knowledge but rather of procedural knowledge. The solution is to provide conditions of learning that enable them to practise using their knowledge in authentic communicative situations (Johnson, 1988).

Cognitive learning theory provides a much more convincing account of classroom language learning than audiolingual learning theory. This is because it does not seek to explain L2 learning solely in terms of observable behaviours but gives full recognition to the contribution of the learner's internal mental processing. The theory is particularly helpful in enabling us to understand what learners need to do in order to obtain full control over L2 knowledge. But, as we shall see, it is unable to account satisfactorily for a number of aspects of classroom language learning – in particular for the fact that there are remarkable regularities in the sequence in which L2 knowledge is acquired.

Extrapolation from general theories of learning is inevitable and desirable. Learning an L2 in the classroom must share a number of characteristics with the learning of other kinds of knowledge. After all, the conditions that prevail in a language lesson are not so very different from those that prevail in the history or science lesson. The fact that an L2 is acquirable in a classroom context suggests that at least some of the processes involved must be the same as in other kinds of learning. But there are dangers in extrapolating from a general theory. It is one thing to claim that classroom language learning is *like* other forms of learning, entirely another to assume that it is the *same*. There is now ample evidence to suggest that in some respects at least classroom language learning is special. Extrapolators are not likely to bother to go inside the classroom to test their hypotheses and, sadly, they are likely to ignore the evidence of those researchers that have done so.

Extrapolation from behaviourist learning theory is considered in chapter 2. Cognitive learning theory is examined in chapter 7.

Extrapolating from Naturalistic Language Learning

In the sixties behaviourist theories of learning began to buckle under the weight of Chomsky's (1959) attack on the general principles of associationist psychology. Mentalist theories of language learning began to assume ascendancy. These emphasized the importance of innate knowledge and the learner's contribution to the process of language learning. The learner was credited with a mental grammar that comprised her competence and which underlay her actual language behaviour. At the same time a number of important studies of L1 acquisition were undertaken (e.g. Bloom, 1970; Brown, 1973).

The rejection of behaviourism on theoretical grounds and on the basis of empirical studies had a considerable impact on applied linguists interested in language teaching. Articles applying the results of L1 acquisition research and theory to the classroom began to appear (e.g. Corder, 1967; Cook, 1969).

In the late sixties teachers-turned-researchers began to take an interest in L2 learning. This period saw the beginnings of Second Language Acquisition (SLA) as an area of empirical enquiry. There was sudden burst of research. Many of the early studies employed the methodology of error analysis (e.g. George, 1972); that is, corpora of learner utterances were inspected and deviations from target language norms identified, described and explanations for them sought. Other studies made use of performance analysis (e.g. Dulay and Burt, 1973); that is, the degree of correct usage of a number of different grammatical features was compared in order to establish an order of accuracy. There were also a number of longitudinal case studies of individual L2 learners (e.g. Ravem, 1968; Huang and Hatch, 978) which examined how grammatical sub-systems such as negatives and interrogatives were acquired.

There were two significant findings of this research. It was shown that many of the errors produced by learners were **developmental** in nature. That is, learners appeared to construct their own rules, which were independent of both their native language and the target language. This finding was used as evidence against the claim of audiolingual learning theory that the major source of learner error was L1 interference. The second finding was that there appeared to be a **natural sequence of acquisition** for many grammatical features. Learners from different language backgrounds displayed remarkable regularity in the rank ordering of grammatical morphemes or in the stages of development of negatives and interrogatives. It was argued that L2 acquisition was a process of creative construction not dissimilar to that found in L1 acquisition.[7]

All this provided a basis for some very different views of classroom language learning from that advanced by audiolingual learning theory. These views were cognitivist in nature. **Cognitive code learning theory** (Chastain, 1971) drew heavily on the learning theory that underpinned the study of generative grammar. One of its central tenets was that the perception and awareness of L2 rules preceded the actual use of these rules (i.e. competence preceded performance). Considerable importance, therefore, was attached to metalingual knowledge – knowledge *about* language. The cognitive code learning theory was directly opposed to **audiolingual learning theory** in this respect. Also opposed were the views of classroom language learning propagated by Newmark and Reibel (1968). These emphasized the classroom learner's innate capacity for language learning. It was argued that classroom language learning – like naturalistic language learning – would take place effortlessly and automatically providing there was sufficient exposure to the target language and the learner was sufficiently motivated. Errors were a natural concomitant of learning and were to be tolerated rather than corrected. Learning could best be fostered if there is no attempt to 'interfere' with it. Very similar views were propagated by

applied linguists who drew on the early research into L2 acquisition (e.g. Corder, 1975).

A familiar feature of articles that appeared in journals such as *Language Learning*, *TESOL Quarterly* and the *International Review of Applied Linguistics* was a final section in which theoretical claims or the findings of empirical research were 'applied' to the classroom. This approach found its arch-disciple in Stephen Krashen, whose Monitor Model, developed in the middle seventies and popularized in the late seventies and early eighties, was specially devised to take account of classroom language learning. The Model itself, however, was based almost entirely on studies of naturalistic acquisition of L1 and L2. It represented the most complete attempt yet at extrapolation.[8]

Extrapolation from naturalistic L1 and L2 acquisition research is discussed in chapter 3.

Researching Classroom Language Learning

Although it is not entirely true to say that there was no classroom L2 research before the seventies, it is certainly true that the decade saw a remarkable growth of such studies. The research conducted in the sixties and earlier was typically experimental in nature and did not involve the observation of actual classroom behaviour. Scherer and Wertheimer (1964), for instance, sought to compare the efficacy of two different approaches to language teaching (grammar-translation vs. audiolingualism) and did so by measuring classroom learners' L2 proficiency by means of pre- and post-tests. The 'treatment' consisted of instruction based on the two approaches, but no attempt was made to investigate what actually happened when it took place. Another frequently cited comparative method study of the sixties was the Pennsylvania Project (Smith, 1970). This investigated the relative efficacy of three different methods: (1) traditional (grammar-translation), (2) inductive (the audiolingual method) and (3) deductive (the cognitive code method). It employed a similar pre/post-test design to the Scherer and Wertheimer study.

As Clark (1969) pointed out, there are inherent problems in studies that try to treat the real-life classroom situation as if it were a psychologist's laboratory. One of the main problems is that there can be no certainty that the instructions given to teachers are actually carried out by them. In other words there is no guarantee that the 'treatments' really are different. Methods that are distinct on paper may not be so in practice. Some effort was made in the Pennsylvania Project to carry out classroom observation in order to establish whether there were real differences in instruction, but this was of limited validity as the observation schedules employed were flawed in a number of respects.

Neither the Scherer and Wertheimer not the Smith study was able to demonstrate that one teaching method was significantly more effective in promoting L2 learning than another. One of the effects of these disappointing

results was that researchers began to question whether large-scale comparative method studies were the right way to go about investigating teaching–learning. Allwright (1988a: ch. 1) describes in detail how the rejection of 'method' as an appropriate goal of enquiry set the scene for the detailed, small-scale observational studies of classroom behaviour that began to appear in the seventies.

The empirical studies of L2 classrooms which have taken place in the seventies and eighties and which provide a basis for building a theory of classroom L2 learning can be grouped under two headings: (1) classroom process research, (2) the study of formal instruction and L2 acquisition. A brief account of each category follows.

Classroom Process Research

Classroom process research has consisted typically of small-scale studies aimed at documenting the events that take place in L2 classrooms. A variety of methods have been employed – the use of observational schedules for interaction analysis, educational ethnography, the analysis of classroom discourse, case studies, interviews, action research (i.e. attempts to investigate teaching–learning while carrying out normal teaching) and introspection (e.g. asking learners to comment on how they set about performing different classroom tasks). Van Lier (1988: ch. 3) provides a useful survey of these methods. The general aim of classroom process research is to **describe** classroom behaviour in detail in order to build up an accurate record of what actually happens. Careful description serves as a basis for understanding and explaining what happens:

> What we are doing when we examine an utterance in context is basically of course *explaining* the occurrence of that utterance as the same time as *describing*. We therefore engage in explanation, and in that sense a distinction between descriptive and explanatory research is simplistic; it is not possible to do one without the other. (Van Lier, 1988: 10–11)

As this quotation makes clear, classroom process research is usually (although not exclusively) **sociological** in orientation. The 'explanation' it provides is of a social nature. That is, it does not provide an explanation of how L2 learning takes place in the mind of the learner, although it can provide some helpful clues about this.

Classroom process research has examined a number of different aspects of the teacher's and the learner's language, as well as exploring the nature of interaction between the participants. Some of the issues dealt with are:

1. Error treatment, i.e. how the teacher deals with learner errors.
2. Teacher talk, i.e. the formal and functional characteristics of the ways in which teachers talk to L2 learners.

3 Learners' language, e.g. the communication strategies which learners use to overcome communication problems in the classroom and the use of code-switching.
4 The differences between pedagogic and natural discourse.
5 The different types of classroom discourse.

These issues are considered in some depth in chapter 4.

The Study of Classroom Interaction and L2 Acquisition

Classroom process research has helped us to understand what happens in teaching–learning. It provides us with a clearer picture about the way in which teachers and learners go about their business. It has also afforded a number of insights about the relationship between overt classroom behaviours and language learning and produced some valuable speculation on this relationship. The research has tended to be piecemeal, however, and has not been informed by an explicit theory of classroom L2 learning. This comment is not intended as a criticism of classroom process research. Indeed, the strength of this kind of research rests in the detailed attention paid to specific aspects of classroom activity. There is danger, however, that investigators working in this tradition will be seduced by the attractiveness of manageable research questions that can be answered by means of easily collected classroom data but which add little to our understanding of how learning takes place. As a complement to classroom process research, therefore, there is a need for theory-led research, which addresses more directly the nature of the relationship between classroom interaction and L2 learning.

A number of applied linguists have argued for viewing teaching–learning as 'interaction'. Allwright (1984a: 157), for instance, argues that interaction should be viewed not just as an aspect of communicative language teaching but as '*the* fundamental fact of classroom pedagogy'. According to Allwright it is through the joint management of interaction by the teacher and the learners that learning takes place. 'Interaction' in this sense refers not just to those exchanges involving authentic communication but to every oral exchange that occurs in the classroom, including those that arise in the course of formal drilling.

A number of different hypotheses about the relationship between interaction and learning have attracted researchers' attention. One that has motivated a number of recent studies is the interactional hypothesis. This states that L2 acquisition occurs most efficiently when learners have plentiful opportunities to negotiate meaning whenever there is some kind of communication difficulty. Such negotiation, it is claimed, brings learners into contact with L2 data which they are likely to attend to and so incorporate into their L2 mental grammars. There are, however, considerable problems involved in testing this hypothesis empirically, not least that of determining what is actually learnt as a result of engaging in an interactional exchange where there is opportunity to

negotiate meaning. The causal relationship between meaning-negotiation and acquisition has not been conclusively demonstrated.[9] However, the theory has served as a basis for conducting a number of classroom studies aimed at answering such questions as 'What kinds of pedagogic task provide the best opportunities for negotiation?' and 'Does small-group work provide greater opportunity for the negotiation of meaning than teacher–class interaction? These studies are, of course, only as good as the theory that motivates them.

It is probably true to say that we still know very little about the relationship between interaction and learning. Chapter 5 reviews a number of hypotheses (including the interactional hypothesis) which address the relationship, but the evidence to support each is often indirect and meagre.

The Study of Formal Instruction and L2 Acquisition

A different branch of classroom research has examined the effect that formal instruction has on L2 acquisition. 'Formal instruction' refers to the attempt to teach some specific feature of the L2 code – usually a grammatical feature – in one way or another. The studies belonging to this type of research fall into two categories, depending on whether they examine the effect of formal instruction on the rate/success of L2 learning or on the sequence/process of acquisition.

Recent surveys of research which fall into the first category (Long, 1983b, 1988a; Ellis, 1985a) indicate that learners who receive formal instruction generally outperform those who do not. The methodological basis of this research is a comparison between classroom and naturalistic learners. The assumption is made that if it can be shown that classroom learners learn more rapidly and/or achieve higher levels of ultimate success than naturalistic learners, then this must be the result of the essential difference in the two learning environments – the focus on form that occurs in the classroom.

Studies which have investigated the effect of formal instruction on the sequence/process of L2 acquisition have produced mixed results. Some researchers have compared the acquisitional sequences of classroom learners with those of naturalistic learners (e.g. Lightbown, 1983; Pica, 1983; Ellis, 1984a). In general the sequences appear to be very similar, but some interesting differences have also been observed. Other researchers have examined the effect of formal instruction more directly by carrying out classroom experiments (e.g. Pienemann, 1984; Eckman et al., 1988). That is, attempts are made to control the learning of specific grammatical features through formal instruction. The results show that some grammatical structures do not appear to be teachable unless the learner is developmentally 'ready'. Other grammatical structures, however, appear more amenable to instruction. There is also some evidence to suggest that formal instruction directed at one linguistic feature can not only result in the learning of that structure but also trigger the acquisition of other 'implicated' structures.

Much of this research has been motivated by theoretical questions concerning

SLA in general. The classroom serves as a convenient arena in which to carry out controlled experiments. Nevertheless, the research has helped us to form a clearer idea about the constraints that govern the acquisition of new linguistic forms and whether formal language teaching enables the learner to 'beat' the natural sequence. One of the strengths of this branch of classroom research is that it has been able to examine the relationship between teaching and learning directly because it utilizes measures of both.[10] It is examined in detail in chapter 6.

Summary

The empirical study of L2 classrooms came about largely as a result of dissatisfaction with global method comparisons. The different categories of research are summarized in table 1.1. It is not the purpose of this book to advance the claims of one approach over the others. No one approach is capable of providing the data needed to build a complete theory of L2 learning. The three approaches together, however, provide a picture of how learning takes place in the classroom.

Theoretical Issues

In this section we will consider a central distinction that any theory of classroom L2 learning will need to address: the role of form-focused and meaning-focused instruction. A number of questions will be raised but no attempt will be made to answer them at this juncture – that must wait until chapter 7.

The Role of Form-focused Instruction

We have already seen that classroom language learning can be distinguished from naturalistic language learning on the grounds that it involves planned attempts to intervene in the learning process. One of the key questions, therefore, is what form this planning should take. Broadly speaking, there are three options. The intervention can involve the provision of form-focused instruction where the learners are encouraged to focus their attention on specific properties of the linguistic code. Alternatively, intervention can take the form of specially contrived meaning-focused activities designed to promote authentic communication in the classroom. The third option consists of some kind of combination of form and meaning-focused instruction.

The choice of the form-focused option involves an acceptance of one of two assumptions. The strong assumption is that attention to the code is necessary for L2 learning in a classroom context. The weaker assumption is that it is not necessary but is desirable as an aid to learning. We will examine both assumptions in the following chapters.

Table 1.1 Empirical research of L2 classrooms

Category	*Goal*	*Principal research methods*
1 Classroom process research	The understanding of how the 'social events' of the language classroom are enacted	The detailed, ethnographic observation of classroom behaviours
2 The study of classroom interaction and L2 acquisition	To test a number of hypotheses relating to how interacting in the classroom contributes to L2 acquisition and to explore which types of interaction best facilitate acquisition	Controlled experimental studies; ethnographic studies of interaction
3 The study of instruction and L2 acquisition	To discover whether formal instruction results in the acquisition of new L2 knowledge and the constraints that govern whether formal instruction is successful	Linguistic comparisons of L2 acquisition by classroom and naturalistic learners; experimental studies of the effects of formal instruction

Both the strong and the weaker assumption imply that it is possible to influence the speed and/or course of L2 learning by directing the learner's attention to the formal properties of the code. In other words, it is accepted that learners are able to learn what they are taught. It is precisely this acceptance which has been challenged in recent years, notably in the publications of Stephen Krashen (1981; 1982; 1985). Krashen has argued that grammar-teaching is powerless to alter the natural route of L2 acquisition and that learners should be left to follow their own internal syllabus. This view has been strongly criticized by a number of applied linguists (McLaughlin, 1978b; Sharwood-Smith, 1981; Ellis, 1984a).

If it is accepted that attention to the code contributes to L2 acquisition, a further question arises. How should attention to the code be organized? The answer to this question depends on whether it is believed that L2 learning involves the incremental mastery of discrete items. Rutherford (1987) refers to this as the 'accumulated entities' view of language learning. Such a view underpins both audiolingual and cognitive code learning theories. Imparting the necessary information about the items that comprise the code can be attempted inductively (as in audiolingualism) or deductively (as in the cognitive code method). That is, the instruction may simply provide the learners with plentiful opportunities to produce utterances containing the target item or it can provide explicit information about the properties of the item. An alternative to the 'accumulated entities' view of learning is **consciousness-raising**. This differs from traditional grammar-teaching in that it sees form-focused instruction as a means to the attainment of grammatical competence not as an attempt to instil it. Consciousness-raising aims to facilitate acquisition, not to

bring it about directly. It recognizes that the learner will contribute to and shape the process of acquisition herself.

Form-focused instruction can be considered from the point of view of how the input to the learner is planned (i.e. syllabus-design and lesson-planning) and also from the point of view of the processes that occur in the course of teaching (i.e. classroom methodology). The choice of syllabus type is based on a particular view of classroom language learning – be this overt or covert. Methodological choices are similarly based. For instance, the teacher who believes that it is necessary to correct learners' errors does so because she believes that this will contribute, in one way or another, to learning. The construction of a theory of language learning that addresses the role of formal instruction is, therefore, of importance not just for curriculum planning but also for curriculum implementation.

The Role of Meaning-focused Instruction

Meaning-focused instruction consists of the provision of classroom activities that encourage learners to communicate using whatever resources, linguistic and non-linguistic, they have at their disposal. Two pedagogical arguments have been advanced in its favour (Ellis, 1986). The first is that learners need the opportunity to communicate in order to develop fluency. Through trying to communicate they develop the strategic competence they need to deal with communication problems and at the same time they automatize their existing L2 knowledge. The second argument is that learners are able to acquire new L2 knowledge as a result of taking part in communication. They 'pick up' knowledge from the input they are exposed to through interaction.

One the issues addressed by classroom process research is the extent to which classrooms are able to afford opportunities for authentic communication (e.g. Riley, 1977; Edmondson, 1985). The study of the teacher's and the learner's language and of the discourse they jointly construct have shown that the communication that takes place in the classroom is usually very different that which takes place outside. The asymmetrical role relationships between teacher and learners together with an educational ideology that views the process of teaching–learning as one of transmission result in a distorted form of communication. A number of questions arise. One concerns whether the distortion has a negative effect on L2 learning. Another concerns how the distortion can be overcome (e.g. through talk in small-group work).

The key question regarding the role of meaning-focused instruction concerns how interaction contributes to the acquisition of new linguistic knowledge. According to one view comprehensible input is necessary. Krashen (1985) has emphasized the importance of the teacher simplifying input to ensure that learners are able to understand. Long (1983a) has argued the importance of negotiation of meaning when there is a communication difficulty. This helps to make input which contains new linguistic material comprehensible and so facilitates its acquisition. According to another view learner output is important.

Swain (1985), for instance, argues that learners need the opportunity for 'pushed output' (i.e. output that stretches their linguistic capacity) in order to avoid stopping learning some way short of native-speaker competence. A theory of classroom language learning needs to consider the role of meaning-focused instruction. It needs to explain the respective contributions of form-focused and meaning-focused instruction and to provide a principled basis for how the two can be combined.

Conclusion

The goal of this book is the construction of a comprehensive theory of classroom L2 learning. This chapter has had three main purposes: to define the term 'classroom language learning', to identify and describe the types of information to be drawn on in the process of building a theory and to outline some of the major issues which the theory will have to address.

The study of classroom language learning can proceed in different ways. It can draw on the theories and methods of different disciplines – linguistics, sociology, psychology and education. This book does not aim to promote the claims of any one discipline over those of the others. If it gives greater attention to psycholinguistic enquiry, this is not because this is considered the 'right' way to go about building a theory but because it reflects the personal interests of the author. Nor is it intended to suggest that a psycholinguistic theory is the 'best' kind of theory upon which to base pedagogic practice. The relationship between research and theory on the one hand and pedagogy on the other, however, does need careful consideration. It will be examined in chapter 8.

NOTES

1 The distinction between formal training and apprenticeship in language teaching is mirrored in Stern's (1981) pedagogic distinction between an 'L' approach (characterized as linguistic and analytical) and a 'P' approach (characterized as psychological and experiential). Howatt (1984) distinguishes a 'rational' and a 'natural' approach.

2 Klein (1986) distinguishes classroom and naturalistic acquisition in a similar way. He describes the former as 'spontaneous' and the latter as 'guided'. 'Guidance' is evident in both the choice of what to teach (syllabus) and how to teach it (methodology).

3 Chomsky continues to maintain that language constitutes a separate faculty which cannot be explained with reference to a general cognitive system (cf. Chomsky, 1986). He rejects, therefore, explanations of language learning within a Piagetian framework.

4 The fifties and sixties were not devoid of empirical research, of course. In

particular, there were numerous studies of language aptitude (e.g. Pimsleur, 1960; Carroll, 1963). However, these were experimental in nature and extrinsic to the classroom. No attempt was made to enter the classroom and observe what happened there.

5 I am, of course, ignoring the history of language teaching prior to the advent of audiolingualism. My reason for this is that before audiolingualism there was no *explicit* attempt to justify pedagogic techniques by reference to the way a L2 was learnt. Grammar-translation, for instance, made no mention of how languages are learned. The learning theory that underlay the oral approach was ill-defined, to say the least (cf. Richards and Rodgers, 1986: 36-7).

6 There is, in fact, no one 'cognitive theory'. Rather there are a number of separate theories which are broadly similar in that they recognize similar distinctions – such as that between declarative and procedural knowledge – and draw extensively on research into information processing.

7 It is important to note, however, that the idea of a 'natural order hypothesis', in the L2 acquisition of grammatical structures is a controversial one. Not all studies lend support to this. The hypothesis and the research are considered in chapter 3.

8 Krashen's later work (e.g. Krashen, 1985) draws on studies of both naturalistic and classroom learning. The Monitor Model, however, was constructed on evidence supplied predominantly from research into naturalistic acquisition.

9 Long (1985a) argues that it is not necessary to demonstrate a direct relationship between interaction and the acquisition of specific linguistic features. He suggests that the link can be demonstrated indirectly by showing that the negotiation of meaning promotes comprehension which in turn promotes acquisition. This proposal is discussed in detail in ch. 5.

10 In fact, though, many of the studies of formal instruction are not really classroom research in the strict sense of this term, i.e. they did not involve going inside the classroom. Comparative studies of naturalistic and classroom learning, for example, have been conducted by collecting data outside the classroom.