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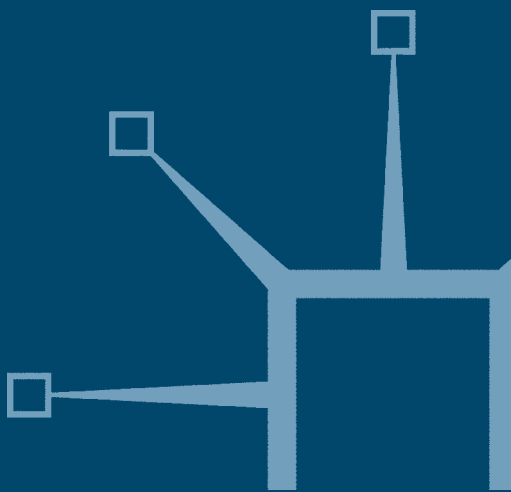
Expertise in Second Language Learning and Teaching

Edited by
Keith Johnson



Expertise in Second Language Learning and Teaching

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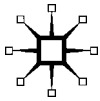

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To the memory of Bertie

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Introduction

Keith Johnson

There is a sense in which almost any statement about language, language learning or language teaching may be said to hold implications for a view about language learning or teaching expertise. Thus an observation about the nature of language implies a view about what it is that an expert user of the language is able to do. Similarly, a statement about language learning is interpretable as an observation about the processes which an expert learner has successfully undertaken.

Since this is the case, it may be argued that studying expertise in these areas is no new endeavour, but has indeed been done since applied linguistics began. What justification then for a book on the topic early in the twenty-first century? Among the reasons is that in the latter half of the twentieth century, particular impetus was given to the study of expertise through attempts to create machines possessing artificial intelligence and able to undertake human skills. In order for these skills to be mastered by machines, it was necessary for them to be analysed and understood. As the impetus gained momentum over the decades, our understanding of the nature of expertise grew. So also did the armoury of research methods used for the study of expertise. One characteristic procedure involves collecting together subjects thought by whatever criteria to be 'experts' (the issue of what criteria may be used to identify experts is discussed more than once in this volume), and finding out what they share in common. Another related method involves collecting together two groups of subjects – so-called novices and experts, and ascertaining how they differ. A number of contributions to this volume discuss expertise studies which utilise such procedures.

By now, at the start of the twenty-first century, expertise studies have been undertaken in a large number of domains (and Table 1.1 of Chapter 1 lists a number of them). Applied linguistics is a relative newcomer to

the list, and this is in itself a major reason why the time is ripe for a volume looking at what has been done in other domains, as well as what is emerging in the areas of second language learning and teaching. The preparedness to look at findings in non-linguistic domains and consider relating them to language learning and teaching is in fact a relatively new – and very welcome – phenomenon in recent applied linguistic history. This is because a paradigm which has long held sway regards language as a construct, and language learning as a process, separate (and largely incomparable with) other constructs and processes. The paradigm is associated with the notion that, as far as first language acquisition is concerned, language develops through mechanisms largely distinct from those which control cognitive growth. The effect of this set of views on second language learning and teaching has been to create a climate in which inspiration has come through seeking parallels with first language acquisition, rather than looking at the practices of (for example) the mathematics or the music teacher. But in recent decades this set of views has begun to be supplanted by ones which permit and indeed invite cross-domain comparisons. Language learning theories have been developed which utilise concepts springing from more general learning theories. Good examples, discussed in work described in Chapter 5 (and elsewhere), are the concepts of declarative and procedural knowledge and automisation, utilised by cognitive psychologists like Anderson (1982), who applies them to learning in domains such as geometry. Because of these developments, there is now a preparedness to consider work in other domains as being potentially relevant to the study of expertise in second language learning and teaching. Many of the papers in this volume reflect such preparedness.

Why is expertise in second language learning and teaching worth studying? Apart from the theoretical insights this may provide to applied linguistics, there is also the huge possible benefit to language learner and teacher training (issues considered particularly in Chapters 7 and 10). If we wish to create expert learners and teachers we require, one might imagine, information about the characteristics they need to develop. When we have that information, very many issues will doubtless arise about how we can best facilitate development of the identified characteristics. But an understanding of what constitutes expertise may be regarded as a necessary condition in that endeavour – as necessary to applied linguistics as it was earlier to the development of artificial intelligence.

In the first chapter of this volume, Keith Johnson provides a brief survey of expertise research covering a number of non-linguistic domains, and attempts to identify salient characteristics of expertise. His short his-

torical perspective begins with De Groot's work on chess expertise in the first half of the twentieth century; he then describes the computer-based AI work of the 1960s and moves to more recent times when the number of domains studied has grown considerably. During the course of his survey, various hypotheses come to light, including the claims that expertise is a matter of ability to think deeply, of superior memory power and of possessing a wide general knowledge. The research shows, he argues, that none of these is necessarily the case. In the second part of his chapter he considers some of the main research techniques used to study expertise. He pays particular attention to various forms of introspection, such as concurrent verbalisation and stimulated recall, both of which have been heavily used in expertise research.

Part II of the book (Chapters 2 to 7) focuses on the language learner and user. In Chapter 2, Joan Rubin describes and develops a comprehensive model of expertise, called LSM (for Learner Self-Management). The model is supported by a mass of research undertaken over the past few decades, and her chapter provides a valuable overview of this. Particularly interesting in the LSM model are the relationships holding between procedures, knowledge and beliefs. Having described the model, Rubin then considers the characteristics which good language learners (GLLs) possess. She provides a historical perspective of GLL studies, describing *inter alia* her own work which played such a major role in the growth of this field. She notes that early work in GLLs focuses attention on knowledge, then later on procedures. More recently there has been an emphasis on metacognitive strategies and the development of knowledge and beliefs. Her chapter also looks at strategies associated with different skills, and at individual differences. Though such differences undoubtedly exist, Rubin makes the point that there is more 'universality' in the use of metacognitive than cognitive strategies.

The following chapters look at the 'four skills' in turn. Christine Goh begins her consideration of listening by noting that one way for teachers to plan activities to develop listening competence 'is to consider the characteristics of second language (L2) listening expertise'. This points out a major justification for expertise studies, that they will provide valuable information on what should be taught in classrooms. Goh's analysis of listening shares characteristics with Rubin's analysis, and though their major analytical categories have different names, there are many features in common. In Goh these categories are *knowledge*, *heuristics/strategies* and *control*. She looks at these in turn, (like Rubin also) considering 'bad' as well as 'good' performers.

In Goh's discussion, the issue of how to train good performance is never far from the surface. In one section she looks at the issue of whether metacognitive strategies can be taught, and a later section is devoted to the question of developing expertise. Here she observes that there is an urgent need to investigate the usefulness of various types of training tasks.

Catherine Wallace's chapter on reading challenges some of the notions discussed elsewhere in this volume, as for example that automaticity is of central importance to expert performance. She argues that 'traditional' accounts of expertise do not do justice to the complexity and diversity of reading behaviour, and suggests that there are differences between reading and other language skills in terms of expertise. She questions the novice/expert distinction in relation to reading, because the behaviour is not describable in terms of incremental skills – expert reading involves the same principles at both early and advanced levels. At the centre of her argument is the notion that we need to regard reading as sociolinguistic behaviour, and her account also has a critical discourse perspective, giving particular importance to the Reader as Critic, a role which permits non-native readers to maximise what they bring to the reading task. In relation to this, she makes the useful point that the L2 reader may have advantages over the L1 reader, since the former brings the possibility of an outsider's eye, able to stand back from whatever stance a text takes. In terms of research methodology, her chapter provides a good example of thinking aloud – William's reading protocol shows clearly how what readers do is to 'interpret' rather than merely 'comprehend'.

In Chapter 5, Martin Bygate attempts to characterise an 'expertise approach' to L2 learning, drawing on work in other domains, and (like others in this volume) making particular use of Dreyfus and Dreyfus' (1986) framework. He notes the role of repertoires in a variety of skills and identifies those relevant to oral language production. His chapter is also concerned with the development of expertise, and here (as throughout the chapter) he shows himself willing to seek outside applied linguistics, in the general skills literature, for insights on this. Another important feature of Bygate's chapter is that his account 'provides guidelines for structuring a quite substantial programme of developing oral expertise in a second language'. This leads him into the realm of task-based teaching, and in this way he shows how an 'expertise approach' to language skill can have important implications for language teaching.

Sara Weigle's chapter deals with writing, and like Bygate, she makes liberal reference to non-linguistic expertise studies, particularly utilis-

ing Bereiter and Scardamalia's (1987) distinction between knowledge telling and transforming. Though she considers the different areas of knowledge a writer will possess, she shares with Wallace a realisation that social factors are as important as 'cognitive explanations'. At various points she mentions the contextual nature of expertise, and how expertise cannot easily be transferred from one domain to another. Her chapter deals at length with the pedagogic implications of writing expertise research, and includes discussion of strategy training (an issue taken up in detail in the following chapter). In this discussion she does not however lose sight of the importance of automising basic skills, acknowledging that learners need to have good vocabulary and syntax control as well as being able to operate purposefully and strategically. In the course of her consideration of training for expertise she looks at the interesting possibility of using reader protocols to develop a writer's awareness of audience.

Steven McDonough's chapter on *Training language learning expertise* concludes Part II. He identifies five questions to ask about learner training, and gives particular consideration to the 'chicken/egg issue'. The assumption in the early days of research in the area was that strategy use determined proficiency level; but it might (McDonough notes) be the other way round, and at the very least the relationship between the two may be non-linear, and more complex than early research suggested. His chapter contains a long section looking in some detail at the issue of how expertise may be evaluated, and how (in any field) there will be differing definitions of success which need to be questioned. His coverage of this and other issues indicate that though McDonough's chapter focuses principally on learner training, a number of the points he makes are relevant to the training of expertise in general, including in teaching, and in this sense his chapter provides a useful bridge to Part III which focuses on areas of teaching expertise.

Chapter 8, written by Amy Tsui, provides a valuable overview of expertise studies on teaching in all domains. She echoes Weigle's point about the 'contextual nature of expertise' arguing that teaching is a situated activity and in this respect is different from some other areas of expertise. She picks up various issues discussed earlier in the volume (particularly in Chapter 1). One of these is the question of what criteria can be used to identify the expert performer (the teacher in this case), and she provides a lengthy consideration of this important issue. Her conclusion expresses doubts that it will ever be possible to identify criteria which will hold across all

cultures. Tsui's chapter has big sections on studies of expertise as both state and process. In the course of her discussion she describes her own work in the development of expertise, and emphasises the expert's interactive process of 'theorising practical knowledge and practicalising theoretical knowledge'. One of the characteristics of the expert which she discusses is the tendency to 'problematising the unproblematic' (a topic which Samuda also touches on in Chapter 11). In this respect she utilises an expressive phrase of Ericsson (2002) who notes that the expert shows 'resistance to automaticity'. At both the beginning and end of her paper, Tsui draws attention to a specific motive for undertaking teacher expertise research – to show the world that teacher expertise is on a par with other areas of professional expertise (important because teachers are so often undervalued in contemporary societies).

In Chapter 9, Simon Borg focuses on an area much discussed in relation to teaching expertise – teacher cognition. While Tsui looks at teacher studies in general, Borg concentrates on language teaching, and his chapter provides a thorough survey of cognition as it relates to classroom practice. Like other contributors, he makes the point that teaching expertise is highly related to context, and in a subsection dealing with *Cognition and context*, he shows how aspects of social, psychological and environmental context shape teacher practices. His chapter also looks at decision-making, which he describes as 'the most researched aspect of language teacher cognition', and in a section entitled *Cognition and experience*, he reports on novice/expert studies which show, *inter alia*, that experienced teachers are more prepared to improvise than inexperienced ones. Echoing a research methodology point made in Chapter 1, Borg notes that longitudinal research on teacher development would provide a useful additional perspective to novice/expert studies.

In Chapter 10, Alan Waters points out that the field of teacher education is particularly lacking in expertise studies; in his words: 'there appears to be strikingly little empirical research concerning the expertise of the teacher educator'. He identifies the kinds of questions which expertise studies might pose and eventually answer. One is: 'how do skilled teacher educators set about framing and developing teacher learning opportunities?' He also makes the point (touching on one of the central rationales for this volume), that teacher education would benefit from looking at expertise studies in other domains. Like a number of other contributors, his chapter also makes use of the declarative/procedural knowledge distinction. Another welcome feature is

that Waters brings into the discussion another relevant area of study of increasing importance today – that of managing innovation.

Part III of the volume deals with expertise in language teaching but, as Waters' contribution suggests, the phrase 'language teaching' is intended in a broad sense to include teacher education. It also includes the area covered in the final chapter, Virginia Samuda's, which deals with expertise in task design. Samuda notes the considerable interest shown in tasks and task-based teaching in recent applied linguistics. Yet, she argues, most of the work in task design has been based on intuition rather than research. She describes the few research-based studies that have been undertaken, and concludes her chapter with a discussion on the applications of research to training issues – a central concern of this volume as a whole. Regarding research methodology, Samuda spends considerable time discussing what Bereiter and Scardamalia (1993) call the 'constitutive problem', to find appropriate research tasks which will capture all the elements of the skill under consideration (what she calls the 'core set of domain problems'). This issue also made its appearance in Chapter 1 (in the section entitled *selecting a suitable task to capture expertise*).

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Part I
Expertise in General

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1
The 'General' Study of Expertise

Keith Johnson

This chapter considers the 'general' study of expertise, in all domains including non-language-related areas. It has two parts. The first considers some of the more influential characterisations of expertise in the literature. The second focuses on research methodology, identifying and discussing methods and issues related to the study of expertise in general. It is hoped that the consideration of general expertise which this chapter provides might suggest approaches and avenues which might be fruitfully taken up in the study of language learning and teaching.

Some characterisations of expertise

The study of expertise in recent times began early in the twentieth century, and received particular impetus in the 1960s with the development of artificial intelligence, and attempts to build machines capable of undertaking human tasks. A first stage in such attempts was to characterise the relevant areas of expertise, as a prelude to trying to create machine simulations of them. In the late 1980s and early 90s a number of books on expertise research appeared, particularly Chi, Glaser *et al*. (1988), Ericsson and Smith (1991), and Bereiter and Scardamalia (1993). It was in this period that Ericsson wrote: 'one of the most exciting challenges in cognitive science today is to understand the mechanisms mediating the superior performance of experts in various domains, such as chess, physics, medicine, sport, dance, and music' (Ericsson and Smith, 1991, p. vii).

Popular domains for the early study of expertise were chess, general problem-solving and medical diagnosis, but as Table 1.1 suggests, the number of domains that have now received attention is

large. The table indicates some representative works dealing with various domains (but makes no attempt to be comprehensive):

Table 1.1 Example expertise studies in various domains

Domain	**Example**
Chess	De Groot (1978) Chase and Simon (1973)
Problem-solving	Newell and Simon (1972)
Medical diagnosis	Johnson, Duran *et al*. (1981) Patel and Groen (1991)
Taxi driving	Chase (1983)
The game of GO	Reitman (1976)
Reading circuit diagrams	Egan and Schwartz (1979)
Reading architectural plans	Akin (1980)
Interpreting X-ray plates	Lesgold, Rubinson *et al*. (1988)
Computer programming	Soloway, Adelson *et al*. (1988) Weiser and Shertz (1983)
Typing	Gentner (1988)
Physics	Simon and Simon (1978) Chi, Feltovich *et al*. (1981)
Mathematics	Schoenfeld (1985) Staczewski (1988)
Economics	Voss and Post (1988)
Restaurant waiters	Ericsson and Polson (1988)
Judicial decision-making	Lawrence (1988)
Nursing	Benner, Tanner *et al*. (1996)
Dance	Solso and Dallop (1995)
Music appreciation and performance	Sloboda (1991)
Acting	Noice and Noice (1997)
Car mechanics	McLaughlin (1979)

An early-held view regarding expertise was that experts are more thorough (going through more steps), and think more deeply than non-experts. Dreyfus and Dreyfus (1986, p. 28) refer to this as the 'Hamlet model of decision-making – the detached, deliberative and sometimes

agonising selection among alternatives'. It is, they say, 'the only [model] recognised in much of the academic literature on the psychology of choice'.

The domain where this was studied early on was playing chess. The game is traditionally considered one where 'quality of thought' is important for success. In Bereiter and Scardamalia's words (1993, p. 26): 'if ever there were a domain in which expertise rested on thinking abilities rather than knowledge, chess would seem to be it'. Early work in this domain was done by De Groot in the first half of the twentieth century, and is described in De Groot (1978). He studied the thought processes of chess players at different levels of achievement – grandmasters, masters, experts, and less skilled players. A number of positions from actual games were presented to subjects, who were asked to decide what they regarded to be the 'best next move', thinking aloud as they did so. In his comparison of two groups – the grandmasters (Gs) and experts (Es) – two of the variables he considered were 'maximum depth of calculation' (how many moves ahead the players think), and the number of different first moves considered. De Groot notes that 'the gap between the levels of performance of the G- and E-group is enormous' (p. 319). But this huge difference in level of expertise cannot be accounted for by the variables mentioned above. Indeed, about the first De Groot concludes that it is 'beyond doubt that the depth of calculation cannot be the prime distinguishing characteristic between the grandmaster and expert player' (p. 319). This view is supported by Chase and Simon (1973), who also studied chess expertise. They demonstrate that 'what distinguishes strong from weak players are their abilities to correctly reproduce large patterns of chess positions … rather than their searching more deeply or broadly than weaker players' (Glaser and Chi, 1988). Such evidence leads Bereiter and Scardamalia (1993, p. 28) to conclude that 'the image of the chess player as a supreme reasoner [is] demolished'.

In his consideration of the characteristics that chess masters possess, one of De Groot's findings is that they can undertake 'special feats of chess memory, for instance, writing down or indicating all of the twenty games played in a simultaneous exhibition the night before' (De Groot, 1978, p. 320). This phenomenon is also looked at by Chase and Simon (1973) who find that chess experts do indeed hold in their head a large number of possible chess board 'configurations' – patterns of around eight chess pieces that they have come across in their experience. This may lead one to believe that chess experts, if not 'supreme reasoners', do indeed have exceptional memories, in turn suggesting

the more general proposition that a defining characteristic of experts in all domains is superior memory power. In fact what the work on chess suggests is that experts have good memories only for specific chess-related phenomena. The specificity of the grandmaster's memory is apparent in work (described in De Groot, 1978, p. 9) undertaken in 1925 by three Russians, Djakow, Rudik and Petrovsky, who attempted to relate a number of cognitive and perceptual abilities, including memory, to chess talent. Their experiments showed that chess masters did not differentiate themselves from control subjects in any of the areas studied, including 'general' memory. It seems that chess experts do not have overall better memories than non-experts, but that they have superior 'chess memories', for specific board configurations. This conclusion is supported by the Chase and Simon study. They find that when both experts and novices are given random or nonsensical configurations of pieces to memorise, the experts do no better than the non-experts at remembering. This suggests a second characteristic of the expert chess player's memory, that it only operates on meaningful configurations of chess pieces – ones related to those the master will have come across before. Research findings in other domains, like sport and ballet dancing (Allard and Starkes, 1991) as well as musical expertise, are similar. As Ericsson and Simon (1991, p. 32) put it: 'access to aggregated past experience is the single most important factor accounting for the development of expertise'. As a result of this, 'expert-system building' (in computers for example) concentrates on knowledge giving.

If it is the case in the chess domain that knowledge of patterns or configurations is important, one might imagine that training novices to remember characteristic move patterns would help to turn them into experts. In one of a number of studies to investigate this, Ericsson and Harris (1989) found that after 50 hours of practice a subject without chess playing experience could recall meaningful chess positions like a grandmaster. But these novices were not then able to play chess like a grandmaster. In Bereiter and Scardamalia's (1993, p. 28) words, 'chess experts do not merely recognize thousands of chessboard patterns, they recognize them in ways that are relevant to playing the game'.

Such findings suggest that expertise involves more than the possession of a body of domain-specific knowledge. It also involves knowing how to deploy that knowledge in a focused way, for example to solve specific problems at particular points in a chess game. It is not just what is known, but knowing when and how to use what is known. The

following anecdote, which appears in various versions in various sources, illustrates the point: a plumber was called to a man's house to fix a broken central heating system. After a very short time spent observing the system, the plumber went up to one of the pipes and tapped it. The central heating system immediately started to work. When the plumber sent his bill to the man, it was for £250. The man felt this to be far too expensive, since the plumber had been in his house for less than half an hour. He complained, asking the man to produce an itemised account. Several days later the itemised bill arrived. It read: 'for tapping the pipe, and time spent on site, £25. For knowing which pipe to tap, £225.'

The chess findings are reflected in another domain in which there have been many expertise studies – medical diagnosis. Indeed in this domain the suggestion is that the thorough, 'agonising selection among alternatives' (the 'Hamlet model of decision-making' earlier associated with the expert) is in fact a characteristic of non-experts. In experiments where specialists and non-specialists are given symptoms and asked to reach a diagnosis, it is not the case that specialists consider more symptoms than non-specialists. The difference is that specialists recognise the significant symptoms from among all those they are given, and base their judgements on those few. As Kagan (1988, p. 485) puts it: 'the amount of clinical data obtained and the length of the decision chain appear to vary inversely with a physician's experience and level of education: more experienced physicians asking fewer questions and focusing on those likely to yield maximum information'. Bereiter and Scardamalia (1993, p. 58) have a phrase which captures this characteristic of selective focus. The phrase is 'judgement of promisingness'; the expert knows which avenues are likely to be promising and which may turn out to be dead ends.

As noted earlier, a central part of the impetus towards the search for expertise came with attempts to develop AI in the form of computers powerful enough to undertake expert tasks. Initial attempts to produce intelligent machines were surrounded by great optimism. Thus in 1958, Simon and Newell were to declare that 'in a visible future … the range of problems [computers] can handle will be co-extensive with the range to which the human mind has been applied' (Simon and Newell, 1958).

One clear way in which computers are superior to people is that the former are capable of performing huge numbers of computations very rapidly. Looking at the way machines tackle problem-solving tasks therefore provides perfect ground to explore the role of computational

power in expertise. Important pioneering work in computer problem-solving was undertaken by Newell, Simon and Shaw on the RAND (the name is a contraction of *research and development*) Corporation computer in the early 1960s. As part of this research, Newell and Simon were using think-alouds to study human problem-solving (and indeed Newell and Simon 1972 is a standard work in the study of general problem-solving expertise). A realisation was soon reached that the 'short cuts' which humans take when solving problems were a powerful processing tool potentially superior to sheer volume of processing. They therefore attempted to develop machine versions of 'heuristic programmes' which employ such short cuts in place of the 'algorithmic programmes' which laboriously work through huge numbers of calculations.

The optimism of these early attempts was strongly challenged by Dreyfus and Dreyfus (1986). Early claims that computers will be able to simulate human 'understanding, intuition and learning' were, they argue, far from met, particularly in relation to what they call 'unstructured' areas, like management, nursing and teaching, in which goals are often unclear and the exact effect of decisions is unknown.

Part of their doubt is expressed in terms of an anecdote when one of the authors attends a cocktail party where in conversation he is asked to illustrate the value of computer calculation in such decisions as, for example, when to buy a new car. He replies that a computer would be able to calculate when the cost of maintaining an old car on the road would cease to be a good financial decision and a new car would be preferable. A listener asks: 'Oh, and is this the way you decide when to replace your car?' 'Of course not', he finds himself replying, 'buying a car is for me too important to be left to a mathematical model. I mull it over for a while, and buy a new car when it feels right'. Considerations such as this lead Dreyfus and Dreyfus (1986, p. 10) to the conclusion that 'current claims and hopes for progress in models for making computers intelligent are like the belief that someone climbing a tree is making progress towards reaching the moon'.

In order to support this belief, Dreyfus and Dreyfus undertake an account of the nature of expertise as an initial stage to a discussion of the extent to which machines are likely to be able to simulate it. This account centres round a discussion of the steps by which a novice turns into an expert. Their model has five stages: novice, advanced beginner, competent, proficient and expert. They identify four parameters along which development is plotted. One they call *component*. In the case of the novice, the rules employed in behaviour are 'context-

free'. They are, that is, general rules of behaviours that are to be used in any situation, irrespective of context. As the learner progresses to other skill stages, these context-free rules are supplemented by 'situational' ones, able to handle contextual information. Their second parameter is *perspective*, the standpoint according to which decisions are made. In the early stages of skill acquisition, rules are applied without any standpoint. A characteristic of the 'competent' stage is that the performer bases decisions on goals, and this leads to the differential application of rules. Thus the competent nurse 'will pay attention to only a few of the immense number of factors impinging on the overall project'. At still higher levels (proficiency and expertise) it is the accumulated experience of the performer which dictates the perspective; the performer 'has experienced similar situations in the past and memories of them trigger plans similar to those that worked in the past.' A further parameter Dreyfus and Dreyfus consider is *commitment*. At the novice and advanced beginner stages, performers are 'detached', and because they are merely applying learned rules and procedures, they feel 'little responsibility for the outcome of their acts'. At later stages of skill development, performers feel more ownership of the rules and procedures they use, and are hence 'intensely involved in what occurs thereafter' (1986, p. 26).

The parameter Dreyfus and Dreyfus call *decision* is the one which raised most controversy. It concerns the degree to which conscious thought is applied to the decision-making process. At the early stages, the conscious mind is engaged in decision-making, and the effect is to slow down and adversely affect performance. At the expert stage, action is entirely intuitive ('intuition' is defined by Dreyfus and Dreyfus (1986, p. 28) as 'the understanding that effortlessly occurs upon seeing similarities with previous experiences'). They cite the case of the martial artist Taisen Deshimaru. 'There can be no thought', he says, 'because if there is thought, there is a time of thought and that means a flaw'. As a further example Dreyfus and Dreyfus cite the case of the chess master Julio Kaplan who in an experiment was required to add up numbers (one number added per second) while playing chess. This mathematical task did not disturb him.

This example fits in well with another account of skilled performance, described in Bereiter and Scardamalia (1983) and developed in Bereiter and Scardamalia (1993). Their 1983 paper is about the skill of writing. They identify two approaches to writing, which they call the low road and the high road. In their account, they employ the notions of channel capacity and automisation associated with information processing and,

particularly, the skill acquisition model of Anderson (1982). According to this model (also developed in Johnson, 1996 in relation to foreign language learning) a learner's behaviour progressively becomes automised as skill develops over time. The effect of automisation is to free channel capacity so that attention may be invested in other important areas. A standard example is that the novice car driver learns to automate the process of changing gear so that it can eventually be done without consuming channel capacity, which then becomes available to concentrate on other matters such as anticipating the movement of nearby traffic. This freeing of channel capacity well accounts for the example of Julio Kaplan that Dreyfus and Dreyfus cite; the chess player has so automated his chess performance that he has attention available to devote to the mathematical task.

According to Bereiter and Scardamalia the difference between the low road and high road in writing relates to what the writer does with the channel capacity which becomes free when automisation occurs. The low road writer is likely to spend freed-up channel capacity fine-tuning the operation (adding small details, changing occasional sentences and the like). Alternatively the low roader's attention might be spent on some activity entirely unconnected with writing, so that the effect of automisation is to decrease the amount of effort devoted to the writing task. Simon's notion of 'satisficing' is relevant here (defined in the Oxford English Dictionary as 'to decide on and pursue a course of action that will satisfy the minimum requirements necessary to achieve a particular goal'). The high road writer, on the other hand, reinvests (the word used in Bereiter and Scardamalia, 1993) the channel capacity liberated by automisation in fundamental transformation of the writing task – 'changing the nature of the task' (p. 25). The extra capacity may be used for exploring various relationships relevant to the writing process. These include relationships between what is written and what is meant; between what is said and what understood; between what is meant and other possible meanings. In this way, 'high roaders' keep reconstituting the task at higher and more complex levels. At school, this may mean taking an assignment and making it personal. Hence high road writing is described as 'writing as self-constructed problem'. The difference between the two 'roads' is also characterised by the terms *writing as knowledge telling* (the low road) and *writing as knowledge transforming* (the high road).

This notion of added degree of commitment is one of the ways in which Bereiter and Scardamalia's account is close to that of Dreyfus and Dreyfus, who have personal involvement as a mark of expert per-

formance. But a major difference lies in the role accorded to conscious thought, which in Dreyfus and Dreyfus (as noted earlier) is denied a place. For Bereiter and Scardamalia the investment of conscious attention on performance is a central characteristic of expert behaviour. Their view also provides an alternative to the notion of expert performance being effortless. 'Many experts we know', Bereiter and Scardamalia say (1993, p. 34), 'are active striving people. They work long hours … and they tend to set standards for themselves and others that are always at least slightly beyond reach.' Bereiter and Scardamalia illustrate this from the field of writing. Scardamalia and Bereiter (1991) reports on a novice/expert study in which it is the experts who are shown to plan their writing more, who take more time to start (write the first sentence), who agonise more over the correct choice of words, make more false starts. Novices are faster, more fluent, and often put down the first thing that comes into their heads. This characteristic of skilled performance suggests an interesting paradox. It is the experts, in contrast to the novices, who possess the rich domain-specific knowledge bases which make it in theory less necessary for effort to be expended on skilled performance. The prerequisites for effortless performance are in place. Yet the experts put more effort into their performance (when the task requires it; see the section on *selecting a suitable task to capture expertise* below) reconstituting the task and making it more complex than it needs be. The performance is a highly effortful one.

It has already been noted that in the late 80s and early 90s a number of books on expertise research appeared. In one of these, Glaser and Chi (1988) provide an overview of the field. They identify seven characteristics of experts revealed by research findings which 'are robust and generalizable across the various domains that have been studied' (p. xvii). These are given below with supporting statements from Glaser and Chi, pp. xvii–xx; statements in square brackets [ ] are additions by the present author. The first four of Glaser and Chi's points are treated briefly because they have already been touched on above:

(a) Experts excel mainly in their own domains. 'There is little evidence that a person highly skilled in one domain can transfer the skill to another'. An obvious reason is that expertise depends on possession of a quantity of domain knowledge, which takes a long time to develop.

(b) Experts perceive large meaningful patterns in their domain '… this ability to see meaningful patterns does not reflect a gener-

ally superior perceptual ability; rather, it reflects an organization of the knowledge base'.

(c) **Experts are fast; they are faster than novices at performing the skills of their domain, and they quickly solve problems with little error** This speed can be explained by increased automisation, or by the fact that experts do not need to conduct extensive searches. [As noted earlier, experts also often choose to complexify their skilled performance which will often mean they willingly forego the benefits that added speed might otherwise bring].

(d) **Experts have superior short- and long-term memories** 'This is not because their short-term memory is larger than other humans', but because the automaticity of many portions of their skills frees up resources for greater storage'.

(e) **Experts see and represent a problem in their domain at a deeper (more principled) level than novices; novices tend to represent a problem at a superficial level** Using physics problems, Chi, Feltovich *et al*. (1981) 'found that experts used principles of mechanics to organize categories, whereas novices built their problem categories around literal objects stated in the problem description'. [More details of this work are given in the section on *sorting* below].

(f) **Experts spend a great deal of time analysing a problem qualitatively** '… at the beginning of a problem-solving episode, experts typically try to "understand" a problem, whereas novices plunge immediately into attempting to apply equations and to solve for an unknown'. This is particularly true with 'ill-defined problems' [akin to Dreyfus and Dreyfus' 'unstructured areas'. In his study of language teaching task design processes, Johnson (2003) shows that the experts spend considerably longer analysing what is required of them than the non-experts, who tend to start designing a task immediately].

(g) **Experts have strong self-monitoring skills** 'Experts seem to be more aware than novices of when they make errors, who they fail to comprehend, and when they need to check their solutions'. Experts have 'superior monitoring skills and self-knowledge'. [Sometimes these strategic skills can partly compensate for less-than-complete domain knowledge. In his study of mathematical problem-solving, Schoenfeld (1985) describes one individual who although not possessing exceptional mathematical knowledge, was nevertheless able to succeed at problem-solving because of strong monitoring skills. Of him Schoenfeld says 'a monitor-assessor-

manager was always close at hand during the solution attempt. Rarely did more than a minute pass without there being some clear indication that the entire solution process was being watched and controlled, both at local and global levels.' (p. 310)].

Studying expertise: the research methodology

In another overview of expertise research, Ericsson and Smith (1991) utilise a framework which includes two stages. These are *capturing superior performance* which relates to the selection of subjects and tasks for the study of expertise, and *analysis of expert performance*, dealing with how data are collected and analysed. These will form the organisational basis for the following discussion, which is intended to capture important aspects of expertise research methodology rather than provide a comprehensive survey.

Capturing superior performance

The identification of experts

Many studies use 'external' or 'social' criteria to identify experts. Thus an expert is someone generally recognised within society as surpassing in a particular sphere. Such criteria are likely to place importance on length of experience. So a diagnostician who has spent 20 years at her work might be regarded as an expert. That this is a common criterion used is suggested by the novice/expert dichotomy – *novice* is clearly a term suggesting 'newness' and 'lack of experience', and the opposite meanings therefore become associated with the term *expert*. But it is of course the case that length of experience and expertise are different concepts, and Woods (1996) reminds us of the adage that one teacher may have had ten years of experience, while another may have had one year's experience ten times. Bereiter and Scardamalia (1993) are therefore led to distinguish between an *expert* and an *experienced non-expert*, a distinction which is lost if one characterises experts just in terms of length of experience. They point out that training programmes need to produce *experts*. If all these programmes provide is amount of practice in the relevant skill, we are likely to produce *experienced non-experts* rather than *experts*.

It seems unlikely that studies of expertise will be able to do entirely without reference to external or social criteria. Indeed Scardamalia and Bereiter (1991) themselves, in their study of writing expertise, talk about 'professional writers' and well-known journalists. But, it is argued in Ericsson and Smith (1991a), we should support such criteria with per-

formance-related measures. We need to ensure that the so-called experts do in fact perform well – producing the best next-moves in chess, the most accurate medical diagnoses, solving mathematical problems in the most elegant ways. In Johnson's (2003) work on language teaching task design, experts are initially identified in terms of length of experience; but an additional performance-related measure is also introduced as actual tasks produced by the so-called experts are subjected to the evaluation of a group of teachers.

Selecting a suitable task to capture expertise

A major problem for many expertise studies is to find an experimental situation which both provides a realistic analogue to the real life situation, and at the same time can be undertaken in an experimental environment such that relevant variables can be controlled.

The chess domain provides an example of the problems involved, and De Groot (1978, pp. 14–27) discusses the relevant issues in detail. A chess game is a single unit, and hence to study one small part of a game is to some extent unsatisfactory. But, as De Groot notes 'this unit is too large for an experimental psychological investigation, as the average duration of a serious competitive game is about four hours' (p. 14). He therefore utilises the *choice-of-move* problem, presenting subjects with positions from actual games, and asking them to make the 'best next move', thinking aloud as they do so.

A further example is provided by Ericsson and Polson (1988) who study the memory of a waiter who is able to remember complete dinner orders from over 20 people without noting them down. In order to undertake the study in controlled conditions an experimental analogue of the restaurant situation is created, using pictures of people cut out from a newspaper to represent guests at a restaurant. When the subject asks each 'person' for an order this is given by an experimenter, computer generated from a predetermined list of dishes. Once all the orders have been placed, the subject is asked to recall them. An important characteristic of this laboratory analogue is that the subject himself is asked to help set it up, and to comment on its similarity to the natural situation. He in fact comments that the experimental task is more difficult than in the real situation, one reason being that in the latter case there is a richer environment which aids memory. Another reason is that in the laboratory orders are given faster than they would be in a real restaurant.

Bereiter and Scardamalia (1993) identify a common problem with experimental tasks likely to occur in novice/expert comparisons. These

comparisons characteristically involve experts and novices undertaking the same task, thus allowing comparative statements to be made. The task must be 'simple' enough for the novices to tackle and the unfortunate consequence is that it is likely to be well within the capacities of the experts, not taxing them to the full. But if the task is easy for one group and challenging to the other, comparisons arising out of it are unsafe. The answer is to find experimental situations capable of taxing both experts and novices. Bereiter and Scardamalia own solution relates to their own field of study – writing. They argue that asking subjects to write an essay (on a topic capable of either complex or simple treatment) is sufficiently open-ended a task to tax both novices and experts alike.

Some major research paradigms used in expertise research

Novice/expert vs. expert-only

A number of writers (including Bereiter and Scardamalia, 1993) point out that novice/expert studies have done much to reveal characteristics of experts, and have hence played an important part in the study of expertise. They provide the 'best-known method of assessing differences in the mediating processes as functions of the subjects' levels of expertise' Ericsson and Smith (1991). Expert/novice comparisons do however have their difficulties and limitations. The problem of finding suitable tasks to challenge both experts and novices has been discussed above, together with the unfortunate terminological mismatch ('novice' being a term referring to amount of experience, but 'expert' referring to more than this). A further restriction is that they offer no detailed insights into how expertise is developed over time. In addition, such studies typically involve a number of subjects doing a restricted number of experimental tasks. The result is that one is unable to identify (in Ericsson and Smith's 1991 phrase) 'stable characteristics of individual subjects'. To identify these, and/or to consider development, one solution is to concentrate on experts alone. Ericsson and Smith (1991) list a few studies that do this. Several are involved with the skill of 'calendar calculation', the ability to name the day of the week on which a given date falls. An example of such a study is Howe and Smith (1988).

Cross-sectional vs. longitudinal studies

One common research paradigm, suitable for both novice/expert comparisons and expert-only studies, is to study a significant number of subjects at a given point in time (cross-sectionally, that is). The literature abounds with examples. In their studies on medical diagnosis, a standard

experimental procedure of Patel and Groen (1991) is to present subjects with a written description of a clinical case. Once the description has been read, it is removed and subjects are asked to write down as much of the text as they can remember, to describe the underlying pathophysiology of the case, and to provide a diagnosis.

The advantages and disadvantages of cross-sectional research are well discussed in the social science research literature. A major plus is that they allow for the rapid and extensive collection of data. But they generally provide little information about development (of expertise) over time. Longitudinal studies can provide developmental information, but the collection of data tends to be neither rapid nor extensive (over a large number of subjects). Indeed, longitudinal data can be extremely time-consuming to undertake, and this accounts for the comparative rarity of longitudinal studies in the literature.

Case studies

A research method which often does involve data collection over a lengthy period of time is the case study, in which a small number of subjects are observed and analysed in detail. Case studies are commonly used not just in expertise research, but throughout the social science and educational fields. Yin (1994) provides detailed discussion of this technique, which is also described in most standard textbooks of educational research methods. Cohen, Manion *et al*. (2000), for example, identify some of the advantages and disadvantages of the case-study approach. Among the former is that case studies provide rich and vivid, subtle and complex accounts, quite superior in these respects to other cross-sectional, quantitative approaches (based on questionnaires for example). In addition, they also do justice to the 'embeddedness' of social truths, regarding (e.g. teacher) actions within a highly contextualised frame. This characteristic is particularly attractive to those who have tired of the uncontextualised generalisations that often emerged from large-scale quantitative research studies. As Shulman (1996), cited by Freebody (2003) puts it in relation to the educational domain: 'too much of teacher education is unbearably generic, offering vague and general principles and maxims that purport to apply broadly to a vast range of situations'. A further advantage is that the researcher is generally highly integrated within the research, which in addition can provide an archive rich enough to allow for possible reinterpretation.

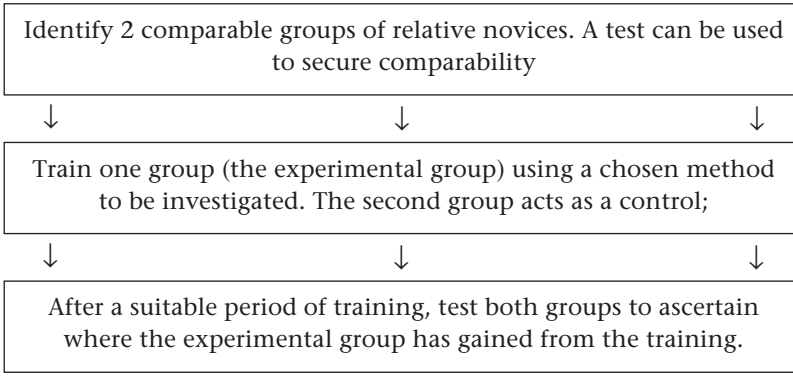
Among the disadvantages, Cohen, Manion *et al*. (2000) note (following Nisbet and Watt, 1984) that case study data are often not open to cross-

checking, and are prone to observer bias. A major issue, discussed at length in the social science literature, relates to the generalisability of case-study data; see Brumfit (2001) and Johnson (2002) for discussion in relation to applied language studies, and for wider associations with modernist and postmodernist traditions. As noted above, some find the lack of crude generalisability refreshing, while others express frustration at the reluctance to generalise which case studies often entail.

Tsui (2003) provides an example of an expertise study in the educational domain using case studies. Her subjects are four ESL teachers working at the same school, and the data collection techniques she uses include lesson observation, interviews, looking at curriculum materials, students work. She justifies the use of case studies by pointing out that 'the relationship between the knowledge that [teachers] develop and the context in which they work is dialectical. That is to say, teachers' knowledge must be understood in terms of the way they respond to their contexts of work, and this in turn shapes the contexts in which their knowledge is developed' Tsui (2003, p. 2). Her study also provides an interesting example of how research may have both a cross-sectional and a longitudinal dimension. The case studies she describes look at four teachers representing different levels of expertise, and were undertaken at the same time. The research therefore has a cross-sectional element. But the case studies were long, lasting a year and a half, so may be regarded as longitudinal. Since the teachers are at different levels, the case studies taken together provide a broad picture of emerging expertise.

The instructional paradigm

A major issue arising out of expertise studies is whether and how expertise can be taught. The common research paradigm to investigate this is:



Schoenfeld (1985) provides an example of this paradigm. He is concerned with methods for helping subjects to learn how to solve mathematical problems by giving specific training. In one experiment, the control group spends its time in practice at solving problems while the experimental group follows a training programme. According to Schoenfeld (1985) 'comparisons of pretest-to-posttest gains … indicated that the experimental group significantly out-performed the control group'.

The question of expertise training brings up a number of complex issues, some of which are considered in McDonough's contribution to this volume. Although many writers identify the possibility of training expertise as a major motive for studying its nature, many also admit, like Schoenfeld, that much more work needs to be done to ascertain whether and how expertise can be 'taught'.

The analysis of expert performance

Cooke (1994) provides an overview of 'knowledge elicitation techniques', methods used across a large number of domains to describe and document knowledge possessed by those involved in relevant skills. Two of the major categories her taxonomy identifies are *process tracing*, concerned with the identification of processes followed in a behaviour, and *conceptual techniques*, which attempt to identify a subject's cognitions. These categories relate well to two central aims of expertise research – to find out what experts (and novices) *do* when they undertake a skilled activity, and what they *think* about aspects of the domain in which they act. Some of the more important techniques used in expertise studies in relation to Cooke's two categories are discussed below.

Introspection and verbal reports

Introspection, where subjects reflect on their own thoughts and mental processes, is a technique commonly used in expertise studies within many domains. An early use was by Duncker (1945) for the study of general problem-solving, a domain in which the technique is also employed by Newell and Simon (1972). De Groot uses it for chess, Voss, Green *et al*. (1983) for exploring expert/novice differences in solving political science problems, and Schoenfeld (1985) for studying how people solve mathematical problems. A landmark contribution to the field is Ericsson and Simon (1984) on the topic of protocol analysis, the term protocol being used to describe the transcription of a think-aloud session.

Green (1998) identifies some parameters for the classification of verbal reports. One is 'temporal variation'. In *concurrent verbalisation* the subject talks while actually undertaking the process being examined; in *retrospective verbalisation* the talking occurs afterwards. Another parameter is 'procedural variation', the choice being between *mediated* and *non mediated*. In *mediated* reports the experimenter signals what is to be talked about. Hayes and Flower (1983) use the term 'directed reports' for this. In *non mediated* reports, no direction is given.

The major value of introspective verbal reports is to reveal processes that are normally hidden; they have the potential to make the covert overt. Smagorinsky (1989), in his useful discussion of the technique, concludes that verbal reports can 'yield significant information' about mental process. But there are many critics. Some argue that wherever possible, research should be undertaken in 'natural' conditions. Irmscher (1987) is interested in writing processes and comments that 'in studying the act of writing, investigators should … disrupt as little as possible the natural setting of writing with cameras, tapes, and talk-aloud protocols'. The essential objection is that talking aloud while undertaking a mental process is 'unnatural' and changes the nature of the processes being observed. Those supporting 'unnatural' data collection counterargue that the processes are essentially the same as in natural collection. Smagorinsky (1989) surveys studies using think-alouds and concludes: 'the cumulative results of these studies suggest that the internal structure of thought processes is not disturbed when subjects utter … verbalisation'. He compares artificially and naturally collected data for two sorts of writing – under exam conditions and in normal situations. Smagorinsky argues that while exam writing is particularly 'intense', it is nevertheless comparable as a process to normal writing. Ericsson and Simon (1980) agree: 'verbal reports … are a valuable and *thoroughly reliable* source of information about cognitive processes'.

In some research situations it is possible to meet the objection of 'unnaturalness' by finding ways of making verbalisation less artificial. 'Pair thinking aloud' is one possibility. Haastrup (1987) uses this method because she feels it will lead subjects to provide more complete and coherent explanations. Schoenfeld (1985) considers the use of pair thinking aloud, but notes two disadvantages: (a) a partner's intervention may distort what a subject does, forcing the use of unnatural procedures, and (b) when people work together, interpersonal factors (Haastrup's 1987 term is 'socio-psychological variables') creep in. The resulting protocols might provide fascinating data on interpersonal

relations, establishing power relations, taking or relinquishing control and the like; but perhaps they will provide less information on the mental procedures followed in relation to the skill being studied.

Another major objection to think-alouds is that not everyone can do them well. Gilhooly (1986) finds large variations in ability to think aloud, the result being that some individuals who may otherwise be ideal subjects produce unrevealing protocols. In his study of language teaching task designers, Johnson (2003) uses the following quotations to exemplify great personal differences in attitude towards concurrent verbalisation. While one designer says: *I find [thinking aloud] very easy, I do a lot of talking to myself*, another comments: *I do tend to find that talking loud interferes with my thinking, I prefer to think quietly*. There are certainly subjects who dislike the technique. Berkenkotter (1983) studied an established writer, Donald Murray, who was asked to verbalise concurrently. He hated it: 'I have rarely felt so completely trapped and inadequate. To find equivalent feelings from my past I would have to go back to combat [i.e. fighting as a soldier] or to public school'.

For many subjects the problems of thinking aloud occur because they are being asked to do it at the same time as undertaking some other activity. These problems are avoided in retrospective introspection – thinking aloud 'after the event'. Sometimes the nature of the skill being studied makes retrospective rather than concurrent introspection a necessity. In studying teacher classroom behaviour, for example, it is impossible for subjects to provide a commentary on their actions while actually teaching a class. An answer is to use the technique known as 'stimulated recall'. A video tape of a lesson is played back to the teacher who pauses the tape to make comments on specific actions and thoughts which occurred during the lesson. Woods (1996) uses this technique in his study of language teacher cognition; it is described in detail by Shavelson and Stern (1981), and specifically in relation to SLA by Gass and Mackey (2000). Even though recall is here 'stimulated' by means of a video, it is likely that subjects will be unable to remember all their thought processes accurately. It is interesting to note in this respect that De Groot (1978), who provides a detailed discussion of the pros and cons of verbalisation, considered in his best next move methodology the use of retrospection, and also of stopping subjects every few minutes and asking for their thoughts. But these are soon dismissed in favour of concurrent verbalisation, presumably to ensure that somewhat 'fleeting' thought processes are captured.

The use of all introspective techniques, concurrent and retrospective, is fraught with difficulties. Those who advocate their use can only point out that, despite all the problems, they are often the only real means of revealing processes otherwise inaccessible.

Narratives

One set of techniques associated (by Cohen *et al*. 2000, for example) with qualitative research involves subjects narrating events, personal experiences, life histories. The use of narratives is becoming popular in educational research, particularly into teacher cognitions. Mattingly (1991) identifies various advantages of narratives, particularly that they force subjects to be specific about otherwise tacit elements. They also make it easier for subjects to talk about actions in a way that avoids theorising. Other discussions of the technique are found in Agar (1980), Connelly and Cladinin (1990), and McCracken (1988).

In one expertise study, Olshtain and Kupferberg (1998), an attempt is made to relate teachers' professional knowledge to discourse features used when they narrate. The authors report two studies – the first the case-study of an expert, the second a comparison of three teacher groups with differing degrees of experience. One of a number of research techniques used is to ask subjects to provide a narration on a given theme. Example themes are: *Tell a story which shows how you treat your students* and *Focus on an episode which happened in your class, and explain how it influenced you*.

Sorting

Another common technique used to explore expert (sometimes versus novice) characteristics is card sorting. In this technique subjects are asked to sort concepts, or examples of a particular entity, into piles based on relatedness. Sometimes subjects are also asked to label each pile. There are various versions of this basic technique. In one, 'spatial arrangement sorting', piles and items within piles are placed closer together or farther apart according to the subject's perception of their relatedness. Chi, Feltovich *et al*. (1981) used the method in relation to physics problems, where they found that experts used principles of mechanics to organise categories, while novices sort according to the types of objects mentioned in the problem description. Chi *et al*. also cite the use of sorting in Weiser and Shertz (1983) in relation to computer programming. Experts and novices were given problems on cards and ask to sort them into piles. The experts sorted according to the types of solutions involved, while novices sorted according to

applications. Similar conclusions were reached by Schoenfeld (1985) who asked subjects to sort mathematical problems into groups. Findings like these form the basis of Chi *et al.*'s conclusion (mentioned earlier in this paper), that *experts see and represent a problem in their domain at a deeper (more principled) level than novices; novices tend to represent a problem at a superficial level*. Schoenfeld (1985) contains a useful discussion of the use of card sorting in expertise studies.

Conclusion

This chapter has attempted to provide a brief review of some of the more salient work on 'general' expertise, and some of the techniques used in 'general' expertise research. A number of the chapters which follow clearly indicate that certain areas of applied linguistics have already taken the expertise literature on board. Others acknowledge that in the fields they are dealing with this literature has yet to make its impact; but where this is the case, the situation is usually lamented, and it is recognised that much benefit would accrue from applying an 'expertise approach'. Indeed, even in those applied linguistic areas where the literature has already exerted an influence there remains, one might argue, much room for the insights of expertise studies to be applied in future work dealing with second language learning and teaching.

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Part II

Expertise in Language Learning and Use

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2

The Expert Language Learner: a Review of Good Language Learner Studies and Learner Strategies

Joan Rubin

Introduction

This chapter presents a current model of the learning processes of successful language learners. It incorporates the major theoretical categories described in over more than thirty year of research.[1] After describing the model, we trace the history of the definition of the Good or Expert Language Learner (GLL), much of which involves defining the learning strategies he/she uses. Following this, we discuss the research methodology used to define the GLL and to isolate learning strategies, and finally, outline some current issues that need to be researched to extend our understanding of the model of the GLL.

Model of the expert learner

The model of the expert language learner presented here, called Learner Self-Management (LSM), is an interactive one in which there is continual interaction between the learner's control mechanism (here termed procedures, but often called metacognitive strategies) and the learner's knowledge and beliefs.

LSM[2] refers to the ability to deploy *procedures* and to access *knowledge and beliefs* in order to accomplish learning goals in a dynamically changing environment (Butler, 1997).

Procedures

Within LSM, there are five procedures: planning, monitoring, evaluating, problem-identification/solving, and implementing.[3]

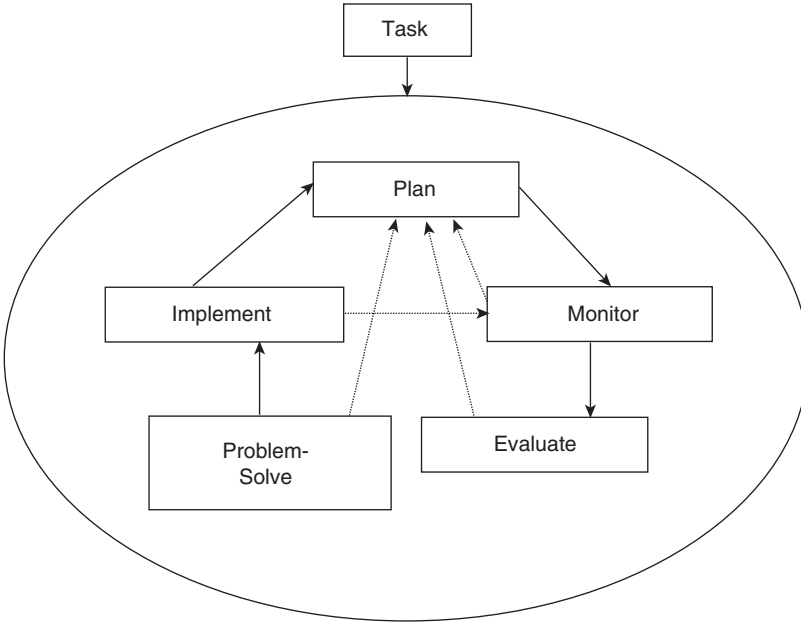

Figure 2.1 Procedures for self management.

Planning

In *planning*, there are four steps: defining/selecting goals; setting criteria to measure goal achievement; task analysis; and setting a time line. *Goal setting* consists of learners determining what they want to accomplish within a stated time period. There can be both long-term and short-term goals.[4] Expert learners are able to set *realistic* goals for themselves within a realistic time frame. For example, if a learner is a beginner and has only six weeks to study a language, the expert learner will not set a goal of speaking like a native. As well, if expert learners recognise that they do not have sufficient knowledge of a subject or the language, they may set their goals a little lower. Expert learners can adjust their goals to match the time available, their knowledge (of the language, the subject matter) and their perception of what they need to focus on next.

In *setting criteria* to assess goal achievement, expert learners establish measures to recognise accomplishment of their goals. Learners may ask

themselves questions, such as: How will I know that I have accomplished my goal? What concrete behaviours can I use to measure my accomplishment? These criteria are used to evaluate their progress. Expert learners are skilled at setting observable useful criteria.

Task analysis[5] according to Wenden (1995) includes a number of components: task purpose, task classification, and task demands. These three components enable the expert to establish an action plan to begin working on a task. While the goal is a subset of the task and defines in specific terms what the learner hopes to learn, the task purpose defines *why* the learner is doing the task. Both the goal and the task purpose help define the task classification, and task classification provides direct input into task demands.

In order to value a task, learners identify why they are performing a task, i.e. the *task purpose*. The purpose is often pedagogical (for example, to get a good grade or to practise using specific forms) or it can be related to some real life objectives (such as filling in a job application, making a doctor's appointment, or having enough language to make friends).

In *task classification*, the learner identifies the nature of the task in order to know how to proceed and to help determine what the demands of the task may be. In classifying a task the expert learner bears the goal and the purpose in mind while considering which characteristics of the task will require attention. Imagine the following scenario: the task is to watch a programme on T.V., the goal is to listen to an interview, and the task purpose is to talk to friends about the person being interviewed. If this is the case, the expert learner may consider several characteristics including: *the nature of listening*: that there are no word boundaries, that intonation plays an important role in defining information: *the genre of an interview*: that it consists of questions and answers, that there are few visuals to interpret the talk, and that it can contain opinions and narrative; and *the nature of speaking* (when the learner discusses the interview with friends): that his/her grammar must be intelligible, that his/her vocabulary should be appropriate for the topic and for casual conversation; and that he/she selects all the appropriate facts to support a narrative or persuasive discourse.

In *task demands*, learners consider what they need to do to accomplish a task based on the task characteristics. Learners may consider: the knowledge and skills needed to complete the task, any background knowledge they might need to accomplish the task and whether they have that knowledge, strategies that might be effective to perform the task and whether they need to find or create new ones, the level of task

difficulty. Once learners know how difficult the task is they consider how long the task might take to accomplish and how much research they need to do. Finally, learners consider how they will break up the task and in what order they should do the task. By considering task demands based on purpose and classification, expert learners prepare themselves to be successful by a thorough analysis of the task. In this way, they allocate their knowledge and resources in a more effective way and are then able to put together an appropriate and flexible plan.

Expert learners always establish a realistic *time line* within which they expect to accomplish their goals. The time line serves to help the learner assess and reassess their understanding of the task demands and assess how realistic their goals were. Along with criteria, it is another evaluation measure.

Monitoring

In monitoring, learners notice any problems they might have. These might include: lack of attention focus, emotional malaise, problems in understanding or expression, or ineffective application of one or more cognitive or socio-affective strategies. Expert learners are continually monitoring their production and understanding to note the source of problems and the extent of their progress.

Evaluation

In evaluation, learners determine whether they have made appropriate progress. They do this by applying the criteria established (during planning) to determine whether they have met some or all of their goals. Learners then consider whether they are satisfied with their performance or need to problem-solve to attain their goals.

Problem-identification and problem-solution

Once expert learners have determined that they haven't met their goals, they begin to consider what else they could do to reach them. Expert learners will identify some possible causes for their lack of success. These could include identifying: use of an inappropriate set of strategies; insufficient knowledge about the language, the topic, the culture; lack of attention focus; unrealistic goals for the time period allocated; or insufficient task analysis. After determining what the problem might be, expert learners consider some possible solutions including: using/creating a more effective set of strategies; acquiring the necessary knowledge; finding ways to improve their attention focus; reformulating their goals or the time period; or improving their

task analysis. According to Ertmer (1996) (cited in: http://coe.sdsu.edu/eet/Articles/metacognition/start), expert learners are 'more aware than novices of the need to check for errors when they fail to comprehend and how they need to redirect their efforts.'

Implementation of problem-solution

Expert learners try out their solutions by *implementing* them to determine if they will yield a better outcome. This may cause them to redo several procedures: monitor, evaluate, change their planning (i.e. criteria, time line, goals, task analysis) in order to accomplish the task.

Knowledge and beliefs

Knowledge and beliefs consists of five components[6]: task knowledge, self knowledge, beliefs, background knowledge, and strategy knowledge.

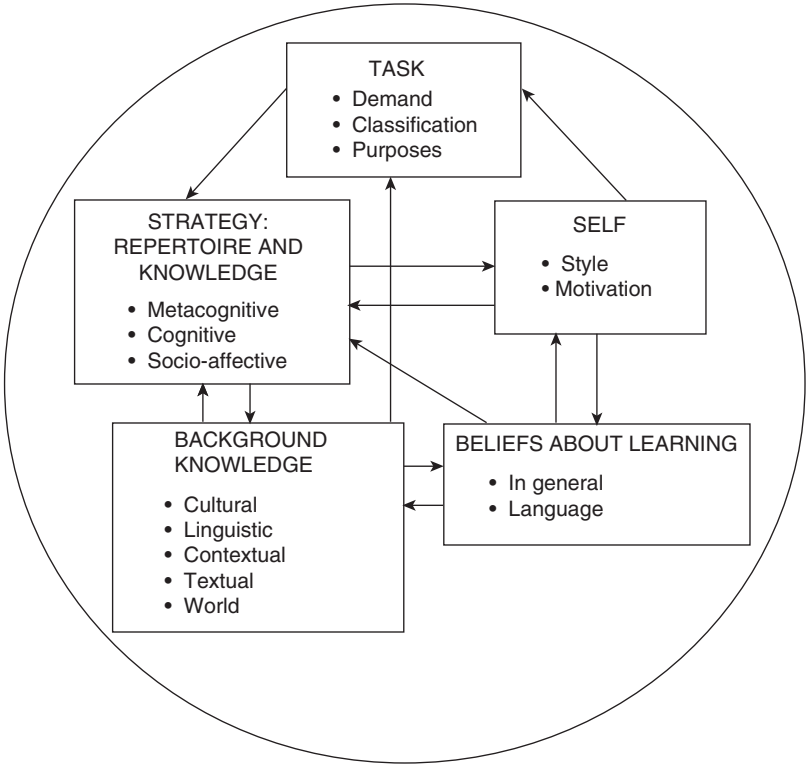

Figure 2.2 Knowledge and beliefs.

Task knowledge

Task knowledge is very important because learners need to have sufficient comprehension of what is needed to achieve results (cf. study by Victori, 1996). According to Wenden (1991) and Wenden (1995), expert learners draw on three kinds of knowledge: (1) knowledge about possible task purposes, (2) knowledge about possible task classifications, and (3) knowledge about task demands. Having a set of task knowledge to refer to enables the expert learner to be more proficient at the procedure of task analysis. Chamot (2001), found that 'good language learners demonstrated adeptness at matching strategies to the task they were working on, while the less successful language learners seemed to lack the **metacognitive knowledge about task requirements** needed to select appropriate strategies[7]' (p. 32).

Task purposes. When expert learners look over a task, they refer to their knowledge of possible pedagogical or real life goals. For instance, given a task, the learner can immediately relate it either to their own particular linguistic need(s) or to language areas that need improvement or relate it to some possible real-life communication plans.

Task classification. When expert learners look over a task, they compare this to some classes of tasks they already know about. For example, GLLs might know that it is useful to classify a task by whether it is analytic, synthetic, descriptive, or comparative. In language learning, a GLL may think about whether the task is productive or receptive. Further, they know something about what this kind of classification implies for learning. Nation (2001, p. 27), shows us how complicated just the task of 'learning a word' can be. He provides a variety of productive and receptive tasks around form, meaning, and use of a word. Having knowledge about the kinds of classifications permits the learner to be more effective in doing task analysis. Another kind of task classification knowledge may relate directly to the nature of language. Rubin and Thompson (1994), describe three characteristics: creativity, systematicity, and similarity. Expert learners use their knowledge of these characteristics to select appropriate strategies. Expert learners may also use their knowledge of how language learning may differ from learning other subjects to be more effective in task analysis.

Task demands. According to Wenden (1991), expert learners have a sense of what is entailed in completing a task. Here the learner draws on resources, knowledge, and strategies in order to complete the task. Learners recognise which of these three elements they have and which they need to acquire more of. Task demands include having criteria to

judge the difficulty of a task and knowledge of some ways to organise and order a task and break it up most effectively.

Self-knowledge

This has increasingly been recognised as important for the expert learner. Self-knowledge includes: knowledge of one's own learning styles and multiple intelligences; and motivation. Knowledge of learning styles enable expert learners to use their style strengths when possible and to compensate when unable to do so.

Motivation has been recognised as playing a critical role in self-directed learners (Costa, L. and B. Kallick, 2004). Motivation, according to Pintrich (1989), includes three components: (1) expectancy component (self-efficacy) – judgement about and confidence in one's ability to perform a task, (2) a value component – beliefs about the importance and value of a task and (3) an affective component – feelings about themselves and emotional reactions to the task. Expert learners choose to engage in a task based on how important a task is to them. Expert learners recognise when they may lack the knowledge to accomplish a task and will do what is necessary to gain the knowledge and skill to do so. According to Victori (1996), self knowledge is important because it can affect a person's ability to learn. Those learners who experience frequent failure can develop negative feelings and may approach their learning passively. Halbach, n.d., alludes to the important role of effective procedures in enhancing motivation.

Beliefs

More and more, beliefs are being recognised as an important component in the expert learner.[8] There are two major types of beliefs held by expert learners: general beliefs about learning and more specific beliefs about language learning. A student's beliefs about the learning process can be significant because they may promote or seriously inhibit the learner's desire to acquire new knowledge or enhance their skills.

For example, learners who believe that the responsibility for learning lies with the teacher may be quite passive and unable to assume control of their own learning. Beliefs about the nature of language learning can be critical as well. Examples include: beliefs that making mistakes is harmful in language learning or that boys are not very good at learning a foreign language. Beliefs of this kind can inhibit learning.

Background knowledge

Expert learners use their background knowledge effectively while employing procedures. When planning, they draw on this knowledge to define their goals and their strategies; monitor and evaluate their progress; and especially to do effective problem-solving. There are several kinds of background knowledge including: domain, cultural, linguistic, contextual, textual, and world.[9] Pressley (1994, p. 268), suggests that 'Many strategies cannot operate (or at least do not do so very effectively) unless the thinker has extensive non-strategy knowledge.' For example, in order to guess effectively, make valid inferences, or elaborate, learners must use their background knowledge. The more background knowledge learners have, the greater their chance of making good guesses.[10]

Strategy knowledge

Expert learners have stored information about three major types of strategies: cognitive, socio-affective, and metacognitive/procedures. Currently, the definition of a cognitive strategy varies considerably. Two fairly common ones are: 'the techniques or procedures that facilitate a learning task' (Chamot, 2001, p. 25) or 'the steps or operations that are used in learning or problem-solving that require direct analysis, transformation, or synthesis of learning materials' (Rubin, 1987, p. 23). Socio-affective strategies are those which help the learner control their emotions (i.e. affective) and those that enable the learner to engage in social activities that then engage the learner in communication (socio). Metacognitive strategies/procedures are those described above. While both expert and novice learners may use the same cognitive and socio-affective strategies; research consistently shows that difference in success depends on effective procedures (Chamot, 2001, p. 32). In addition, expert learners use strategies alone and in combination in an effective and appropriate manner. Chamot and Rubin (1994, p. 773), note that 'strategies are most useful when used effectively together so that success depends not on the use of an individual one but on the effective *management* of a repertoire of strategies.' (italics: author)

Interactive characteristic of LSM

The LSM model is characterised by a regular interaction within the procedures, within the learner's knowledge and beliefs,[11] and between procedures and knowledge and beliefs. Figure 2.3 'Self-management process' represents this multi-interactive relationship.

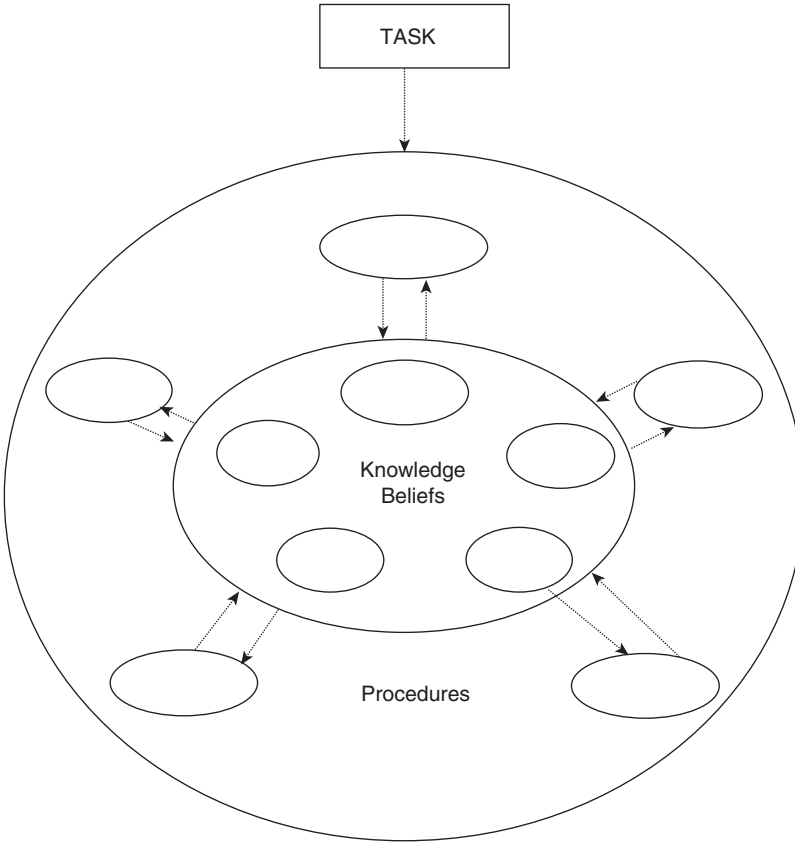

Figure 2.3 Self-management process.

The outer circle refers to procedures and the inner circle refers to knowledge and beliefs. When expert learners begin to work, they use procedures and base their choices on multiple aspects of their knowledge and beliefs. Following is an illustration of this interaction:

A student is learning to make a doctor's appointment by telephone. He/she may access feelings about using the phone (self-knowledge) and may decide to give him/herself a pep talk (using affective strategy knowledge). The student may then decide how to accomplish the task (planning, a procedure) by considering what he/she knows about telephone calls – that they usually consist of two persons, that there is often a question and answer sequence (task

classification, a procedure, using background knowledge). The student may then consider other prior knowledge such as what questions are normally asked in this kind of interaction and what the responses might be (task demands using background knowledge). The learner may then try to make the doctor's appointment. While so doing the learner may falter and note that he/she is unable to continue (monitoring, a procedure). The student may decide more information is needed (problem-solution, a procedure). The learner may then ask his/her teacher what are the kinds of questions that are asked when making a doctor's appointment (implementation, a procedure using resourcing, which he/she has stored as cognitive strategy knowledge).

This example shows that when learners manage their own learning as they work through procedures, they may trigger access and utilisation of their knowledge. As they do so, their knowledge may change. In the same way, knowledge can trigger changes in procedures. Hence, LSM involves a constant interaction within and between procedures and knowledge.

Characteristics of expert learners

Given the LSM model, it is helpful to describe some of the characteristics of Expert learners.

Well developed procedures

Expert self-managed learners can assess the requirements of the task at hand, can identify and deploy appropriate learning strategies, can make appropriate attributions for success and failure and readily accept responsibility for their own learning (Strage, 1998). Expert learners are able to monitor their own progress, to shift strategies upon encountering problems, and move on as sub-goals are attained.

Depth of knowledge and facilitating beliefs

Expert learners possess appropriate, productive beliefs about themselves as learners and about the learning process, a well-developed repertoire of cognitive and socio-affective strategies, adequate knowledge about the nature of tasks, and sufficient background knowledge. An example of a productive belief is a strong sense of self-efficacy, that is, confidence in one's ability to succeed and the recognition that success often comes after some frustration (Brown and Pressley, 1994). According to Donovan, Bransford, and Pelligrino (2000) 'Experts have acquired extensive knowledge that affects what they notice and

how they organize, represent, and interpret information in their environment.'

Productive interaction between procedures and knowledge

Expert learners are able to access their knowledge and beliefs in order to orchestrate their use of procedures. Further, while carrying out procedures, they may add to or modify their knowledge.

Flexible

Self-managed learners are distinguished by their awareness of and ability to use their knowledge, beliefs, motivation, and cognitive processing in a flexible manner (Butler and Winne, 1995; Pressley, Borkowski, and Schneider, 1987). Stern (1975), noted that GLLs used a methodical but flexible approach, developing the new language into an ordered system and constantly revising this system.

Adaptive

Expert learners are also adaptive, that is, they are able to cope with a range of tasks and with a range or problems. When expert learners encounter a lack of success, they are able to effectively identify problems and come up with alternative solutions that they try out. Uhrig (2004) reports on two highly successful foreign students who were able to adapt their learning strategies to the task.[12]

Contextualised

The knowledge that expert learners bring to bear on a task is highly contextualised, rather than an isolated set of strategies, beliefs, or other knowledge. According to Donovan, Bransford, and Pelligrino (2000), their knowledge represents 'contexts of applicability' in which the learner knows when and how to use their knowledge.

History of the definition of good language/expert learners

A review of the development of the current model shows that the earliest descriptions of the Good Language Learner (GLL) foreshadowed much of what later research teased apart to develop the current model. Early descriptions of the GLL focused largely on the *knowledge* side of the model, particularly on cognitive and socio-affective strategies as well as on background knowledge. Following this, researchers refined and detailed a host of cognitive and socio-affective strategies as well as documenting different kinds of background knowledge. Shortly after, the

focus was on understanding the role of procedures (called metacognitive strategies at that time) and their interaction. Finally, the role of knowledge was given more attention as aspects of task, self, and belief knowledge were elaborated.

Recognition of the concept of 'the good language learner'

In the early 1970s, several researchers (Rubin, 1975; Stern, 1975 and Naiman, Frohlich and Stern, 1975) isolated and defined the concept of the Good Language Learner (GLL). Soon thereafter, Wesche (1975); Wong-Fillmore (1976); Tarone (1977 and 1981) and Hosenfeld (1977 and 1978) added to our understanding of the cognitive processes of GLLs. Although these citations mostly provided details on the knowledge side of the current model, there is incipient reference to procedures or metacognitive strategies. Comparing the strategies listed by these scholars to the LSM model, we can make the following observations.

Knowledge

Cognitive strategies

Following the LSM model, here is what our analysis found. Several cognitive strategies are described. Research on cognitive strategies dates back to 1966 when Aaron Carton recognised that learners vary in their propensity to make valid, rational, and reasonable inferences. Building on Carton and focusing on the GLL, Rubin listed the following cognitive strategies: guessing, use of cognates, practising, analysing, categorising, synthesising. Cohen and Aphek (1980 and 1981), identified 11 categories of association used for memorisation. Rubin (1981) identified the following cognitive strategies: clarification/verification, guessing/inductive inferencing, deductive reasoning, practice, and memorisation.

In addition, there is early recognition of the importance of the development of a *strategy* repertoire in GLLs. Rubin (1975), notes that in order to be efficient the GLL is able to stratify their strategies for maximum efficiency. Wesche (1979) foreshadows an aspect of strategy repertoire we are just beginning to investigate, namely, 'it may be complexes of them (i.e. behaviours) rather than specific ones which characterise different kinds of learners' (p. 419). Wesche (1979), also observed that there was a greater variety and quantity of learning behaviours pursued by those who improved most rapidly.[13]

Social strategies

Also referenced are social strategies: 'seeks out opportunities to use the language by looking for native speakers, going to the movies or to

cultural events' (Rubin, 1975). Wong-Fillmore (1976) found that the most successful young learners were those that used an important social strategy, namely, using a few well chosen formulas which allowed learners to continue to participate in activities which provided contexts for new learning. Wesche (1979, p. 425) reported that voluntary out-of-class exposure to French characterised the highly successful student.

Affective strategies
Naiman *et al*. (1975, p. 54), identified two affective strategies: 'You've got to be able to laugh at your own mistakes' and 'You've got to have a sense of humor.'

Background knowledge
Many examples of the use of background knowledge as the basis for these strategies were listed (for example, use of knowledge of lexicon and grammar, general knowledge of society, of similarities to native language, rules of speaking, knowledge of a second or third language).

Beliefs
Hosenfeld (1978), hints at what is becoming an important area for research, namely, the role of beliefs about language and language learning. She notes that some learners have a 'mini-theory of second language.' Rubin (1975) described some psychological characteristics of the GLL which may relate to his/her beliefs about the nature of language learning: 'comfortable with uncertainty,' 'willing to make mistakes,' 'willing to try out guesses' and 'willing to live with a certain amount of vagueness.'

Self-knowledge
Although not so labeled, Stern (1975) and Naiman *et al*. (1975) identify 'a personal learning style' (p. 20), noting that *self-knowledge* is critical for GLLs. Their first strategy (p. 50) is 'The GLL finds a style of learning appropriate to him by initially conforming to the learning situation or effectively adapting it to his personal needs in the process of language learning he learns to identify personal preferences regarding the way he would like to learn a language and selects learning situations accordingly.'

Rubin (1975), noted that 'He is willing to appear foolish in order to communicate and get his message across.' Presumably, GLLs have a strong sense of self-efficacy that allows them to appear foolish and live with uncertainty, though the term self-efficacy was not used at that time.

Procedures

In addition, there were incipient examples of *procedures*. Rubin (1975) provided an example of *problem-solving*: 'A wrong guess does not disturb him, but is quickly corrected from the subsequent context' showing the ability of the GLL to be flexible. Stern (1975), also noticed the *problem-solving* skill of GLLs saying they have an ability to identify their own unique problems. Naiman *et al*. (1975, p. 51), also cited the *problem-solving* ability of GLL: 'By identifying individual problems connected with language learning and actively dealing with them.' (underlining mine). Hosenfeld (1978), observed GLLs evaluating the appropriateness of the logic of a guess, a form of *problem-identification* and *problem-solution*.

Rubin, *op. cit.* and Stern (1975) both noticed that GLLs are *self-monitoring*. Stern (1975) also alluded to the fact that GLLs have good procedures i.e. they have 'technical know-how about how to tackle a language.' The above-mentioned 'ability to identify their own unique problems' could result in an ability to clearly state their own learning goals.

Rubin (1975) also included *evaluation* though she did not differentiate it from *monitoring*. She noted that the GLL considers 'whether his performance meets the standards he has learned.' At this time, there was no discussion of learners' ability to establish their own criteria to meet their own goals.

At the same time that these pioneering studies of the GLL were being conducted, Holec (1981) focusing on self-directed learning, greatly elaborated many aspects of *procedures*. These included: 'fixing objectives,' 'defining the contents and the progression,' and 'selecting methods and techniques to be used,' all part of what is now called planning. Holec also included monitoring and evaluation as part of the ability of a self-directed learner (p. 9).

Focus on cognitive and socio-affective strategies

Identification of the strategies used by the GLL

Following the initial identification of the GLL and detailing of their knowledge and some of their procedures, other studies provided greater specification of cognitive and socio-affective strategies. Hosenfeld (1977), reporting on the reading strategies of both GLLs and more novice learners, found that GLLs used some form of contextual guessing. Cohen and Aphek (1980) elaborated the many kinds of memory strategies used to learn vocabulary.

Much of the early work of Chamot and O'Malley (see especially O'Malley *et al.*, 1983 and Chamot, 1987) greatly added to the delineation of cognitive and social strategies. Oxford (1986) building on the work of Rubin and Chamot and O'Malley and their colleagues, created a strategy inventory for language learning (SILL) which elaborated many more cognitive and affective strategies.

In her 1987 article, Chamot included *socio-affective* strategies. Oxford (1990) greatly enhanced our understanding of affective strategies, dividing them into three types: ones that allow the learners 'lower their anxiety,' 'encourage themselves,' and 'take their emotional temperature.' Dornyei (2001) elaborated on Oxford's 'encourage yourself' strategy by outlining a number of self-motivating strategies. With the exception of Dornyei's work, this important area, has not received much elaboration since Oxford first isolated it.

Comparison of good versus poor learners

Several studies have especially considered how use of cognitive strategies differ between Good versus Poor Learners. Abraham and Vann (1987) reported on two learners judging their success by how well they passed the TOEFL[14] and 'being able to function adequately in a university environment' (p. 85). One of the major differences between the two learners was their *flexibility* in using strategies and their skill in matching choice of strategy to the demands of the task. In other words, Abraham and Vann reinforce the view that cognitive strategies are in the service of procedures (especially taking into account both goals and task analysis) and not just 'good' or 'bad' on their own. Even more important, the authors note that the GLL clearly understood how to do effective Task Analysis, 'spending a great deal of it (author: i.e. his time) on aspects of the tasks where he thought it was important, but cutting short a lengthy explanation … that he felt to be unnecessary' (p. 95). The Poor LL did not seem to do much Task Analysis as he 'seemed to organize all tasks in the same way' (p. 95).

In their 1990 study, Vann and Abraham, offer further evidence of the importance of Task Analysis in prompting success. This study found that the Poor LLs used inappropriate strategies (for example, using strategies effective for oral communication for carrying out a written task) based on poor Task Analysis.[15]

More recently, in a study of Chinese learners of English, Gan *et al*. (2004, p. 239), also noted 'striking differences in terms of self-management in language learning between the successful and unsuccessful students …'. The authors note that the majority of GLLs

'appeared to be able to determine their own goals, to locate a learning problem and its causes, and then to take corresponding measures to overcome the problem' (p. 240).

Differences by skill type

A number of studies have identified use of cognitive strategies by skill. In studies focusing on *listening*, Vandergrift (1992 and 1997); noted differences in strategy use by proficiency level (1992), and found that use of metacognitive strategies (i.e. procedures) 'appeared to be a significant factor distinguishing the successful from the less successful learner' (1992).[16] Studies investigating learner's listening strategies have been conducted with high school and university students and with several languages including French – Vandergrift (1992 and 1997), Italian – Laviosa (1991), and English – O'Malley (1987).

Studies of strategies specific to *speaking* usually reference communication strategies (see for example Tarone, 1980). Tarone (1981), was the first to provide a list of such strategies: approximation, word coinage, circumlocution, literal translation, language switch, mime, appeal for assistance, and avoidance.[17]

Several researchers working in *reading* (Kern, 1997; Anderson, 1991; Carrell, 1998) have observed that successful second language reading comprehension is 'not simply a matter of knowing what strategy to use, but the reader must also know how to use it successfully and know how to orchestrate its use with other strategies. It is not sufficient to know about strategies, but a reader must be able to apply them strategically' (Anderson, 1991, p. 19, quoted in Carrell, 1998). Further, when working on reading, learners often need to focus on *vocabulary*. Gu (2003a), argues 'that the choice, use, and effectiveness of vocabulary learning strategies depend on the task, the learner, and the learning context' (abstract). Thus far, there has been limited work identifying the cognitive strategies used for reading languages using different script systems[18] (such as Japanese, Russian, Chinese, Arabic or Hebrew). The National Capital Language Resource Center, Washington, D.C. is currently conducting a major study to investigate strategies used to learn less commonly taught languages.[19]

Individual differences

There are a number of studies considering how use of strategies can vary individually (Laviosa, 1991; Gu, 2003b), or by age (Harley, 2000), gender (Oxford and Ehrman, 1988; Oxford and Njikos, 1989; Kaylani, 1996), learning style (Ehrman and Oxford, 1989), general personality

type (Ehrman and Oxford, 1989) or culture (Politzer and McGroarty, 1985; Macaro, 2001).[20]

However, what is striking is that while there is some variation in the cognitive and socio-affective strategies when compared against these variables, there is little or no variation in the use of metacognitive strategies by GLLs. Huang (1984), provided clear evidence that GLLs use *metacognitive* strategies even in cultures which use rote learning as the dominant classroom strategy. This study and that of Gan *et al*. (2004), and others further point toward the possibility that effective use of procedures is universal in GLLs.

Focus on metacognitive strategies

Initially, the strategies of planning, monitoring, and evaluating were called 'metacognitive strategies.' Wenden (1982), Wenden (1986) (working with adults) and O'Malley *et al*. (1982), and Chamot (1987) (working with high school students) provided the first clear contrast between cognitive and metacognitive strategies. These authors noted that metacognitive strategies refer to the control or regulatory process by which learners plan, monitor, and evaluate their learning. At a later date, Chamot *et al*. (1999) added 'problem-solving' to the list of metacognitive strategies. O'Malley *et al*. (1983) provided an extended list of specific planning strategies. Rubin (2001) added a new procedure 'implementation of problem-solution.'

As noted above, there is accumulating evidence of the universality of metacognitive strategies (here called 'procedures') in the work of Carrell (1998); Gan *et al*. (2004); Huang (1984) and Rubin and Henze (1981). As well, there is continuing evidence that what really distinguishes GLLs from poor language learners are well-developed metacognitive strategies (O'Malley *et al*., 1989; Gillette, 1990). Gillette (1990), suggests that 'instead of establishing yet more extensive taxonomies of language learning strategies, SLA researchers should now focus on the way in which ELLs (author: ELL= Excellent Language Learner) deploy these strategies' (p. 192).

Focus on metacognitive knowledge

The clear delineation of metacognitive knowledge was due to the work of Wenden. In her 1986 article, she elaborated many types of knowledge a learner might have. These included: beliefs about language learning, background knowledge (about the target language), and knowledge about their strategies. In this article, Wenden, *op. cit.* drew on the work of Flavell (1979), and began to apply his tripartite scheme

of knowledge: task, strategy, and self to analyse her findings. In a series of papers Wenden (1991, 1995, and 1999) continued to draw attention to the importance of metacognitive knowledge in a learner's management of his/her language learning. Her work has provided an important dichotomy (i.e. Procedures, Knowledge) for the current model. Nonetheless, in Wenden's (2001) review article, she surveys papers that address metacognitive knowledge and notes that it is 'the neglected variable.'

Still, there are some important beginnings. Victori (1996) provided clear evidence of the relationship between self knowledge and task knowledge. Hauck, in press, considers the role of metacognitive knowledge in the use of meta-cognitive strategies.

More recently, greater attention has been given to the role of beliefs about language and language learning and its impact on other kinds of knowledge (Mori, 1997/1999; Wenden, 1999).[21] A great deal more work needs to be done to consider the interactions among the different kinds of knowledge.

With regard to self knowledge, Ehrman (1996) has provided an extensive review and elaboration of the kinds of learning styles that language learners have. She considers the role of style in learning success and discusses the importance of learner ability to develop coping skills while working in other styles.

Another contribution to understanding self-knowledge is the study by Chamot *et al*. (1993). In this study, the authors found that among high school students of five languages there was a high correlation between learners who reported greater strategy use and those who perceived themselves as more confident learners

In summary, we can see that while the early researchers of GLL pointed toward both procedures and knowledge, attention to these areas appears to have developed first, overwhelmingly, and in a continuing focus on cognitive strategies and how they are used in clusters, then with considerable and growing attention on metacognitive strategies, and more recently, on the development of knowledge and beliefs, though only to a limited extent.

Research methodology

Choice of instruments

Two major reviews by Cohen (1987) and Cohen and Scott (1996), have outlined most of the kinds of research instruments used to study the GLL and learner strategies. In their review, Cohen and Scott (1996), point

out that most research methods have their limitations and the only way to minimise these disadvantages is to use a number of them together. Further, they suggest that given the state of the art of the study of the GLL and learner strategies, 'The challenge is for researchers to choose an assessment method that will provide the desired information for the given study' (p. 104).

The list of instruments includes the following: think alouds, questionnaires, observation, diaries and dialogue journals, case studies, learner histories, interviews, and computer tracking. Given that questionnaires have been used so extensively to track the use of strategies, it is well to note that it is widely recognised that in order to understand how expert a learner is requires more than checking off a list and then correlating it with some other outcome. In order to fully characterise the learner's level of expertise, the respondent needs to be given a specific task and then queried on how he/she uses his/her knowledge (including strategies) to perform a task. With regard to diaries and dialogue journals, these appear to be most useful when the learner is given instructions about what to focus on.[22] Case studies have been very successful in detailing ways in which learners vary in their approach to the learning process (see: Abraham and Vann, 1987; Laviosa, 1991 and Uhrig, 2004) and add greatly to our understanding of how procedures and knowledge interact.

Issues in methodology

Definition of terms is a major issue in developing research design about the GLL and strategies. The most basic issue concerns what is the appropriate outcome to use to determine success. Is it: teacher's designation of 'good learners,' 'self-designation,' highest grades, marks on a competency exam, ability to accomplish a task related to their goals, or study of many languages? While the current model provides a characterisation of what constitutes an expert learner and is consistent with research in educational psychology, researchers have not always agreed on the criteria used to select GLLs.

Another definitional issue is determining the appropriate categories that are to be included in procedures and those to be included in cognitive and socio-affective strategies. The literature provides many overlapping lists and new researchers may find this confusing (see for example, the strategies listed by Rubin, 1975; Rubin, 1981 and Rubin and Thompson, 1994; by Chamot, 1991 and 1999; and several versions of the SILL, by Oxford, 1990 as well as other versions in both English and foreign language.)

Future research

Given the current model outlined above, there is a great deal of research needed to clarify the interactions in the model. In particular, future research is needed to delineate how each of the five kinds of knowledge interact with each other, e.g. how task knowledge affects strategic knowledge or how beliefs affect self knowledge, etc.

Further, it would be helpful to have a clearer picture of how both procedures and knowledge change as learners work on tasks. Also, it would be very useful to have a clearer picture of the ways in which procedures are sequenced.

Some other research issues include: detailed information about the cognitive strategies specific to writing especially for less commonly taught languages, detailed information about the cognitive strategies used to learn grammar, and how proficiency level impacts on knowledge.

Summary

Since the first studies of the GLLs, there has been an enormous growth in understanding the cognitive and affective processes that contribute to their expertise. There is now a model in place and greater understanding of how the parts work together.

There is consistent evidence of the universality of procedures but clear evidence that use of cognitive and socio-affective strategies vary in a myriad of way according to language skill, task, and individual traits.

Still, the study of expert language learners has a long way to go. In particular, we need more information about the interactions within and between Procedures and Knowledge. We need to know a great deal more about grammar strategies. It would be helpful to know about how strategies cluster. And how all of this may be affected by the social setting.[23]

Notes

1. Two of the earliest papers on the Good Language Learner are Rubin (1975) and Stern (1975).
2. In the educational psychology literature (Butler, 1997; Pintrich and Garcia, 1992; Pintrich and De Groot, 1990; Pressley, 1995 and Zimmerman and Schunk, 1989) LSM is referred to as 'self-regulation'. In her 1991 volume, Wenden used the term to refer only to metacognitive strategies (here called 'procedures').

3. Within language learning, a tripartite division of metacognitive strategies (planning, monitoring, evaluating) was proposed by O'Malley and Chamot (1990) and Wenden (1991). More recently, Chamot, Barnhardt, El-Dinary, and Robbins (1999), included the strategy of problem-solving. The LSM model has also incorporated the strategy of implementation from the four way division (noting, evaluating, adjustment, and implementation) developed by Neustupny (1995), for all language management.
4. There are a number of examples of long-term goals. These include the ACTFL proficiency guidelines for the four skills (Rubin and Thompson, 1994, give a brief description of these); the United States Foreign Service Institute time line for achieving levels of proficiency considering the level of difficulty each language presents for speakers of English, and a description of ability levels set by the Council of Europe (2001).
5. Task analysis is an area that Wenden (1991) and Wenden (1995) described for language learning. It has been further elaborated in a forthcoming book by Rubin and McCoy.
6. In several articles, Wenden (1986, 1991, and 1995) has drawn attention to the important role that learner knowledge plays in promoting success. Drawing on the work of Flavell (1979), Wenden includes 3 kinds of knowledge: task, strategy, and self. Wenden (1999), however, has also drawn attention to the importance of beliefs in effective language learning.
7. Chamot *et al*. (1999, p. 166), also noted 'This trend (i.e. to have task knowledge – author) was apparent with children in foreign language immersion classrooms, high school ESL and foreign language students, and adult language learners.'
8. Wenden (1999); Mori (1997); Horwitz (1999).
9. See Rubin (2001), for an elaboration of kinds of background knowledge.
10. Even though guessing has its limits, expert learners are better at recognising when their guessing has been ineffective.
11. Anderson (1991), provides a succinct example of the interaction between cognitive strategies and prior knowledge: 'Beginning level language learners may know what strategies to use but because of a lack of vocabulary, or other schema related information, they may not have a strong enough language foundation to build on.' (p. 469).
12. The two students used strategies specific to the subject matter, one was a law student and the other was enrolled in a business administration programme.
13. Further research has shown that both expert and novice learners may use the same strategies but it is their ability to control them that makes for success (Chamot, 2001).
14. TOEFL = Test of English as a Foreign Language.
15. Chamot and Kupper (1989, p. 17) also noted that more successful students use strategies more often, more appropriately and in ways that help them complete the task more successfully.
16. Rost and Ross (1991) also found that learners varied in their use of strategies by proficiency level.
17. In her definition, Tarone (1981) makes a point of separating learning strategies from communication strategies (subsequently called 'language use' strategies by Cohen, 1998, and 'compensatory strategies' by Oxford, 1990).

18. Exceptions are Kato (2000); Okita (1995 and 1996); Takagi (1995); Takahashi (1993) and Van Aacken (2003) (for Japanese Characters) and DeCourcy and Birch (1993) for Chinese characters.
19. Personal communication, Anna Chamot, August 19, 2004.
20. For a review of the literature and these differences, see Oxford (1989); Oxford (1996); and Skehan (1989).
21. An earlier article by Horwitz (1987), delineated a variety of learner beliefs and suggested that some of these beliefs may lead to less effective learning strategies (p. 126).
22. See for example Rubin (2003).
23. Cf. Gillette (1987), whose subjects 'are in full control of their own learning process, adapt it to their own individual purposes and never look for language learning "recipes" developed by others' (p. 278). On the other hand, Norton and Toohey (2001) present a case for how good language learners arise from their social setting and the support they receive.

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3
Second Language Listening Expertise

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Introduction

Listening has become an important component of many language programmes but many teachers are still uncertain about how they help their students develop their listening abilities. One way in which teachers can begin to plan activities for developing listening competence is to consider the characteristics of second language (L2) listening expertise. It should be noted that the term 'listening expertise' is seldom if ever used in the L2 listening literature. Research and discussions on L2 listening has focused on characteristics of 'competent', 'skilled', 'advanced', 'good', 'active', 'strategic', 'high-ability', 'proficient', 'effective' or 'successful' listeners. As a working definition, therefore, we will consider expert L2 listeners as learners who show good comprehension abilities and who possess specific cognitive attributes that enhance their comprehension processes and overall listening development.

It may be instructive to begin our discussion with the observation that a good active listener 'is someone who constructs reasonable interpretations on the basis of an underspecified input and recognises when more specific information is required. The active listener asks for the needed information' (Brown, 1990, p. 172). This view underscores the importance of the learner's role in meaning construction and highlights cognitive and social processes at work. The contribution of these processes has also been emphasised by others (e.g. Dirven and Oakshott-Taylor, 1984 and 1985; Long, 1990; Mendelsohn and Rubin, 1995; Rost, 1990 and 2002). Meanwhile, research in the last two decades has offered further empirically-based insights into these and other processes affecting the development of listening competence (see reviews by Dunkel, 1991; Rubin, 1994; Lynch, 1998; Vandergrift, 2004).

Many of these studies compare learners with different listening abilities in various learning contexts. We can identify two lines of inquiry here. The one that has been pursued more fervently investigates what learners *do* when they listen. The other identifies what learners *know* about learning to listen. Collectively, the studies aim to answer one or more of the following questions: What comprehension strategies do successful L2 listeners apply? How do they make use of their knowledge of the language system and the world? What type of knowledge about listening do they possess? What listening skills do they demonstrate? What is the nature of their participation in interactive listening? Questions that focus on weak listeners are also important: What problems do they have? What factors contribute to their inadequate use of strategies, especially top-down ones? How can teachers help them improve bottom-up processing? Can weak listeners be trained to use the strategies that good listeners use and what kind of results will this have?

Results from a number of these studies are relevant to our discussion of L2 listening expertise. These are considered in this chapter. Our discussion will be guided by three characteristics of the general nature of expertise that are of particular relevance to L2 listening. These are knowledge, heuristics/strategies and control (Johnson, 2003 and this volume). Research suggests that all these attributes are important. For the initial development of listening expertise, however, knowledge of the language system and the listening process are particularly important.

Knowledge

A hallmark of experts is the possession of rich domain or field knowledge, accumulated through past experience and training. In addition, experts also possess detailed knowledge about the nature of specific tasks and the procedures needed for completing these tasks effectively. These two types of knowledge for L2 listening are discussed next as linguistic and metacognitive knowledge respectively.

Linguistic knowledge

L2 listening expertise is partially developed through an accumulation of systemic knowledge of the target language. This includes phonological, semantic and grammatical knowledge as well as knowledge about pragmatics and discourse (Anderson and Lynch, 1988; Rost, 2002). Mere declarative knowledge of the language, however, is insufficient for improving expertise. For effective language use to take place, declarative

knowledge must be proceduralised or automatised (Johnson, 1996). Particularly crucial to L2 listeners is the proceduralisation of phonological knowledge so that recognition of words and phrases in connected speech becomes automatic. This would allow learners to focus their attention on interpreting the message in its specific cultural and communicative contexts. To facilitate this level of interpretation, relevant pragmatic and discourse knowledge is also needed (Rost, 1990).

Phonological knowledge

Learners of different proficiency levels are affected by phonological modification of words in connected speech, for example, assimilation and elision (Heinrichsen, 1984). Studies that examined the role of memory have also shed light on the role of proceduralised phonological knowledge. Weaker listeners were slow at converting sounds to words and suffered interference in their echoic memory, which was needed for holding aural input for processing (Greenberg and Roscoe, 1988). L2 listeners were also reported to have less efficient working memory capacity when compared with native speakers (Call, 1985; Tyler, 2001) and many learners' comprehension suffered as a result of the inability to automatise word recognition skills (Segalowitz and Segalowitz, 1993; Goh, 2000).

Inadequate lexical processing among weak listeners often forced them to rely on top-down processing which was not always reliable (Tsui and Fullilove, 1998). Studies on speech rate further showed that some learners had difficulty comprehending text produced at a rate of over 200 w.p.m. (Griffiths, 1992) and that when learners were able to digitally slow down the speed of the input, their comprehension improved (Zhao, 1997). Hesitations by lecturers were also found to be useful for L2 students taking notes (Dunkel, 1988). This gave the students more time to process words and meaning, processes which have not been effectively automatised.

Results such as those above support the argument that knowledge about phonological cues and automatised lexical processing skills are extremely important for successful comprehension (Brown, 1990; Lynch, 1998; Field, 2001).

Semantic knowledge

Vocabulary knowledge has been shown to be an important variable in successful listening comprehension among listeners of different abilities (e.g. Bonk, 2000; Chung and Huang, 1998; Kelly, 1991; Meccarty, 2000). Besides knowing what key words in the input mean, language

learners often also need to understand colloquial expressions and metaphorical language, especially the kind that is culturally specific. In Britain, for example, overseas tertiary-level students often do not understand their lectures sufficiently because they do not understand some of the expressions and idioms that their lecturers use (Dudley-Evans and Johns, 1979). It is interesting to note that this problem has been observed again two decades on (Littlemore, 2001).

While knowing what words or phrases mean is important, it is not often easy to separate the construct of semantic knowledge from phonological knowledge. In experimental studies that involve pre-teaching vocabulary, for example, it is possible that the subjects have gained not only lexical knowledge but also phonological knowledge. A major problem among some L2 listeners is that they cannot recognise words that they know in print. Therefore, by introducing an unfamiliar word before listening, teachers could have sensitised learners to its pronunciation, thereby further facilitating lexical processing.

Grammatical knowledge

Compared with phonological and semantic knowledge, the role of grammatical knowledge in listening is the least examined. Nevertheless, some existing studies have shown that L2 listeners rely quite heavily on syntactic cues, even when other cues such as contextual and semantic ones are present (Conrad, 1985; Wolff, 1987). A strong correlation between grammatical knowledge and listening comprehension has also been established among some learners (Meccarty, 2000). Although this in no way indicates a causal relationship between the two variables, it does show grammatical knowledge to be another important characteristic of listening expertise.

Since meaning is partially communicated through the grammar of text, we may reasonably conclude that grammatical knowledge, especially if it has been proceduralised, can enhance the parsing of spoken texts. This is shown to be true in first language comprehension where 'canonical schemas' or stored knowledge of sentence structures can greatly facilitate language processing (Bever, 1970).

Pragmatic knowledge

To interpret what they hear and respond appropriately, learners need to understand the function of an utterance and its intended effect, or the speech act (Austin, 1962). This is why pragmatic competence is an important part of listening expertise. From 'a pragmatic perspective, listening is an intention to complete a communication process' (Rost,

2002, p. 40). The listener therefore has to take on an active role to shape the interaction in collaboration with the speaker. The form of a speech act may vary from language to language, and indeed from one variety of English to another! L2 listeners will therefore need to know the socio-cultural 'rules' that influence the use of language in a particular speech community.

Research among ESL secondary school students in the USA show that they demonstrated few pragmatic behaviours for active listening, such as asking for repetitions, rephrasing statements for clarification and backchannelling (Brice and Montgomery, 1996). The researchers argue that a lack of pragmatic competence in the classroom could adversely affect the learning process and outcome of ESL speakers in mainstream classes. With regard to backchannelling, three English 'receipt tokens' (Mm hm, yeah, mm) have been identified as important listener feedback that learners could use to participate effectively in interactive listening (Gardner, 1998).

Discourse knowledge

Closely related to pragmatic knowledge in interactional listening, is discourse knowledge. Most studies on discourse knowledge were undertaken in academic contexts and focused primarily on discourse signalling. The benefits of discourse signalling cues on lecture comprehension have not been positively identified. In one study, both L1 and L2 speakers did not appear to have benefited from these cues, there being no significant difference in the amount of notes and quantity of information recorded by the subjects (Dunkel and Davis, 1994). In two other studies, however, discourse signals have a positive effect on L1 lecture comprehension and the amount of student lecture notes (Rickards, Fajen, Sullivan and Gillespie, 1997). Similar influences of discourse markers have been found on understanding and recall in L2 academic listening (Jung, 2003). In cases where signalling cues are useful to learners, there remains the question of whether macro-discourse markers or micro-ones are more helpful (see Chaudron and Richards, 1986; Flowerdew and Tauroza, 1995).

While the recognition of discourse signals drew some attention among researchers, there has been little research done on the role of discourse structure knowledge. In one such study, language learners were found to use text-type identification as a prominent strategy (Wolff, 1989). It has been argued that to help non-native speakers in lecture comprehension, ESP teachers need to acquaint them with the general schematic structure of lectures (Young, 1994). To this end,

learners would benefit greatly from systematic instruction in the macro- and micro features of lectures (see Lynch, 1983, for example.) In addition, specific knowledge about variations in the discourse patterns of lectures across different disciplines would be extremely beneficial (Dudley-Evans, 1994).

The above review underscores the important role of linguistic knowledge in developing L2 listening expertise. The proceduralisation of this knowledge is important as it enables perception and parsing processes to be automatised, further facilitating comprehension. This is a characteristic of expert L2 listeners, who normally have less difficulty at these lower levels of processing. Even when they did not recognise some words in a stretch of input, they would normally have processed other parts sufficiently to enable them to use some top-down strategies to infer or elaborate their initial interpretation (Goh, 1998). The exact ways in which linguistic knowledge is activated during language processing are still a much debated issue (see for example, Anderson, 1995; Hulstijn, 2003; McClelland and Elman, 1986). Nevertheless, given the role of memory in information/ language processing (Solso, 2001), the importance of different types of linguistic knowledge can hardly be ignored.

Metacognitive knowledge

Another type of knowledge that is important for the development of listening expertise is metacognitive knowledge (Flavell, 1979; Wenden, 1998). It has three dimensions: how individuals learn and the factors that influence one's own learning (person knowledge), the nature and the demands of learning tasks (task knowledge) and effective ways to learn or accomplish a task (strategy knowledge). Learners who have a high degree of metacognitive awareness are generally more self-directed in their learning. High metacognitive awareness has also been found to correlate with motivation and self-confidence. Good strategy knowledge also results in more successful and appropriate strategy application to new learning tasks.

Developing learner awareness is an important part of teaching listening. Teachers have been encouraged to model thinking aloud (verbalising their thoughts in front of the class) as a way of demonstrating to learners the cognitive steps involved in comprehension (Chamot, 1995) as well as sensitising learners to phonological and contextual cues through different kinds of 'precommunicative listening practice' (Buck, 1995). It has also been argued elsewhere that mere emphasis on the contents of the lesson will not be very useful for helping learners

develop their overall listening expertise; hence the need for activities in and out of class that emphasise listening processes that learners engage in (Goh, 2002a)

Although issues about learner awareness have been discussed, research into metacognitive awareness is still relatively new. Studies so far show that language learners possess some knowledge about the listening process and that this knowledge can be further enhanced through classroom instruction. This is found to be generally true of all learners of different ages and language learning background.

Awareness about L2 listening

Research attention initially focused on descriptions of L2 listeners' metacognitive knowledge, in particular task knowledge and strategy knowledge. Studies on a group of Chinese ESL learners in Singapore identified knowledge regarding four aspects of L2 listening: their role as listeners, their problems resulting from individual and environmental differences, the cognitive demands of L2 listening and useful strategies for comprehension as well as for developing their listening outside class (Goh, 1999 and 2000). Collectively, the learners were also aware of key factors that could impede or enhance their comprehension. It was also found that the better listeners demonstrated a higher degree of such awareness.

In another study, 250 Singapore secondary pupils were surveyed and the correlation between different types of knowledge was examined (Zhang, 2001). There was a statistically significant correlation between the learners' strategy knowledge and their reported strategy use. Suggesting a reciprocal relationship, the researcher argued that learners' strategy knowledge may have influenced their preferences for certain strategies. At the same time, the success experienced as a result of using a particular strategy reinforces beliefs about the usefulness of the strategy.

Metacognitive instruction

Besides building up an inventory of types of metacognitive knowledge, research has also explored the usefulness of metacognitive instruction among learners of different ages. In a case study of eight primary school pupils, it was found that even young learners had knowledge about the listening process (Taib, 2003). Their awareness is, however, less than older learners reported in the literature. This could be attributed to lower cognitive maturity and a limited exposure to various types of listening situations. Nevertheless, they benefited from meta-

cognitive instruction and their task and strategy knowledge increased after two months. For two months, the pupils had weekly lessons of listening exercises that aimed at preparing them for a public examination in English. After each listening exercise, the pupils reflected individually before discussing the listening processes they engaged in. At the end of the intervention period, the pupils demonstrated more elaborate metacognitive knowledge. Furthermore, they reported greater confidence for the examination and increased motivation to further develop their listening. A better understanding about the listening process has reduced their level of anxiety and increased their expectancy to succeed.

The usefulness of metacognitive instruction has also been examined among Canadian elementary school learners of French (Vandergrift, 2002). Regular listening lessons were modified to incorporate metacognitive activities, using instruments that engaged learners in prediction, evaluation and other listening processes. The learners reported increased motivation and knowledge about learning how to listen. The researcher argued that this could potentially help learners achieve greater success on those types of listening tasks.

The picture that is emerging from research so far is that metacognitive knowledge is important to the development of listening expertise in at least two ways. Firstly, it influences the manner in which learners approach the task of listening. Through better task knowledge, learners can plan, monitor and evaluate what they do. Their strategic knowledge can also help them use relevant strategies for comprehension as well as for improving their listening abilities in general. Person knowledge can also help them attend to problems that learners generally face and those they experience individually. This awareness will assist them in finding ways for improving the situation.

Secondly, metacognitive knowledge can reduce anxiety induced by listening, increase motivation and improve confidence. Rich metacognitive knowledge is a characteristic of learners with good listening ability. A causal relationship, however, has not been established. Nevertheless, it seems reasonable to hypothesise that metacognitive knowledge, in particular task and strategy knowledge, can improve comprehension performances.

Strategies

Experts in general have at their disposal a wealth of mental resources for accomplishing specific tasks in their professions or crafts. They

have a wider repertoire of strategies for achieving their goals effectively compared with novices, who often expend large amounts of time and energy in an attempt to achieve similar results. In this section, we will examine why in addition to linguistic and metacognitive knowledge, strategy application is an important part of listening expertise development. For our purpose, we will refer to listening strategies in its broadest sense to include any conscious procedures for understanding, remembering and recalling information (O'Malley and Chamot, 1990; Oxford, 1990).

Strategies used by language learners have been categorised as cognitive, metacognitive, social and affective strategies. These strategies are often discussed in relation to language use and language learning (Cohen, 1998). In L2 listening, competent listeners have been found to use more and better strategies to enhance their comprehension. Many also adopt strategies for improving their listening abilities outside class.

When attending to spoken input, expert listeners use various strategies for manipulating the input directly to help themselves understand as much as possible. These 'direct' strategies are referred to as cognitive strategies and include making inferences, elaboration and visualisation. In addition, metacognitive strategies are used for managing mental processes before, during and after listening. Examples of such strategies include comprehension monitoring and evaluation. There are also indications of frequent use of social-affective strategies among competent listeners to improve face-to-face interactions and manage negative emotions. While there seems to be a high correlation between high listening ability and strategy use, the causal effect of strategy use has generally been inconclusive due to a number of factors.

Processing approaches

Much of the research on listening has focused on the language use or comprehension strategies that good listeners apply during one-way and two-way listening (Mendelsohn, 1998). In particular, there have been studies that focused on the differences among listeners in their application of top-down and bottom-up strategies. There is also growing attention paid to affective strategies. An intended application of such research is to train novice listeners to use appropriate strategies to help improve the overall outcome of their listening (Mendelsohn, 1995; Thompson and Rubin, 1996).

It is noted that while the literature base in strategy instruction has grown very little in the last five years, studies that focused on the differences between more-skilled and less-skilled listeners have produced

some useful insights (Vandergrift, 2004). In comparing learners, the issue of top-down and bottom-up processing highlighted in some early research (for example, Bacon, 1992; Conrad, 1985; O'Malley, Chamot and Küpper, 1989; Vogely, 1995; Wolff, 1987) continues to be important. There is general consensus that language learners, regardless of their level of listening competence regularly draw on background knowledge to fill in the gaps in their understanding.

The ability to use schematic knowledge (Anderson and Lynch, 1988) constitutes an important strategic approach for making inferences, prediction and elaborations (Vandergrift, 1996; Young, 1998). It is further noted that weak listeners were often hindered by a limited knowledge of tactics for operationalising these strategies (Goh, 1998). For example, they were less able to use contextual information and linguistic knowledge for making inferences. High ability listeners frequently made use of these tactics to infer unknown meaning or complete an interpretation. They also varied the tactics used for each strategic approach according to the situation. In all, high-ability listeners demonstrated a higher frequency and better quality strategy use. There are also indications that these abilities are not gender-specific (Goh, 2003).

Interaction patterns

A close examination of a high-ability and a low-ability listener showed the former to engage in various combinations of cognitive and metacognitive tactics in each listening sequence (Goh, 2002b). This finding is consistent with the view that efficient text comprehension is a dynamic process involving the interaction of several mental processes (Britton and Graesser, 1996). Although it has been shown that effective listeners often process input in a top-down manner, it is difficult to claim that adequate background knowledge about context, participants and topic is a characteristic of listening expertise because weaker listeners have it too (Goh, 1998; Lund, 1991; Young, 1998). Rather, it is the ability to make use of this knowledge appropriately that distinguishes expert listeners from the rest. In a study that examined dictation errors, young adolescent learners were found to process lexical input almost entirely in a bottom-up manner (Randall, 1997). There was little evidence of them using context in lexical access or verifying their perception of words in the dictation task.

Comprehension can be impaired if listeners hang on doggedly to an interpretation while ignoring clues from the context or the co-text. Effective listeners make use of various information sources for monitoring

and evaluating comprehension and are not 'trapped' into one interpretation because of prior knowledge. In fact, a finding that has emerged quite consistently is that expert listeners make use of metacognitive strategies more frequently (Vandergrift, 2004). They are able to use the whole range of metacognitive strategies – planning, monitoring and evaluating – to manage their listening, and they are also better at coping with listening problems. These include advance organisers, directed attention, monitoring attention and comprehension, and evaluating comprehension.

Social strategies have also been reported among high ability listeners' interactional listening. These learners use a wider and better range of clarification questions as strategies (Rost and Ross, 1991), while low proficiency learners used more kinesics, global reprises and hypothesis testing in L1 to clarify meaning with speakers (Vandergrift, 1997). Affective strategies have also drawn some attention in listening research mainly because it is recognised that L2 listening performance may be affected by learner anxiety (Vogely, 1999; Arnold, 2000). Some affective strategies that have been frequently reported by learners include positive self-talk and self-reinforcement (O'Malley and Chamot, 1990). A study of affective strategies conducted among East Asian students studying in Singapore produced two interesting findings: a) affective strategies and metacognitive strategies often work in tandem; b) motivational, empathetic and anxiety-reduction resources in affective strategies often affect the choice of other strategies (Ho, 2004).

Findings from listening strategy research show that expert listeners have more ways or tactics for applying each strategy. The strategies they use are often contextually appropriate and interact effectively to produce reasonable interpretations. Low-ability listeners do not use as many strategies, particularly those for elaborating and evaluating initial interpretations. It may be argued that this happens not because they are unaware of listening strategies, but that they have not perceived enough input to allow them to process the information at a higher level. Our current insights into L2 listeners' metacognitive awareness (see previous section), seem to support this view.

Control

The third important characteristic of general expertise is control over one's thinking when attending to a task. The term 'metacognition' (Flavell, 1979) has been used to refer to this ability to think about one's thinking. Metacognition incorporates two key aspects of an indivi-

dual's thinking: (a) knowledge about cognitive states and processes and (b) control or executive aspects. It is argued that that this 'dichotomy of the mind is consistent with information processing accounts of declarative and procedural knowledge and captures two essential features of metacognition – self-appraisal and self-management of cognition' (Paris and Winograd, 1990, p. 17).

In the strictest sense of the word, control is not a characteristic that distinguishes an expert from a novice. The main difference lies in the expert's ability to take into account a large number of variables while dealing with a task. Johnson (2003) refers to this as 'maximum variable control'. Compared with a novice, an expert is sensitive to more factors, both internal and external, that might influence the outcome of a task. For language learners, the ability to assess different variables during listening and make appropriate on-the-spot decisions are directly influenced by their degree of linguistic and metacognitive knowledge. Expert listeners may decide not to focus on a part of an input because they do not think it would greatly affect their overall understanding. Instead attention may be directed to the next part of the message. This ability is comparable to experts' 'judgment of promisingness' – decision about which avenues are likely to bring about the desired result (Bereiter and Scardamalia, 1993, cited in Johnson, 2003).

The excerpt below is taken from Learner X's immediate retrospective protocol. It illustrates the way expert L2 listeners exercise maximum control of variables during listening. X had just heard a few short segments of a passage on the camel's hump and noticed a word she did not recognise.

> His nice 'apsack' back. Actually I was surprised by the meaning that camel store the heat in the cold night not um in daytime, so I paid particular attention to the following sentence, but the last sentence is too long so I think I missed the middle phrases…
> Is the meaning is equal to hump in the beginning? Because food is stored in hump, and the heat resource is stored there in the hip, hip sack. Is the two terms equal…
> In the middle I didn't hear clearly about one part, something, just before comparison between camels and other animals, but I after hearing all the paragraph I can find camel didn't, camels don't store the heat in all their skin, just in their knapsacks, so this is the outstanding advantage they have… distinguish from other animals.
>
> (Goh, 2002b)

Learner *X* repeated a phrase containing the unfamiliar word 'knapsack' as soon as the input stopped. She monitored her understanding of other parts of the segment by comparing her interpretation with her knowledge about how camels stored heat in their bodies. She also checked her interpretation with the context in the segment by paying attention to the next part of the input. *X* demonstrated control by monitoring her unfolding comprehension while at the same time retaining the sounds for 'knapsack' in her working memory. She soon arrived at a preliminary interpretation of the word by associating it with 'hump'. She also tried to evaluate her comprehension by asking the question 'Is the meaning is equal to hump in the beginning?' Once again, *X* applied her prior knowledge to assist her understanding and also used the context that had evolved by then to interpret and confirm her understanding of the unfamiliar word. When she listened to the final segment, she recognised the exact part she did not understand but continued to listen. In this last part she recognised the word 'advantage'. With this understanding, she successfully related it to an earlier part and eventually managed to process the word that eluded her the first time.

From the above discussions, we can see that control is as much about possessing linguistic and metacognitive knowledge as it is about the ability to use appropriate strategies. In fact, it is a combination of knowledge and strategies that enables some L2 listeners to process what they hear more effectively than others. Specifically, expert listeners are able to: a) consider various factors that affect their comprehension; b) apply the most appropriate strategies for a specific task and orchestrate the application and c) identify important aspects of input and use the most relevant linguistic and contextual clues for arriving at a reasonable interpretation.

Characteristics of an expert L2 listener

Language learners have often been characterised as 'good' or 'poor' listeners, or using other similar sets of antonyms, based on evaluations of their comprehension abilities. While this is a useful judgement, it emphasises performance and overlooks cognitive processes that could contribute to overall expertise. As our review of knowledge, strategies and control has shown, expert listeners are also identified by cognitive attributes that distinguish them from other listeners. To summarise, expert L2 listeners can be characterised as learners who:

- possess complex knowledge of the language system, much of which has been proceduralised;
- exploit grammatical, phonological and lexical cues to process input from the level of word recognition to discourse organisation;
- make use of knowledge about specific listening contexts to form interpretations and give appropriate responses;
- possess rich and elaborate metacognitive knowledge about themselves as L2 listeners, processes in of L2 listening and strategies that can facilitate comprehension and learning;
- are motivated, generally confident and less anxious about listening than the other learners;
- use a repertoire of strategies (cognitive, metacognitive, social and affective) for enhancing comprehension and managing behaviours and emotions;
- demonstrate flexibility in applying strategies to handle different listening tasks and various cultural and communicative contexts;
- exercise effective control of a large number of variables related to the listening process, the input and the environment.

These characteristics are largely related to the development of expertise for basic skilful listening comprehension. Our review and discussions have not taken into account abilities required for high-level listening purposes such as critical listening, appreciative listening and therapeutic/empathetic listening and other forms of work-place related listening competency (Wolvin and Coakely, 1996 and 2000). This might seem like a narrow view of listening, considering the important role that listening plays in professional and personal development. The main reason for this selective review is that much of the research conducted in second language listening, including academic listening, has concerned itself mainly with listening for comprehension. As language learners are not experts in the sense that a professional counsellor or a musician is, our criteria for identifying expertise in L2 listening are by necessity modest.

Developing listening expertise

In many listening lessons a great deal of time is spent on the content of the listening passage. Pupils work on pre-listening activities, followed briefly by listening to the tape or CD before the correct answers are given. To help learners develop expertise in listening, some of these practices will have to change. The three-phase (Pre-, while- and post-)

lesson structure that teachers are so familiar with now is still relevant, but the focus of listening lessons must expand to include knowledge about the language and listening processes.

It has been observed that listening classrooms nowadays tended to focus too much on developing top-down strategies such as inferencing and prediction, and has overlooked the importance of helping learners perceive words and lexical segments (Field, 1998 and 2003; Hulstijn, 2001). In view of the crucial role of proceduralised phonological knowledge, there is certainly a need for developing perception ability among learners. Teachers have also been urged to help develop learners' metacognitive knowledge by modifying existing lesson structures to include metacognitive awareness-raising activities and opportunities to experiment with some listening strategies (Goh, 1997; Vandergrift, 2004). Part of this awareness-raising should include developing task knowledge about discourse structures of various types of listening event.

In strategy instruction, teachers need to be selective and prioritise the strategies to focus on in the classroom. Some cognitive strategies such as inferencing are used by all learners regardless of their abilities, perhaps because it is a general cognitive skill. Metacognitive strategies, however, are less frequently used even by L1 listeners and should be developed to improve control. In the case of L2 learners, who often experience a heavier cognitive load due to inadequate proceduralisation of linguistic knowledge, monitoring their comprehension in real time is all the more challenging. Nevertheless, there are other ways in which some control can be exercised. One way is to provide learners with opportunities to use planning and comprehension evaluation strategies. Both strategies are applied outside of 'real-time' listening and have an important influence on the overall outcome of comprehension.

In sum, a listening curriculum must focus strongly on the cognitive and social processes of listening. It should provide a balanced development of the various characteristics of listening expertise. The learning activities suggested above can be further supported by different types of authentic materials, such as digitalised audio input including computer software for improving learners' perception and comprehension of fast speech (Cauldwell, 1996; Hulstjin, 2003) and multimedia CD-ROMs for developing comprehension and using metacognitive strategies (Goh and Doyle, 1998).

More importantly, teachers and learners need to see that developing listening expertise is a gradual process, not unlike the development of

reading or writing. Learners are not going to understand everything they hear in every lesson. If they can, it is time to move on to more challenging materials or tasks. It is also worth noting that there is a difference in the way they progress in one-way and two-way listening, with further discrepancies found between performance in the classroom and real-world listening (Lynch, 1997). Each lesson should therefore help to increase learner awareness of and abilities in listening processes, giving them practice in improving their perception of the target language, and when they are unable to hear all the input make use of appropriate strategies to complete their interpretation.

Researching listening expertise

We now have a modest but growing body of work that examines the features of listening expertise. Most of the studies have been descriptive ones that document characteristics of listening expertise of learners from different learning and cultural contexts. This area of research is expected to continue and more insights will no doubt be offered as taxonomies and other descriptors continue to be refined.

There remains still an urgent need to investigate the usefulness of specific classroom tasks and self-directed learning activities that can develop listening expertise. Controlled studies that examine causal and co-relational relationships between the different variables are also needed. For the field of L2 listening to continue to move forward, we need both descriptive and experimental research to be conducted in as many different contexts as possible.

Many of these studies will expectedly be conducted by postgraduate students probably with limited time, resources and access to a large number of subjects. A possible direction is to conduct well-planned action research that aims at improving listening expertise among students from intact classes. Teachers and the research community at large can learn much from carefully-executed intervention studies.

Finally, here are some possible directions for future research on listening expertise:

- Learners' person knowledge, particularly listening self-concept should be explored for its effects on listening comprehension, anxiety, motivation and learning to listen;
- Learners' task knowledge as it relates to both inside and outside class listening situations should be examined for its role in comprehension;

- The effect of metacognitive instruction should continue to be explored through more controlled studies;
- The effect of discourse knowledge, particularly of specific text types or genres on listening performance;
- The relationship between the use of specific tactics within broad strategic approaches and individual learning/cognitive styles;
- The relationship between sophisticated semantic knowledge and listening performance of proficient listeners;
- The relationship between knowledge about discourse structure and listening performance;
- In-depth case studies of individual learners in different learning and cultural contexts;
- The influence of extensive listening on the development of listening ability, task knowledge and strategy use;
- The role of teacher training in successful strategy instruction;
- A greater focus on young second language learners;
- A new focus on higher forms of listening expertise such as critical listening and therapeutic listening in instructional and social/work-related situations.

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4
Reading and Expertise

Catherine Wallace

In this chapter I shall first look at what we understand by reading in relation to the notion of expertise. I shall then build on this discussion to identify kinds of reading expertise which match the roles and goals of the second language learner. I shall argue that one role in particular, that of the *reader as critic,* allows L2 readers to maximise the resources they bring to reading in a second language

Introduction: reading and expertise

What is expertise?

To the lay person the notion of expertise suggests skill, knowledge, and training, often with a period of apprenticeship. In addition it appears to have a culturally determined dimension in that one is an expert in something that is socially valued – while you can be an expert debater could you be an expert gossip? It also suggests expenditure of effort: you can be an expert skier or cook but not an expert sleeper. Finally, the term 'expertise' connotes an outcome or product which is visible and can be judged or evaluated. Expertise seems to involve skilled, conscious physical activity. This, on the face of it, sits uneasily with a usually private, silent activity like reading. It may be for this reason that we talk less of someone, other than a child, being a 'good' reader, – let alone an 'expert' one – although we readily refer to a good writer, speaker or listener. This is especially so with listening, because it is judged by the receiver. In the case of reading expertise we might want to ask: who judges other than the reader herself/himself how effective or efficient the process is, and how satisfactory the outcome of the activity is?

Moreover do we want to argue that reading is a skill like riding a bike or driving a car which can be broken down into discrete steps in the learning process? And, if we pursue the bike riding or car driving analogy, a characteristic of skilled performance is that it becomes automatic. We do not think of when and how we change gear, or maintain balance on a bike. Automaticity is a further feature, then, which is linked to notions of expertise. This begs the question as to how far the term *expertise* might at first sight appear to privilege some conceptualisations of reading over others.

Novice and expert readers

Some see a polarity between experts and novices. Dreyfus and Dreyfus (Dreyfus and Dreyfus, 1986 in Tsui, 2003) talk of the development of novice to expert through a series of stages. If we relate this to an activity like reading we might envisage stages of reading that one passes through, with new skills building on and dependent on the acquisition of earlier ones. And yet this kind of sequence was challenged in the case of reading as long ago as 1979 when Lunzer and Gardner (Lunzer and Gardner, 1979) were unable to identify skills demonstrated by more proficient readers but not shown by those in the early stages of learning to read. Overall they found two features linked to effective reading: flexibility and reflectiveness. Interestingly Tsui (2003) notes that research findings into the manner in which expert teachers 'read' a classroom situation, highlight flexibility as one salient feature, selectivity of attention being a second. These are both attributes possessed by effective, experienced readers. In short it can be argued that the process of becoming a reader is not describable in terms of incremental skills. Rather, from the start, effective reading involves essentially the same principles at early as at advanced levels of reading: drawing on a wide range of textual clues to make meaning from text (cf. Meek, 1988), with experienced readers becoming more adept at knowing what to read, and in what manner as related to contexts of use and purpose. If this is accepted, we may wish to challenge not only the notion of progressive, readily identifiable steps in developing reading skill but also the view that the final outcome of this process is the achievement of some kind of 'full' competence as a reader. Inevitably, just as total comprehension of a text is never attainable, as I discuss below, reader competence and skill is not describable in finite and unvarying terms. Experienced readers, like writers (cf. Bereiter and Scardamalia, 1993 in Tsui, 2003) feel continually challenged, critically and cognitively. The process of becoming a writer or reader is open ended.

At the same time, an outcome of automaticity as a demonstration of the highest degree of expertise is dubious. Skilled readers, it is true, will not habitually be hesitating at the decoding level of text processing. They can be said to have automatised basic competencies such as the ability to match grapheme to phoneme, in the case of alphabetic languages. However, especially in certain reader roles, they will continue to struggle with textual difficulties or incompatibilities, in many ways highly *conscious* of the process. Much the same again is described by Bereiter and Scardamalia (*op. cit.*) with expert writers working at the 'edge of their competence' interpreting the task in ever more demanding ways.

First and second language readers

If novices are allocated a deficit position *vis à vis* the 'expert' in some accounts of expertise, much the same dichotomy is apparent in contrasts between the 'expert' native speaker reader of English as opposed to the novice second language learner. In other words, linked to the notion of 'expert' in second language teaching and learning is the assumption that the model or norm is the native speaker. Indeed it is for this reason that Rampton (1990) in his discussion of language teaching, prefers to talk of 'expert' users of English rather than of native speakers. In the case of reading, it is readily acknowledged that many native speakers of a language are not proficient readers and writers, especially for academic purposes. More contentious is whether, assuming parity of educational level, second language readers are to be assigned a deficit status when compared with L1 readers who, simply because they have strong intuitive knowledge of the language system, will necessarily have greater reading expertise. I shall argue below that some conceptualisations of reading will inevitably favour the L1 reader, whereas others give space for L2 readers to assert a distinctive identity – even to claim advantages over the L1 reader – to be experts in their own right.

Expertise in what? – views of reading

In talking of *expertise* much depends on what we understand by the reading process. Different academic disciplines or traditions view reading in distinctly different ways. Psychological accounts, which have tended to dominate the field, theorise the process as Luke (Luke, 1996, p. 311) puts it, by 'reference to internal states' rather than

external social circumstances. On the other hand, Brian Street and his associates under the auspices of what has come to be known as the New Literacy Studies (cf. Street, 1984, 1995, Barton, 1994, Baynham, 1995), describe literacy as social practices which are acquired in naturalistic settings. In particular, Street (1984) contrasts what he calls 'autonomous' with 'ideological' conceptualisations of literacy. While an autonomous view sees reading and writing as skills learned largely through schooling, with universally shared characteristics, the ideological position sees literacy as culturally situated and variable in the forms it takes. If we take a broadly ideological view of literacy, literacy can be seen – even within educational settings – as 'repertoires of practices' rather than as a unitary undifferentiated skill (Freebody and Luke, 2003). Moreover, reading is not just a sociocultural activity but, more specifically, a *sociolinguistic* process. A key sociolinguistic principle is the need to see any kind of language activity, to include reading here, as being necessarily variable. That is, language varies, pragmatically and semantically, according to the context in which it is used. At the same time language users demonstrate variable language behaviour as they respond to varying contextual conditions. With this in mind, I shall challenge several common ways of seeing reading – what I have called here some *reading myths*, on the grounds that they do not attend sufficiently to these sociolinguistic aspects of reading behaviour.

Reading myths

There are three common ways of seeing the role of the text, the reader and reading goals or purposes which I would like to question here: one is that texts can usefully be broken down into constituent parts to aid the apprentice reader in particular, second that learners can be evaluated in terms of fairly fixed levels of reading ability, and finally that the principal role of the reader is information processor and the main eventual goal of reading is comprehension. Here I take each of these in turn

Myth one: a text is the sum of its parts

One popular view is that texts consist primarily of words and that the learner reader moves from reading words, to linking those words within sentences, ultimately progressing to the reading of whole texts. This kind of progression is certainly suggested by the British National Literacy Strategy which categorises the proposed activities of the

Literacy Hour under word, sentence and text based activities (cf. DfEE, 2000) presented in columns or 'lists' in that order, as one reads from left to right. And, although it is possible to contextualise the word and sentence work within text focused work, in practice teachers tend to teach them separately, initially prioritising smaller units such as phonemes, thereby lending support to the incremental view of the reading process, by which an aspiring reader moves from smaller to larger units of meaning, from phonemes to whole texts. Many reading specialists continue to take a predominantly word recognition view of early reading (cf. Grabe and Stoller, 2002, for example). On this view, reading expertise is best demonstrated through the success with which words are decoded and/or understood. Adams for instance says: 'the ability to read words quickly, accurately and effortlessly is critical to skillful reading comprehension' (Adams, 1990, p. 3). Peter Fries (2004), drawing on corpus linguistics, challenges this view. He argues that one cannot talk about 'reading words' in advance of any discussion of what a word is. For instance, is 'look up' in 'she looked up the word in the dictionary' best seen as two 'words' or, as linguists would argue, a single lexical item, whose meaning is not equivalent to the sum of its parts? Secondly we need to consider the crucial role of *context*. Fries offers the example of *yonks,* a British word not previously known to him, as an American. Yet he had no difficulty interpreting the sentence in which it occurred because he placed it into a set of related constructions, as follows:

I have known him for	Five months
	Two days
	Ten years
	Yonks

As Fries points out, a new word has been given meaning for him by being placed in a particular lexico-grammatical context.

What is evident here is the key principle of the need to attend to context. Occasionally a reader may not be able even to decode without such contextualisation, especially in the case of homographs such as the word 'minute'. This means that without an overall sense of context, a reader cannot decode the word in a sentence such as 'she carried a minute dog'. We see then that, although words clearly constitute texts in a physical sense, the reading process cannot be seen as reading words in any straightforward way. The whole is not merely the sum of its parts.

My observation of what Fries describes led me some years ago to claim that reading skill or expertise is necessarily variable and context dependent. And it is this core sociolinguistic principle of variability in reader processing which I turn to next.

Myth two: readers have a 'reading age' which is readily testable

Even as educated adults we have all noticed failures or breakdown in skill. Quite recently and to my considerable embarrassment I initially misread an email, which was making a qualified offer of a contract for work, as an unconditional offer. Only closer reading revealed the hedging which, crucially, accompanied this written message. Reading is context dependent and socially mediated. One can observe in readers' on-line processing of text, not the consistency generally assumed by reading tests, or the widely accepted notion of 'reading age' but a variability of recognition, with words 'known' in some contexts but not others. In a study of reading variability (Wallace, 1987) I looked at the manner in which either the text or the teacher could impact on the reading event. In the case of textual features, complex reference could be observed to defeat learners so that 'simple' words such as *one* resisted decoding although it was clear that the learner's general decoding knowledge would readily permit them to 'read' the word in predictable contexts. Indeed Fries (*op. cit.*) observes much the same in the miscue analysis he conducts to verify his claim that the lexicosyntactic environment plays a crucial role in readability for learner readers. And yet, in spite of this readily observable variability, reading competence still tends to be viewed as a given, as something which is fixed at any one point in time. One result is that in British schools children are assigned a reading age on the basis of testing, with little or no account taken of variables in the text or context of situation which may affect the reader's performance. Johnny, aged 8 was a learner thought to have particular reading difficulties, as judged by the conventional testing procedures. For this reason I was asked to help with his reading for a few months. These were my notes:

…In terms of particular strategies Johnny is a good decoder but as I noted at my second visit, when he picks up the reading scheme book to read with me, he does not look at the title, survey the text at all or comment on it. He just gets going. Reading seems a chore to get through. However he is very persistent, and expects to continue through to the end of the text on each occasion, although not with much sense of enjoyment.

However a few weeks later I noticed a real change in Johnny's reading behaviour.

Johnny began, unprompted, to read silently, telling me what the text was about, summarising quite adequately, for instance, a simple newspaper text, paragraph by paragraph. He told me very proudly that he was now doing 'free reading'; that his cousin was not yet doing this. It seemed to me that Johnny had a sense of having earned his apprenticeship through completing the reading scheme!

Elsewhere my notes suggest that the reading scheme has frustrated rather than facilitated Johnny's sense of himself as a reader.

In terms of the texts, in particular the reading scheme Oxford Reading Tree, it seems clear that Johnny finds these particularly tedious. I notice myself on the second occasion that the story is very silly and dull – about men dressed up as cleaning ladies and pirates. Also the language is bizarre, with inverted word order, so that I have to check that I have understood correctly. The text reads: 'the pirates bold had an old, old map'.

I contrast this with different text genres.

Once I began to read simple newspaper texts with Johnny, he showed a little more interest, and was able to read these narratives, albeit much more adult, with greater ease in some cases than the reading scheme books. He had some background knowledge of disasters, such as a recent ferry disaster which was one early news story we read together. However, the real change in Johnny's response to texts came when I discovered his interest in animals, particularly rabbits, and found that he responds very well to non-fiction texts about the care of animals. He is also very well-informed about animals, so that this offered an opportunity for him to correct some of the information in texts and to engage much more pro-actively with them.

In short Johnny's variable reading behaviour challenges the notion of reading as a fixed set of skills. I saw nothing to indicate that Johnny was a reader with difficulties as had been proposed; merely a reader who had only recently begun to work 'at the edge of his competence' (cf. Bereiter and Scardamalia, *op. cit.*)

Yuko was a very different kind of learner from Johnny. First she was a second language learner, literate in Japanese and an adult who was following a course in marketing at one of Britain's new universities. She felt she had some difficulties in her reading in English which had

led her to enrol on a course on *Critical Reading*. At the end of the course she had this to say in an interview with me.

CW: Do you think the course improved your reading?
Y: I think so. I've become more – a bit more critical about reading things. Before when I was reading any text I just went: A is B, I thought OK it's B. I believed it. Well, now I think, well it could be C. The reason why I said that may be based on the knowledge or the experience I've got previously so sometimes if I don't have any of this knowledge of one particular thing, I just believe.
CW: You mean you do now, or you did before?
Y: Yeh, for example if someone talk about engineering or something like that I have no idea what it's talking about so I just believe what the text's saying but things like marketing or travel things I'll be very critical.

In short, to begin to answer the question 'what constitutes expert reading?' we need to think who is asking the question to whom, when where and why. We are expert readers of *something* – a genre, a content area or a register. We are not simply 'expert readers' and our proficiency and confidence as readers is highly variable.

Myth three: The reader is an information processor; the outcome of the process is comprehension

A dominant view of the reader continues to be that of comprehender or information processor, typified in definitions such as: '(Reading) is an information processing skill comprising a number of cognitive sub-skills that enable us to acquire purely visual information from a page and convert it into meaning' (Underwood and Batt, 1996). In classroom contexts learners may be required to reproduce this information as evidence of understanding, often as answers to comprehension questions. I believe there are problems with this view at the macro and micro level. First, at a macro level, we do not necessarily read texts for information. We make a judgement initially as to how to approach a text – not always a reliable one admittedly – and then adjust our reading behaviour accordingly. Few texts repay detailed and careful attention of the kind I needed to apply to the contractual text quoted above. Even at a micro level where, especially in classrooms, we may want to support readers in close, analytical textual readings, right/wrong answers are negotiable to a greater degree than is always acknowledged by teachers or tests. Frequently too, students' responses to texts reveal not a quest for 'right answers' but queries about register

or usage. One learner, Sara, in an adult ESOL reading class (Cooke and Wallace, 2004), makes it clear she does not want just to deal with the comprehension task in front of her but to generalise knowledge to other contexts. In connection with a 'new' word *nominate*, (the text says: 'people were told they could not nominate their partner') she asks, sensing possible register specificity, *Can I say that to my son'?*

In short, learner readers even in a 'reading comprehension' classroom are observed to draw on texts in highly variable ways, frequently, as we observed (Cooke and Wallace, *op. cit.*), hijacking the assigned task altogether. It must be acknowledged that one advantage of the orthodox comprehension task is that skill is readily evaluated. This appears to satisfy the criterion noted earlier that expertise needs to be amenable to transparent judgement. However it is likely that comprehension tests can only be a fairly crude assessment tool, one which ultimately will not allow us to capture the range of ways of reading which constitutes the second language learner's reading repertoire.

Mindful of the limitations of the comprehension test and also of the need to capture features of the ongoing reading process, other kinds of evaluation have drawn on reader strategies, either as evidenced in miscue analysis or as articulated by readers themselves. One study which centred specifically on L2 readers was that by Block (1986) who investigated the range and nature of strategies used by relatively successful and less successful L2 readers; she identified different modes of response, including what she called *extensive* and *reflexive* modes. In the former the reader attempted to deal with the message conveyed by the author. In the latter, reflexive mode readers related affectively and personally to the text content, focusing on their own train of thought. The group of readers which Block called 'integrators', judged in the study as the better readers, were exclusively extensive. Block concludes that a convergent reading which is integrated with the writer's line of enquiry is a qualitatively better reading than a divergent one which, in reflexive mode, pursues the reader's own line of enquiry.

In a strategies orientation to the reading process reading problems tend to be attributed to reader inadequacy, rather than as being triggered by features of the language or content of the text or by situational constraints. A further difficulty is with identifying the status of strategy. How can strategies be satisfactorily discriminated from each other and how do they inter-relate or link to some over-arching kind of reader position or stance, which is less to do with reading skill than the social values or experiences which a reader brings to the text? In

general, the strategies literature (as Koo notes 1998, p. 65) makes only minimal concessions to social dimensions in the reading process.

Finally the notion of strategy itself is reductive. As Kramsch says (1995, p. 48) 'it focuses on local problem-solving, not on contemplation or reflection' – important if we bear in mind the findings of Lunzer and Gardner (*op. cit.*) on the reflective reader. Kramsch contrasts the strategy scholars' preoccupation with procedural knowledge and automaticity with what she calls declarative forms of knowledge. It is this kind of declarative, explicit knowledge, rather than automaticity of processing which characterises reading as a sociolinguistic activity, which I turn to next.

A sociolinguistic view of reading: reader roles

If we take a sociolinguistic view of reading, reading effectiveness is necessarily contextually influenced, with the ability to make meaning from text linked to variables such as what we are reading (*content*), what kind of text (*genre*), in what *context* and with what *purpose*? Freebody and Luke (2003) see readers taking on varying roles as they make use of four key resources for dealing with texts: the roles of code breaker, text participant, text user and text analyst. As a code breaker the reader draws on alphabetic knowledge to deal with the mechanical aspects of reading. However, as Gibbons (2002) points out, code breaking, though necessary, is not sufficient for the successful reading of authentic texts in real social contexts (Gibbons, 2002, p. 81). Readers need to participate, that is draw on appropriate content and cultural knowledge, they need to use texts for different purposes in everyday life and finally, as text analysts, readers see texts as open to question, as representing a particular ideology or view of the world. The notion of reader role offers a more sociolinguistically sensitive way of describing and judging reader skill than decoding to comprehension models of reading. We see Johnny initially restricted to his role as code breaker, only able to assume the more active role of text *user* once the text allowed him some agency – we might say acknowledged his expertise not as 'reader as good decoder', but as a knowledgeable carer of animals. Crucially he was not only taking *from* such texts but bringing pertinent and expert knowledge *to* them. Yuko, in the vignette quoted above, is talking in her role as a text *analyst*, adopting a stance which is prepared to challenge a writer's ideological position and the way she herself is positioned as a reader.

I should like to draw on Freebody and Luke's notion of reader role, which involves a reader drawing on text in a range of ways. One role which is especially relevant, although not exclusive to, the second language reader is that of 'user of text for language learning'. A major reason why the second language learner reads is to learn more about English itself. This indeed is what prompted Sara's comment above about the word 'nominate'. I begin therefore with this role of the reader, moving on to consider the role of reader as a text user, in particular as what I call a 'text interpreter' and concluding with discussion of the role of the reader as critical analyst. In the case of each of these roles, I consider how we might evaluate reader effectiveness.

The reader as text user for language learning

The more fluently and widely the second language reader reads, the more exposure to the key structures and vocabulary of the second language he or she gains. Reading offers more language input than can usually be provided orally, especially in second language learning contexts. As well as providing *quantity* of input there is also a need to offer learners access to vocabulary and structures which tend to occur only in particular kinds of writing. For this reason access to a wide range of print genres is crucial; it is possible, even in material specially written for the classroom, to aim for authenticity of genre, by making a text recognisable as an advertisement, story, a poem or a business letter (cf. Wallace, 1992). At the same time attention can be drawn to the way in which textual and discourse features typify certain genres.

Michael Halliday notes that print provides 'a resource for asking questions about text, that it makes the grammar more visible' (Halliday, 1996, p. 350). For very early second language learners in particular access to written text offers a metalinguistic and metacognitive tool in that the more fully structured language of written text allows them not just to notice features of the language, made more visible in print, but to match up their own current language use against the standard features of the text. In this example we see Amna, a near beginner to reading and to English (cf. Wallace, 1990) who had never been observed to use the 'do' auxiliary in her own speech to form past tense interrogatives, commenting thus:

Did you means past?
And on another occasion:
Did you sleep means you sleep or no?

Amna was also able to notice how reference works in discourse, as we see in the next example, where she reads the first two lines from a story, hesitates and then makes her own comment on the text in the third line:

I go home and get a cup of tea
I sit down and drink it.
Why not write here 'tea? Why write 'it'? Short way. 'It' means tea.

As Olson (1990) says, reading is a metalinguistic activity. Literacy turns language into an object of awareness. Amna was able to notice the use of past tense and the way cohesion works in English through observing these features in the relatively stable and visible medium of written text rather than in ephemeral and less readily noticed spoken language.

Evaluating the expertise of reader as language learner

If we agree the value of the role of the reader as language learner, what kind of evidence might be drawn on to assess how effective the reader is in this role? One common practice, which uses the text as language learning vehicle, is to ask students to notice grammatical items through activities like: 'underline all the past tenses in a text'. A difficulty with this kind of activity, which I observed very recently in one classroom, is that it does not reveal any understanding of the relationship between form and meaning, merely recognition of form. Alternatives are to invite attention to form/meaning in various ways. Beginner learners might be encouraged to develop a metalanguage of the kind Amna draws on, as a tool to give them access to the role of linguistic features as embedded within texts, not as isolated or decontextualised language forms. For advanced learners there are a number of proposals for inductive grammar activities developed by Ellis (e.g. 2003) and Hall and Shepheard (1991) which encourage learners to notice the manner in which grammatical choice contributes to overall textual meaning.

The reader as recreator of text: from comprehension to interpretation

What about the use of texts 'beyond language learning' (cf. Littlejohn and Windeatt, 1989)? Second language readers may want and need to respond to texts in more diverse and complex ways than in their roles as language learners. They may wish to be more than mere 'animators'

of texts, – a term which Widdowson (1992), drawing in turn on Goffman (1981), uses to describe a mere 'taking from' text; they may wish to be 'authors', that is, active constructors and creators of meaning. Text authors, unlike animators, are both participators in and users of texts in the terms provided by Luke and Freebody (*op. cit.*). They draw on background knowledge and are aware of the overall purpose of texts in contexts of use other than the classroom and beyond their role as language learners.

Studies in pragmatics and speech philosophy have long challenged a conduit model of communication, preferring to talk of an ongoing negotiation of meaning between speakers and listeners or readers and writers. Bakhtin, arguing that all texts are dialogic, talks of 'the fiction of the understander', noting that 'any understanding is imbued with response' (1986, p. 68). It follows that we might want to treat readers' responses to texts not as reproductions of the original text but as new texts, closely engaged with the meanings of the original one but not merely parasitic on it: we might say as a text created out of the original one by the reader as an active agent, as *author*, in Goffman's terms. *Interpretation* seems to capture this creative process more adequately than comprehension. It also takes greater account of the possibility of individually variable readings of texts, influenced by different kinds of background knowledge. Moreover, as Urquhart and Weir (1998, p. 117) point out, background knowledge is not, as assumed in some strategy studies of reading, an extra resource but a filter through which we view *all* texts. I would add that this filter is socially constrained, so that as readers we are not just drawing on personal and individual experiences but are inevitably located within a social framework. 'The act of reading is not merely a mind-to-mind engagement but an act which engages the reader's social identities' (Koo, 1998, p. 65). As Chouliaraki and Fairclough put it: people establish their identities through the diverse ways in which they *interpret* texts. In addition , and echoing my earlier claim about creative reading, Chouliaraki and Fairclough continue: 'different interpretations entail bringing different discourses to the interpretation of a text creating in a sense a new hybrid text which combines the text interpreted with the discourses which are brought to it in the process of reading' (Chouliaraki and Fairclough, 1999, p. 14).

Evaluating the reader as an interpreter of text

How might we evaluate the skill with which a reader fulfils an interpreter role? One way of doing this is by asking readers to 'think aloud' through texts. William, an educated first language reader, has been

asked to read a text from a magazine and simply to comment on it in any way he wishes. Below is the opening section of the text along with a later extract from the text with William's commentary beside it.

SINGAPORE
WHERE THE STATE CHOOSES YOUR PARTNER

Singapore's citizens are so law-abiding that many of them participate in state-run matchmaking schemes, which encourage intellectual equals to marry each other. Sophie Campbell reports from the country where failing to flush a toilet can be an offence.

Welcome to Singapore. Death to Drug Traffickers reads the immigration card on arrival at Changi Airport. Driving down a palm-bordered highway to the cluster of futuristic buildings that is down town Singapore you find yourself on an island the size of the Isle of Wight, inhabited by three million of the most obedient people on earth. Singapore is famous for its Draconian laws. Gambling is banned, there are £185 fines for jaywalking within 50 metres of a pedestrian crossing or smoking in a public building and up to £370 fines for spitting, littering or failing to flush a public toilet. Even when the streets are empty, people wait patiently on the immaculate pavements until the lights indicate that they can cross.

(from Marie Claire, 1992)

The text

The government has fought to maintain a
Peaceful, multiracial society that helps
Those who help themselves. Policies like
Bilingualism (English plus a mother tongue),
Public housing… and the creation of a
national ideology may seem sinister. A
firm believer in eugenics (the genetic
transfer of intelligence) and 'social
engineering' Lee has been vociferously
encouraging educated people to marry
each other and produce children.
In 1984, worried by the tendency of male
graduates to marry down and leave well-
educated women unwed, The Government
set up the Social Development Unit (the SDU)
to match male and female graduates. The SDU
has gone from strength to strength. It has
spawned the Social Development Service
(SDS), which matches O-level students with
O-level students, A-level students with A
Level students.

William's reading protocol

OK, I hadn't really read the
front part, the first bit care
fully enough. So this is
encouraging intellectual
equals to marry. OK so
implying here that men are
getting intimidated by women
graduates – too intellectually
powerful for them. OK OK
and here we've got an
example of a Singaporean
couple… Looks like we're
off the personal interest
story and on to the
generalisations. OK (reads
'matching A-level students
to A-level students) Wow
what's this remind me of?
Brave New World. Sounds a
bit Brave New Worldly in a
lateral kind of way.

We see how William draws inferences from the text, as in '*so implying that men are getting intimidated by women graduates*' At the same time he refers to his own reading strategies in '*OK I hadn't read the front part, the first bit, carefully enough*' and relevant background knowledge, as in '*Wow – what's this remind me of – Brave New World.* Later in the reading protocol he assumes an identity of text user by commenting on how far he sees himself as the reader of such texts in everyday settings: *It's not an article that makes me sit up in huge surprise knowing what stuff I know about Singapore. It seems to conform fairly well to what I'd expect of an article. It also has to be said if I was reading this on a train, I would have drifted in and drifted out.*

William assumes momentarily an imagined identity of the 'reader on a train'. However, while William is a skilled interpreter of text – he has recreated the text rather than merely reproducing it – his reading cannot be said on the evidence here to be particularly critical. This raises the question as to what a critical stance to text might look like. I turn to this next.

The reader as critic

The sense of critical, which I wish to put forward here is indebted to work in Critical Discourse Analysis and its pedagogic offspring Critical Language Awareness. A critical stance involves challenge not to the propositional or logical content of texts, which William does skilfully, so much as to their ideological loading. This means attending not only to the truth value of what is said nor, pragmatically speaking, to how we are intended to relate what is said to what is meant (though both of those will remain key to effective reading), but to the kind of ideological factors which underpin the discourse choices in text and which are only partially under the control of individual writers. So if we take our key text **Singapore**, it is undeniably the case that the government is encouraging educated people to marry each other, but more interesting for critical reading purposes is not this verifiable fact and the propositional statements which encode it, but the manner in which the text's lexical, syntactic and thematic choices taken together, invite one kind of reading rather than another. To engage in this kind of critique the reader needs some analytical tools and it is for this reason that critical discourse analysts propose frameworks of varying linguistic specificity which have the potential to help students notice the ideological weighting of text features (cf. for example, Wallace, 2003, O'Regan, forthcoming). However, even in the absence of a more analytical reading, we can ask some preliminary critical questions such as: why the text has

been written in the first place, to whom, and in what other ways the text might have been written (cf. Kress, 1989). In everyday, convergent reading the why question is not salient, as there is fairly ready cultural recognisability of a text type. Sheer familiarity precludes analysis or reflection. A reader in critical mode will aim not for familiarisation but for *de*familiarisation. And it is here that a second language reader may have an advantage over the first language reader, simply because she or he is not the envisaged reader of a text which assumes not just linguistic and cultural but also ideological co-membership between reader and writer. In other words a second language reader may have some advantage as an outsider or, what Mills (1992) has called an 'over hearer' to the writer/reader communication.

Evaluating the reader as critic

Yuko, the student in the *Critical Reading* class quoted earlier, was also asked to read the text about Singapore and I draw on her reading protocol here to discuss how far there is evidence of criticality in her responses.

> *And then, as I read on, I don't know which magazine or newspaper this article was actually put – appeared – but I guess its more or less like a woman's magazine like Marie Claire. It says here: 'the creation of a national ideology may seem excessive, even comical to a Western observer' and then they carry on talking about encouraging educated people to marry each other and produce children. Well probably that's what actually happening in Singapore but I think what they talked about here well, in my opinion, is really extreme case, um, maybe because I just can't believe this story is usual. If it is just extreme case they introducing in this text, I can understand, but I don't like this article so much because I think in this kind of text, generally speaking, I think the British people I mean and other European people seem like seem that they looking at Far East people in some different way … I think its like they're as if looking at some completely strangers, like people who's mad or who act beyond their comprehension. I don't like … Well I don't think um. I know these articles appear in British magazines but I just don't like the way of introducing these things.*

I would want to argue that Yuko brings her identity as an outsider to the reader/writer interaction in ways which are productive for a critical reading of this text. She moves beyond the text as the artefact in front of her to speculate on the wider context of situation, to include writer purpose and readership. She elaborates the writer's message in her own

schematic terms and for her own purposes. There is undoubtedly a strong affective dimension to Yuko's responses. Nonetheless, there is also a degree of analytic distance, suggested by the preparedness to argue through her case and exemplify. Overall she is producing a different kind of discourse from William, a discourse of enquiry, characterised by expansion of argument which involves the presentation of reasons for beliefs or points of view.

While offering justification for the responses she offers, Yuko is at the same time using the text for her own ends, relocating the text within her own cultural landscape. This is a divergent reading in Block's terms (1986). At the same time, this is not a careless or wilful reading; one where referential meaning is disregarded. Importantly, there is an awareness of matters of truth versus opinion. However the truth factor of texts, – referential meaning – is only one kind of meaning as when Yuko says: '*well probably that's what actually is happening in Singapore but I think what they talked about here well, in my opinion, is really extreme case*'.

Conclusion

I have argued that usual ways of judging reader expertise may not do full credit to the resources or needs with which most second language readers come to L2 reading. Accuracy of decoding or skill in answering comprehension questions may not adequately reflect the full range of roles which L2 readers wish to assume as readers of English. Fluency too may not always indicate effective text processing: the hesitant reader, even as a beginner, may not be the unskilled one but one who is more metacognitively aware and alert to textual ambiguity. Reading, I have suggested, like writing, is a thinking process evidenced and supported less by automaticity than by enhanced reflectiveness.

Furthermore, if one sees reading as interpretation, and, more particularly *critical* interpretation, then the native speaker loses the advantages which a comprehension view of reading provides. The notion of criticality cannot be linked to innate linguistic competence but is socially situated and educationally learned. It is achieved with difficulty, and effort. Above all, it is variable, closely tied to sociolinguistic context. In seeing reading expertise in this manner I believe that the second language reader, as an outsider to the reading interaction between writer and envisaged reader, can be seen, not as aspiring towards the holy grail of native speaker competence but as an expert in her own right.

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5
Oral Second Language Abilities as Expertise

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Introduction

Ericsson introduces a book on expertise with the words:

> In every domain of expertise, many start on the 'road to excellence' but few reach the highest levels of achievement and performance. (1996, p. 1)

In many ways this statement appears not to apply to language. Most people are fluent speakers of their languages, and by the way they use them, they define what it is to be a proficient speaker. Yet when we consider closely the experiences of second language learners, things are not so straightforward. Although it is true that second language users contribute to defining what it is to be proficient in their second language, there are nevertheless good grounds for distinguishing quite significant differences between the levels of achievement and performance of many second language speakers. The differences seem to range across the whole complex of oral language abilities, from discourse to phonology, and expertise studies are centrally concerned to understand such differences from a holistic perspective.

Traditionally the study of second language development has been in terms of the linguistic patterns used by second language users at different levels of proficiency, inferring from overt differences the ways in which learners develop their underlying knowledge of the linguistic system (cf. Tarone, 1988). I will label this a 'sub systemic approach', that is, an approach in which the researcher's focus is on the learners' acquisition of a part of the target grammar – the system of rules for forming the interrogative, for negation, or for structuring relative clauses. Although sub systemic

approaches have for some time explored the ways in which learners' systemic knowledge has evolved within functional and discoursal contexts of use (e.g. Schachter, 1986; Tarone and Parrish, 1988), their main focus is the development of learners' knowledge of different linguistic subsystems.

Up until the 1980s to some extent pedagogical approaches tended to highlight different sub systems of the target language for learning and processing practice. It could be argued however that most approaches had difficulty in bringing the different sub systems together into a single frame. This was in many ways both a philosophical and a technological problem: philosophical in the sense that since grammar can be defined as made up of numerous distinct sub systems, the syllabuses of pedagogies which make attention to grammar central are likely to prioritise those sub systems; and technological because integrating grammatical sub systems needs to be done at discourse level, and as long as pedagogical activities ignored the use of discourse, the sub systems could not be easily brought together in learning activities. Although grammar translation and literature-based approaches did manage to achieve this to some extent through the use of (generally literary) texts, it was the advent of the communicative approach which gave rise to a rich vein of techniques for activating meaningful use of oral discourse, without having recourse to scripting, and without motivating talk around a narrow structural focus. Materials exploited the potential of non-verbal representations (such as pictures and graphics such as tables, charts, graphs, schedules, and maps) with linguistic input material briefing learners on problems to be solved rather than on the language to be used. That is, instead of relying on more or less tightly scripted prompts to direct the speakers into particular grammatical and functional areas of talk, materials designers concentrated on providing a *purpose* for talk, with learners responsible for sorting out precisely what talk to produce, and to check that they were making sense. In many ways this was a revolutionary development, as powerful as the discovery earlier in the 20th century of the power and potential of the structural drill. However, while the communicative approach was revolutionary in pedagogical terms, it nonetheless remains poorly informed by views of the kinds of abilities which it aimed to stimulate, or of the ways in which they might develop.

In contrast to sub systemic approaches, an expertise approach to second language learning considers all language learning as a problem of developing strategic mapping of the language onto domain needs, and strategic control so as to be able to use it. To do this it draws on what is known about expertise in a variety of skills, complementing sub systemic approaches by drawing attention to how the parts of the

system are integrated into whole pragmatically driven performances. That is, it helps to understand oral second language development in terms of the particular strategic demands the mastery of oral language places on learners.

An expertise approach makes a number of basic assumptions about the nature of second language use and second language development, as follows:

- Language use and learning are fundamentally bimodal, with users' knowledge and their processing of language having equal importance: 'knowing or learning a language' is not wholly a matter of mastering linguistic systems, but also entails learning their use; knowledge is impossible without some kind of control, but equally control is vacuous without some knowledge to focus on;
- An essentially functional view of language, whereby users' knowledge and control of a given language and of its different elements is strategically goal-oriented;
- Language expertise is not hardwired, but emerges through the interaction between the motivations and capacities of humans and the demands which they aim to respond to;
- The elements of a given language therefore need to be seen in terms of the ways in which they are shaped in order to manage ideational, interpersonal and textual meanings for some strategic purpose, and not only as a series of abstractly interlocking elements;
- The approach doesn't assume that *language development* is homogeneous across oral and written modes or discourse types or conditions, but rather that it is at least an empirical question how people come to extend their use of language knowledge across modes, discourse types and conditions;
- The main puzzle for language pedagogy and research is to understand how the holistic capacity needed for language expertise can be built up.

But how can this perception be articulated, in ways which might be of use to pedagogical research and practice?

This paper argues that seeing oral language as expertise suggests that the communicative approach has helped to redefine the problem rather than solve it (cf. Dewey, 1913).

The next section discusses the nature of oral language ability in terms of expertise, section 3 considers oral second language development in the light of an expertise approach, and section 4 then discusses pedagogical and research issues arising form the emerging account.

Expertise and oral language use

We start from a consideration of what a model of oral language use needs to include. A bimodal approach by definition must comprise an account of the nature of both the oral language *repertoires*, and the *processes* for using them, and how they develop.

Experts are thought to have a highly developed store of repertoires, structured at both macro and micro levels. For example, although all chess players observe the same basic rules, more expert players are far more likely to remember to a high degree of accuracy the layout of the pieces of a game in progress. This is interpreted as being a reflection of the range of game plans that the player has memorised (De Groot, 1965). The level of performance of sportsmen such as tennis players, say in terms of speed, accuracy and effectiveness, can similarly be partly seen as a reflection of the number of strategic combinations of moves that they have mastered. This could apply similarly to the ability of artists such as musicians, and skilled craftsmen, such as builders or cooks. Repertoires operate at different levels. So for example at lower levels they will involve various subroutines, such as types of tennis stroke, or in the kitchen, types of pastry or ways of cooking with eggs. At higher levels they will involve strategic combinations of tennis strokes which if followed can enable a player to win a point; or in the kitchen, strategic combinations of routines will contribute to making a dish. In addition to this, it is important to bear in mind that repertoires are stored not as blocks of abstract knowledge, but as routines – that is, they are stored as guides to action, in ways which make them readily usable. So the question is, what kinds of repertoire are relevant for speakers in a second language?

Oral repertoires

The first question then is whether there is a typical language base which oral communication draws on. Is oral language shaped for the circumstances and purposes for which it is typically used, so as to form an oral repertoire? Chafe (1982, 1985) argues that it is, identifying numerous features of language which are prototypical of, and in some cases unique to, speech rather than written language. For instance reference to the discourse participants and to the time and location is significantly more common though not unique to speech as is the use of certain verb groups; so too are hedges and other markers of involvement; while pausing and hesitation phenomena are unique to speech. Working from spoken language corpora, McCarthy and O'Keefe (2004) agree, suggesting that the fact that 'dialogues produced for classroom use are for the most part scripted', results in materials 'lack[ing] core

spoken language features such as discourse markers, vague language, ellipses and hedges' (p. 29).

There are different views of the main oral language repertoires. For instance, working from a corpus, Carter and McCarthy (1997), and McCarthy (1998) propose eight major types of oral discourse. In a recent paper, McCarthy and O'Keefe (2004) reduce this to three – small talk, discussions, and narrative, and this must clearly remain a topic for further research. Nonetheless, this chapter assumes that analysts' interest in discourse patterns reflects a consensus that different discourse patterns imply a regularity about the shaping of repertoires for interpersonal use.

The main aspects of oral language which can be thought of as constituting a specially shaped repertoire seem to be the following:

- Discourse repertoires: types of narrative (Eggins and Slade, 1997), planning (Carter and McCarthy, 1997), oral presentations; formal business meetings (Williams, 1988); discussion strategies; business negotiations (White, 1997); patterns of small talk (McCarthy and O'Keefe, 2004); conversation (Carter and McCarthy, 1997);
- Adjacency repertoires: phasing of speech acts; turntaking (e.g. Richards, 1983; Schiffrin, 1994); openings & closings (formal and informal, face to face and by phone); negotiation and repair sequences (Yule and Tarone, 1991; Dörnyei and Thurrell, 1994);
- Syntactic options: topic-comment sequencing (topic fronting or end focusing) (Carter and McCarthy, 1997);
- Ellipsis (clausal and phrasal utterances) (Chafe, 1985);
- Personal involvement and register options: wider range of informality of lexis, and phrasing; use of hedges, intensifiers, and disjunctive expressions (Chafe, 1982, 1985);
- Deictic options: temporal, spatial and interlocutor deixis; tense and aspect;
- Fluency issues: fillers, pausing (Beattie, 1980; Dörnyei and Kormos, 1998);
- Articulation: intonation, stress, pronunciation.

Some of these features are higher level than others – for example discourse patterns involve the organisation of multi-utterance sequences; linearisation and ellipsis relate to the internal organisation of particular utterances; personal involvement and deictic options are concerned with words and phrases to mark referential meanings or attitude; fluency issues involve the use of pauses and fillers; articulation involves the utterance by utterance use of segmental and suprasegmental features.

An expertise approach to spoken language will see expertise as reflected in the range of patterns speakers are familiar with and able to

exploit at each level. Expert speakers can be expected to be familiar with a range of discourse patterns, a range of convergence strategies, to manage linearisation and ellipsis comfortably, and to know key ways of marking personal involvement and deictic options. They will sound fluent and vary their fluency, and manage the range of articulatory demands. Experts will use these features to converge to target like oral patterns, to some extent motivated by personal preference, but to some extent motivated by the dynamics of unscripted talk.

This perspective raises questions such as how do speakers become better at internalising and handling discourse patterns, such as story telling, or inviting; how do speakers' abilities to signal personal involvement develop; in what ways do speakers develop their use of fluency markers; does ability at the different levels develop simultaneously, or are there learners who focus first more on one level than another, and if so, in what ways; and how can repertoires be effectively addressed in the language classroom?

The reader will have noticed in this account that it is very difficult to discuss repertoires in relation to expertise without referring to the learners' ability to use them. That is, processing and how to promote it, is also a pedagogic issue, and this is the focus of the next section.

Oral processes

That is, expertise is seen as essentially holistic: parts of the ability are not seen purely in their own right, but in relation to the whole skill in action. The question is, how do speakers process oral language to achieve their goals?

A useful starting point is Levelt's model of oral language production (1978, 1989). This was developed for first language speech, so in some ways it needs adapting for speech in a second language. Furthermore, it is a 'steady state' model (de Bot, 1992) so is not sufficient to account for development. It is also extremely detailed, and this paper cannot possibly do his scheme full justice. However the broad structure is insightful. It has been reported elsewhere (e.g. de Bot, 1992; Bygate, 2001; Dörnyei & Kormos, 1998) so this account will be relatively brief.

Levelt starts from the assumption that speech links an intention to articulation (Levelt, 1989) – that is, it is goal oriented. The speaker's intention is represented as a *conceptualisation*, which once generated is held in working memory. A process of *formulation* then seeks appropriate language to represent the conceptualisations, which is then transformed into acoustic signals through *articulation*. The whole speech production process is situated within speakers' awareness of the ongoing discourse, and within their range of background knowledge. The

whole process is *monitored* in order to ensure that the subprocesses of conceptualisation, formulation and articulation are all appropriate, and to modify them when necessary.

Levelt proposes that for any message, intention precedes articulation. Conceptualisation therefore is slightly ahead of formulation, and formulation is slightly earlier than articulation. Furthermore, articulation is seen as being more automated than formulation, and similarly formulation is generally more automated than conceptualisation. This means that conscious attention can be mainly focused on the processing of meanings, while increased automation allows formulation and articulation to require less attention. The net effect is that all three processes can continue simultaneously, with concepts once planned being sent off for formulation, and articulation while attention continues to focus on the upcoming part of the message.

Clearly this account helps describe what learners' attention capacity is used for in speech production. This can be diagrammed in a simplified way as follows:

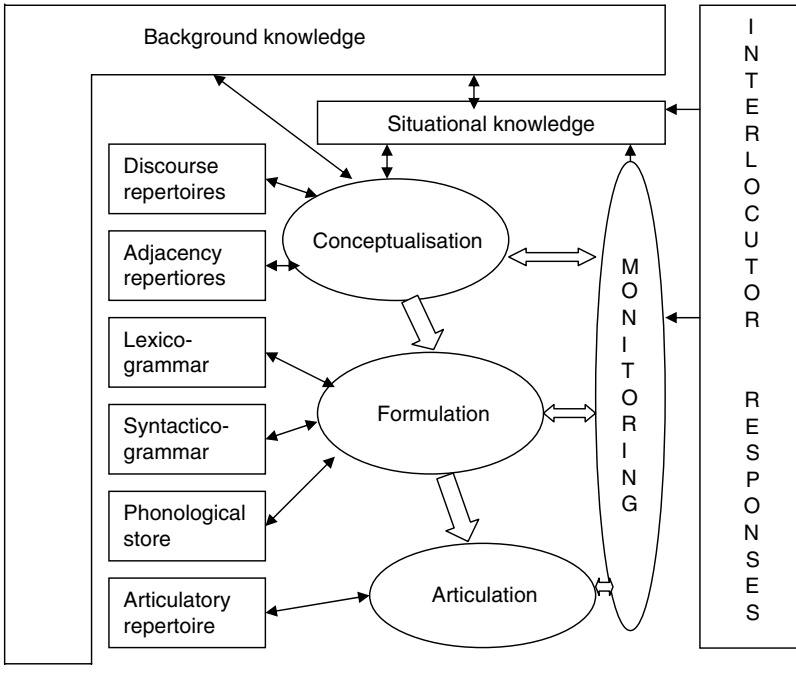

Figure 5.1 Working memory in speech production (after Levelt, 1989).

Some comments about this figure. First of all, it falls clearly into the category of mechanistic computer metaphors which have been criticised by socio-constructivists such as Platt and Brooks (1994). The main justification for using it here is that even holistic approaches need to account for the various sub processes that they aim to include, if only to ensure that attention to the whole is not at the expense of understanding, and if necessary attending to, the parts. In addition, though, the diagram serves to represent graphically the range of simultaneous processes kept in working memory during speech production. The ovals represent sub processes. Block arrows represent the controlling processes of speech production. The two way line arrows indicate the processes of seeking out and using stored knowledge, situational, background, and linguistic. Information from a speech event, including information from interlocutors, can be shifted to the background knowledge store, but this necessarily goes through the current situational knowledge store. Finally this is similar to other figures that can be found in the literature (e.g. Garman, 1990; Morrison and Low, 1983).

Various aspects of Levelt's model are of interest, but we will just mention two here – the fact that speech involves holding plans in working memory while acting on them, and the complementarity of automation and flexibility at all levels of the skill.

The fact that higher levels provide a frame for production at lower levels means that higher level frames hold information which is *ahead* of the current point of operation of the level below. For instance, the message 'there's a bull in that field' is almost certain to be formulated with the speaker knowing where the bull is, and the stream of speech emerges with the speaker knowing that the word 'bull' is going to be followed by the word 'field'. At a more detailed level of realisation, the word 'in' cannot be produced without the speaker knowing in advance which noun is to follow (if the word was 'river' the preposition could well be 'in', whereas if the word was 'gate' it would likely be 'behind'). Speakers in all languages have to work in this way – it is often impossible to start a phrase or clause without knowing what is going into later parts of it. In other words, the higher structures coordinate the lower ones. One pedagogical implication here is that lower level skills need practising in the context of higher level processes.

We also need to note a complementarity between the dynamic and the automated aspects of the hierarchy: however automated the lower levels, they are open to monitoring and modification. This means that speakers need to be able to focus at least some element of attention to lower levels of processing – they are not managed 'blindly'. But by the

same token, however deliberate the higher levels, we can also assume that they are used with some degree of automaticity. This is reflected in the ways in which even though speakers may have equivalent lexico-grammatical knowledge, those familiar with certain discourse types tend to be able to manage them more fluently than those who aren't. Hence, learners need to maintain awareness of the lower levels of processing, as well as build up a certain level of automaticity with higher levels of processing.

The overall implication of this perspective is that in learning to speak a foreign language, speakers need to integrate low and high level skills, that is expertise needs to be developed within the context of the communication of actual messages in on-going discourse, with speakers choosing what to say, when to say it, and how to say it, and self-correcting as necessary.

Although all speakers manage this complex of demands to some extent, second language speakers will often find the ability hard to master. For instance, generally the non-linguistic background knowledge is straightforward, but signalling it appropriately in a target language can be difficult. Similarly, tracking the state of the talk can often be harder in a second language. The speaker may have a less rich store of relevant discourse genres, and less awareness of potential registers, making the decoding and encoding of parts of the discourse more difficult. Around the handling of the current message, second language speakers are likely to have difficulties in finding and accessing appropriate vocabulary, and linking it up appropriately to lexical and grammatical markers. Phonological patterns are likely to cause problems, particularly in their realisation. In addition speakers will generally be aware of those aspects of talk which cause recurrent problems, and may be reminded of this as they seek appropriate language for their current purpose. And as the above schema indicates, learners also need to be able to manage the improvisation of unscripted speech under typical real time constraints.

The question then is how expertise develops, and to this we now turn.

Oral language and the development of expertise

We commented earlier that Levelt's model is a *steady state* model: that is, it describes how a competent speaker is able to perform, but it doesn't explain how a novice or inexpert speaker develops. For instance, do speakers develop their repertoires and capacities to use them in any

particular order (for instance starting with higher and moving to lower levels), or do they develop them at different *rates*?

There is little research into second language development which has explicitly studied this question. However there are sources of information which can provide us with strong clues about how oral language expertise develops. These are first language acquisition research; second language acquisition research; language learning theory; comparisons between novices and experts in other domains; and logical reasoning.

First language acquisition

First language acquisition research has shown that first words appear at around one year of age. At that age and for some years to come, the infant is busy acquiring knowledge about the world at large, with language just one area for development. It is evident that before children are able to produce language, they are already able to participate in complex interactions. Bruner (1983); Ochs and Schieffelin (1983) and Wells (1985) for instance all document ways in which children are able to participate knowingly and effectively in interactions with parents and siblings despite having no or only the most minimal language at their disposal. Children's first words appear, then, within the context of an already developed ability to manage interpersonal interaction. That is, it is possible to participate creatively within discourse without language. Indeed, both Bruner and Wells argue that it is through the pre-established interpersonal understandings that children learn language. Children are able to use their familiarity with the speech events and with their interlocutors' typical intentions to respond to others' utterances and to initiate their own. This amounts to the fact that infants engage in parallel learning – of discourse level conceptualisations, formulations and articulation – from the start. Although at any one time more development may well be taking place at one level than at another, development at any level occurs while the others are in a state of activation.

Second language acquisition

As with child language development, second language acquisition also commonly involves simultaneous activation of all levels during learning. As with first language development, here too the speaker may be engaged in more development at one level than another. Wong Fillmore (1979) studied a young second language learner, Nora, in primary school. Wong Fillmore noted that Nora quickly showed herself able to participate in games at recreation time, despite barely speaking

the language. Wong Fillmore concluded that Nora had adopted a general strategy – to 'learn the big things first'. That is, initial involvement in games, during which time she followed the rules by guesswork, gave her the chance to pick up the elements of language. These in turn would enable her better to play the games, and in so doing, to learn the language. Here most of Nora's initial work seems to have been at the conceptual discourse level. Subsequently she would have undoubtedly spent more time sorting through the lexico-grammar of the language.

Of course, parallel processing does not necessarily lead to target like learning, since once a speaker has found the strategies for managing the discourse, it is perfectly possible for them to abandon any further efforts to master the lexico-grammar. Schmidt's 1983 study of Wes illustrates this point. Wes, a Japanese learner of English as a second language, was able to satisfy his general needs, without pushing his lexico-grammar beyond a limited level of proficiency. In terms of his discourse repertoires he was very advanced, but much less so in his lexico-grammatical repertoire. As Skehan put it 'reliance on communication strategies [...] seemed to be harmful to his linguistic health, a point that evidently did not disturb Wes, since he had achieved the goals he had set for himself as far as communication was concerned' (1998, p. 23). This does not mean that being good at handling discourse repertoires necessarily impedes development of lexico-grammatical repertoires, but it does imply that there is a need for learners to *attend* to the levels of formulation and articulation, in parallel with the conceptual level if these are to develop.

Indeed, Schmidt's study of his own second language learning makes this very point (Schmidt and Frota, 1986). In an introspective study Schmidt discovered that on many occasions when he learnt and adopted a new element of the language, this followed his prior *noticing* of the feature in the surrounding discourse of those he was with. This concept of *noticing* makes explicit (by definition) that the learner was able to attend to formal features of the language even while following people's discourse meanings. That is, the learner was clearly capable of managing the conceptual discourse level of speech, while devoting more attention than would be usual in one's first language to the levels of formulation and articulation.

There is little doubt however that as with child language learning, the macro-context can help oral second language learning. Dakin (1973) invented elements of a language, Novish, with peculiar grammatical features, with the purpose of demonstrating how learners who

obviously had no prior knowledge of the language were able to infer through trial and error how the system worked. However, to engage in the process of inferencing, learners need to bring various types of background knowledge to the task, such as knowledge of how the first lesson in a new language is often structured, of how to match vocabulary items with pictures of objects, and of how a teacher would refer to them. This implies that even from the earliest phases of both L1 and L2 learning, learners are able to attend to the discourse level of meanings, as well as new formulations and articulations. That is, within the development of oral language abilities, parallel learning from the start is uncontroversial.

Comparisons between novices and experts

So far, we have considered the possibility of parallel processing in first and second language learning, and the fact that it can in fact be an extremely helpful cue and anchor to the meanings people are expressing, and to the lexico-grammar that they use to do it. To the point that the context may well enable learners to manage the task with more fluency than they could otherwise manage. The question then though is whether there is any particular pattern to the ways in which expertise develops in a speaker's use of a second language.

Dreyfus and Dreyfus (1986) suggested that expertise typically develops along the following lines:

> The learner employs precise rules, which apply to objectively specifiable circumstances that can be recognized independently of other aspects of the situation encountered.
> The learner recognizes the role of context: in some situations the rules are to be modified, so it pays to remember these particular situations.
> Rules are not applied simply because they are applicable but because they will enable the performer to reach a goal. Since the learner here sets the goals for particular situations, he or she does not simply respond to events, but directs activity.
> The learner doesn't simply use the deliberate model of reasoning and relies extensively on recalling previous events similar to the current one, based on holistic similarity.

The whole process of responding is smooth and fluid (in contrast to the unevenness of other levels of performance): the learner sees the situation, and sees what to do, responding intuitively.

This account of expertise development makes a number of very important points. First it makes clear that expertise is founded on regularity of behaviours (rules are one kind of regularity). Let us call regular behaviours 'moves'. A second phase of learning concerns understanding when particular moves are appropriate, and learning that they need to be modified in certain contexts. A third significant phase occurs when learners become aware that different moves may be available at any given point, and that they therefore need to understand how the different options can contribute to different goals. This is the point where learners become strategic, taking significantly more control of the activities by exercising choice over how they achieve their goals. Once learners do this, then the mode of operation can change, from one in which they deliberately apply knowledge of the rules or regularities in deciding which move is appropriate, one where they use a more holistic recollection of how previous events were managed to guide action. This holistic mode of recollection leads to an essentially intuitive mode of operation.

To summarise Dreyfus & Dreyfus' account, development typically proceeds as follows:

- Focus on mastering particular moves and when to use them
- Start to use moves strategically, and then use them to achieve personal goals
- Shift from a deliberate to a holistic and intuitive mode of deciding when to use moves, based on accumulated experience

Crucial in this is the appreciation that the greater part of the learning process is concerned with developing strategic goal-oriented action, and building up sufficient amounts of experience for the learner to be able to operate intuitively. It is also important to note that the phases oriented to the development of strategic and intuitive operation are seen as grounded in initial mastery of a number of relevant moves.

This account does not distinguish between declarative and procedural knowledge, the two types of knowledge widely thought of as underpinning human expertise. Here we will assume that both declarative and procedural knowledge are needed at all phases, though that the user can exploit explicit declarative knowledge at times, which subsequently needs to be made implicit (cf. the view suggested by Johnson, 1996 that in some sense procedural knowledge can precede declarative knowledge, and sometimes the reverse).

To summarise, two brief comments. Firstly, this account provides guidelines for structuring quite a substantial programme for developing oral expertise in a second language. Language teaching programmes tend to sound as though their main purpose is to deal with the first of the three phases. This account provides justification for seeing a lot of second language work as concerned with developing learners' strategic and intuitive capacities. Secondly, this has implications for the initial phase: the second and third phases of expertise development need to be grounded in the mastery of relevant initial moves. It is here that the appropriate elements of the oral repertoire need to be explicitly introduced at early phases.

Overall, what seems clear is that parallel learning – that is, learning to process the multiple levels of oral language within discourse contexts – is perfectly feasible, and that both repertoire and processes need to be addressed. While research is relatively lacking in the overall development of oral expertise, research into learning on oral activities does provide some clues as to how holistic oral ability can develop. We consider this in the next section.

Second language processing research

First of all some evidence suggests that familiarity with the relevant discourse task or type can influence speech production. Snow (1987) and Snow *et al*. (1991) studied the abilities of children of different backgrounds but of comparable levels of second language proficiency to provide decontextualised (i.e. dictionary type) definitions. Previous experience of the discourse type involved in producing such definitions made a critical difference in children's performance. Bongaerts and Poulisse (1989) demonstrated that students used similar types of communication strategy in their first and second languages; that is, even if the second language was relatively weaker than their first, the discourse pattern was readily transferred. These studies demonstrate an influence on performance of knowledge of a discourse routine. Bygate (2001) and Bygate and Samuda (2005) show that familiarity with the *content* of a discourse task affects performance. In terms of discourse type, this is a slightly distinct kind of effect. It can however be related to Levelt's model: familiarity either with discourse type or with discourse content can be expected to affect ease of processing at the level of conceptualisation. In either case, we can anticipate that this would lighten the load and assist in performance, and hence could help to promote overall development.

Familiarity is related to planning. Skehan and Foster's research (e.g. Foster and Skehan, 1996; Skehan and Foster, 1997) into the impact of planning explores the possibility that speakers will vary in the extent to which they individually attend to accuracy, fluency or complexity in their speech. Their interest has especially centred on whether attention to one of these dimensions impedes attention to the other. Findings suggest that fluency and complexity can both be promoted simultaneously by allowing speakers planning time, but apparently impeding attention to accuracy. Yuan and Ellis (2003) on the other hand suggest that allocation of on-line planning time can heighten speakers' attention to accuracy, resulting in fewer language errors. These studies seem to imply that learners have difficulty in managing fluency, accuracy and complexity demands simultaneously.

There may be good reasons for their findings. Pre-planning can perhaps help speakers to organise their ideas in one of two ways: either it simply makes it easier for them to get on with their talk, improving their fluency; or else it results in a more complex set of ideas, resulting in more complex talk. Pre-planning is however more likely to focus on general ideas than on detailed choices of language. This is because working memory will find it far easier to hold and use a general discourse plan than a host of detailed language features. In contrast, on-line planning involves speakers in planning the formulation of their talk as they proceed. Since this takes place during talk, it is far less likely to focus on discourse planning than on upcoming utterances and their formulation. This is more likely to result in accuracy, which is what Yuan and Ellis in fact found.

Planning then can help variously to promote fluency or accuracy or complexity. This is not to say that planning is a resource that teachers should necessarily get learners to use. Methodological implications need to be considered separately. However these studies do suggest that speakers tend to improve on one or other dimension at any one time, but not all three. If this is correct, we can conclude that people accumulate the complex of speaking skills cyclically, one element being added at a time, working perhaps from complexity, to accuracy, to fluency. In the light of this, we should not expect second language speakers to improve on all three simultaneously (for a similar argument in relation to second language acquisition generally see for instance Skehan (1998): 91).

However, the three – along with various other aspects of processing – do need to be brought together. The picture gained then suggests that improvement does have to be multidimensional, but one aspect of

language processing providing the basis for development of a different aspect. That is, speakers do not simply bring together discourse plan, relevant messages and their formulation, and then produce the whole in a smoothly flowing stretch of talk. Rather they are likely to build up their capacity to handle discourse, interpersonal functions, lexis, and grammar and gradually improve fluency, and accuracy in turn. Integration of the attention to the various levels and of the fluency of execution needs working up to.

In the light of this kind of picture, when speakers encounter a new speech demand, it is unlikely that they are usually able in one go to release a fluent piece of well formed oral discourse (any more than we expect writers to write down their messages in a single flow). Rather it is more likely that they would form a discourse plan, and struggle somewhat to complete it. In doing this they would likely make errors, miss out or simplify some of the things they would ideally have liked to say, and co-opted help from interlocutors in attempting to achieve their goal. The question is, what would happen if our speakers had to generate the same or a similar piece of talk a second or third time? Here studies of task repetition are of potential interest, both for understanding the learning of oral abilities, and in conceptualising how to teach them.

Bygate (1996) showed repeating a task apparently enabled a speaker to produce more idiomatic and more accurate speech. Bygate and Samuda (2005) provide evidence that task repetition is associated with more sophisticated narratives, with speakers able to frame and comment on their narratives far more second time around. Lynch and Maclean (2000, 2001) showed similar results with adult ESL learners, who on repeated opportunities to explain a poster they had prepared for colleagues, slowly but spontaneously improved their lexical and grammatical accuracy. Hence there is evidence that through repeated encounters with similar activities, speakers' gradually improve their ability to find words and grammatical items, to use them accurately, and to add relevant supportive material into their talk so as to frame what they say.

Congruent with this account is evidence drawn from studies of the impact of peer-peer talk in preparatory phases of oral activities. Machado (2000), reports that preparatory talk between peers prior to an activity is carried over into the performance phase. Ko, Schallert and Walters (2003) considered that story telling benefited from contributions made by peers, again during a preparatory phase (both studies cited in McCarthy and O'Keefe, 2004). Sorting out aspects of the talk

with peers prior to carrying it out would be another way of phasing learners' attention to the task.

From thse various studies it appears that oral pedagogy can usefully consider how oral skills are built up, with an eye to the gradual accumulation of both content factors and implementation factors, seeking out different ways of encouraging this type of development. One clear implication is that pedagogy cannot simply focus on analysing and mastering lexico-grammatical structures, or discourse repertoires: all levels need integrating into fluent accurate performance. In the final section we consider the implications more fully.

Implications for pedagogical research and development

One response to the proposal that holistic skills need to be developed is to offer holistic activities, and leave learners free to do what they will. In discussing implications for pedagogy the next section starts by exploring the issue of whether activity is enough to develop expertise, or whether it needs to be pushed in some way. We then draw out some implications from this discussion.

Is activity enough?

General problem-solving has been of interest in language teaching since the inception of communicative and functional language teaching, because setting learners problems to solve was seen as a way of pushing them to use the second language. Simple examples of this are the now classic information gap (e.g. Ur, 1988) or jigsaw activities (e.g. Geddes and Sturtridge, 1978). Prabhu (1987) proposed a task-based approach to language teaching structured essentially around problem-solving tasks. Clearly problem-solving activities are relevant for both written and oral skills, but they are particularly relevant for teaching oral skills since problems can provide a way of ensuring that different members of a pair or group each have something different to contribute to the activity.

Problem-solving tasks have long been used very widely however across the curriculum (see for instance Barnes, 1976; Barnes and Todd, 1995). Once a new pedagogical procedure is adopted, however, it rapidly raises research and development questions. Ericsson and Hastie (1994) for instance point out that real world activities do not automatically give rise to learning. They argue that whether the activity is for fun or for work, as soon as people are concentrating on achieving an

outcome through the task, they act strategically, in order to ensure either that fun remains high, or to ensure that work is efficient and effective. This means that although learning opportunities will often arise within the context of the activity, participants will normally ignore the opportunity to improve their performance, and just concentrate on completing the activity. The implication is that expertise does not emerge simply through activity: it needs to be 'pushed' – the mere provision of speaking activities for learners to engage in is not enough to ensure that they improve.

Indeed, Ellis and Siegler (1994), in a review of research into the use of problem-solving activities aimed at promoting learning, point out a number of potential problems with the use of such tasks. These include the following:

- children are generally unwilling to plan;
- understanding the goals of the task is important if we are to avoid random trial and error behaviour;
- good ideas (i.e. intended learning) do not automatically win out in problem-solving tasks;
- task design is important;
- formative feedback is important (a point made by Reed, 1968, many years earlier);
- beneficial effects do not follow automatically from working with others, but rather depend on the nature of the interaction;
- designed activities which structure and support particular types of interaction (e.g. collaborative questioning, or hypothesising) are effective;
- experience of solving particular problems leads to the development of multiple strategies for solving that class of problem;
- problem solving activities do however offer the particular strength of providing a realistic context in which learners skills can be tested out and developed.

The implication from this research is that in teaching oral skills through oral language problem-solving tasks, we need to consider a number of factors which are likely to affect learning. These are particularly the design of the activity, whether its goals are clear to the learners, the kinds of interaction it encourages or models, and whether or not feedback is offered. Noting the importance of design, the following section focuses on how activities can be used to encourage development.

Pushing oral expertise

As we have noted, it is not sufficient to provide activity: expertise can only be attained through appropriately targeted effort. A number of implications emerge. First, more work is needed to highlight the repertoires that are relevant for oral language development. As we have seen, the relevant processing skills cannot be developed without an appropriate repertoire to focus on. The different types of repertoire outlined earlier need to be explored so as to put together a varied and structured programme. This is so that speakers can accustom themselves to navigating a range of typical discourse and adjacency patterns, mark their talk appropriately for register, use appropriate syntactic patterns, and deliver it with some of a range of fluency markers. With this in place, it is then possible to consider how the parts of the process can be activated and brought together.

In terms of use, learners need to encounter pedagogical activities which push them to do this. Furthermore studies of the development of expertise suggest that speakers not only need to be brought to process relevant repertoires, but that they need to be drawn into doing so strategically in order to achieve their own self-determined goals, and to shift their mode of processing – at all levels – from the deliberately conscious use of explicit knowledge, to the intuitive use of a store of relevant experiences. In doing this, learners are likely to vary in whether they focus on fluency, or accuracy, or on the problem of matching message content to speech capacity (the limited capacity hypothesis). Learners are also likely to vary between either continuing with their same initial focus, or else next using their initial achievement as a basis for shifting to another focus (from accuracy to fluency or a matching focus; or from fluency to accuracy or a matching focus; or from a matching focus to accuracy or fluency).

Activities and the way they are used can encourage fluency or accuracy whether by asking students to pre-plan; or by creating time pressures; by using task repetition or recycling; by encouraging preparatory discussion; or by using feedback. Attention to language can be encouraged by providing tasks with complex content; or by adding pre-planning time with a focus on content complexity, or by task repetition or recycling. Attention to accuracy can be encouraged by explicit briefing, or by encouraging the use of on-line planning, or by structuring tasks with an observer. A focus on accuracy can also be linked to the use of task repetition or recycling. This means paying attention to different ways of introducing planning, both pre- and on-line; and to different ways of introducing repetition.

The question is then how pedagogy can help learners to build up fluency in the complex processing skills needed for the repertoire. Regarding planning, it is fairly clear that there are various ways in which planning is already present in, or can be effectively introduced into, phases of pair or group work activities. This can occur in a number of ways: for instance where the task requires students to draft some questions prior to asking them, or to rehearse a position or design and prepare a poster, before presenting it orally. The teacher can ask students to begin an activity by first simply naming the objects or alternatives they can see in a picture or diagram or list or on the table in front of them; or to provide a brief initial description of one of an array of pictures which they hold; or to rehearse together the kinds of questions they could ask a partner, based on the material they have been given. Similarly the teacher can take the class through a mini example of a task, and even discuss what they were doing, so that they are prepared for the task itself. Phases such as these provide a form of planning in that the students find themselves mentally rehearsing relevant vocabulary, and relevant ideas and the utterances needed to formulate them, before using them in the context of the class.

Repetition can also be managed in various ways. The internal structure of tasks can entail repetition. For instance, class-survey type activities, card-based games, games like 20-questions, spot the difference activities, map-based activities, direction finding activities, matching tasks, picture stories, and other types of jigsaw tasks may all involve repetition in one form or another, which can be significant for promoting development. But in addition, where tasks do not contain much internal repetition, students are likely to find it valuable if lessons lead them to repeat in one way or other all or part of oral activities. For example, retelling a picture story to the whole class, or reviewing it jointly in the whole class; reporting a group's interpretation of a set of objects or pictures; identifying the differences between pairs of pictures; reporting a route across a street plan, or map; reporting the reasons behind a group decision. Numerous other whole-class activities which are conducted orally offer opportunities for repetition, particularly with younger learners. For instance the telling and re-telling of familiar stories; the daily review of the calendar and weather chart; reviewing the content information of a history, science or social studies project. And it is likely that preparation and rehearsal phases, either with the teacher, or with peers, can have a significant contribution to make in contributing to the cumulative development of our target ability.

We have noted from the research into the use of problem-solving that for pair or group tasks to be productive learning opportunities, they need to have a number of qualities. First it is useful if they are clearly structured in terms of goals and means of achieving them; second it appears that learners benefit from understanding the goals; and third, learners are helped if they receive regular formative feedback on their performance. This suggests that it may be useful to review the ways oral language activities are used in the classroom. In particular, if this analysis is correct, we need to be clear about how far the design of oral language activities allows for different types of planning and repetition, and we need to select them for classroom use in light of their design. Students need to understand the rationale and purpose behind the use of activities, and so may benefit from being told what both the general and particular learning aims of any given activities are in terms of oral skills.

Feedback is not something which is usually structured into unscripted oral activities, and yet the research suggests that formative feedback provides important motivation and valuable information which help learners learn. If this is correct, thought would need to be put into ways in which mechanisms for generating and providing feedback can be structured into oral activities.

Finally, there is the question of how development of expertise can be maintained through different levels of proficiency. Here the intersection between processing capacities and discourse repertoires is likely to be a key reference point.

Conclusion

Ericsson's view of expertise development certainly seems to apply to oral second language proficiency: indeed, 'few reach the highest levels of achievement and performance', as most second language speakers will agree. So what can we do to help?

The account presented here raises interesting questions regarding how learners develop oral language expertise, and for the design and use of activities for oral language development. Oral language repertoires at different levels need charting. The phases whereby expertise emerges need researching, and materials and procedures for helping students develop need exploring and refining. The general approach to the development of oral language expertise needs interfacing with the thinking of materials and test designers. This leaves us with a number of questions for exploration.

a) What are the major repertoires at different levels of speech processing, for different students in different contexts, and how are they best attended to?
b) How can strategic uptake and the recoding needed for intuitive processing be effectively encouraged?
c) What aspects of task and activity design are relevant to promoting oral language expertise?
d) In what ways can the exploitation of tasks and activities, for example through the use of planning, task repetition and pre-task talk, contribute to our pedagogic aims?
e) What are the roles and most useful points of focus for explicit and implicit instruction, briefing, and feedback?
f) What is the impact on learning of the accounts of oral second language expertise on learners and teachers in different learning contexts?
g) How can progress best be reflected back to learners through formative assessment, and to examiners through summative assessment?

This chapter offers some suggestions for ways forward.

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6
Second Language Writing Expertise

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Introduction

It is not uncommon to observe that, while virtually everyone is an expert at speaking their first language, expertise in writing is attained only rarely and only with great effort. Writing as a technology is quite recent in human history, and widespread literacy has only been accomplished in the past few centuries. Many languages do not have a writing system, and in other cases, the variety of the language that is used for writing differs widely from the variety that is used for oral communication. Even the majority of those who speak a standard language that is used for writing do not develop what might be called expertise. The situation of second language writers is vastly more complicated due to the variety of situations in which a second language is learned, the reasons for learning that language, the relative usefulness of writing in the L1 versus the L2, and whether an L2 learner is literate in L1. The second language is frequently not acquired to the same extent as the first language, first language literacy influences the acquisition of L2 literacy in complex ways, and the use of writing in different L2 contexts differs widely. What does it mean, then, to be an expert writer, and to promote the development of expertise in second language contexts?

This chapter begins by discussing the differences between expert and novice writers, and then provides a summary of the literature on expertise in writing in first and second language (L1 and L2) studies from both cognitive and social perspectives. Cognitive approaches to the study of writing have focused on the individual writer, investigating the strategies and areas of knowledge needed to complete a specific writing task. From this point of view, differences between expert and

novice writers in both the writing process and the written product itself are ascribed to variation in these strategies and knowledge areas among different writers. Social-constructionist views of writing, on the other hand, see the act of writing as part of a socially and culturally situated set of literacy practices. The process of becoming an expert writer, from this perspective, is the process of becoming a full member of a 'discourse community' – a group of people (e.g., scientists, journalists) who share a certain set of values about and ways of using both oral and written language – by learning how writing is used in that community for various purposes and with specific audiences in mind. The chapter also looks at cultural aspects of writing expertise; in particular, how cultural preferences shape our notion of what 'good' writing is. Finally, the chapter concludes with implications for instruction of the research on writing expertise.

Differences between expert and novice writers

Much has been written about the complex nature of writing (see, for example, Hayes and Flower, 1980; Bereiter and Scardamalia, 1987; Grabe and Kaplan, 1996; Alamargot and Chanquoy, 2001). Writing is a highly complex task that requires the coordination of numerous cognitive activities. Among the things that the writer has to keep in mind are his or her overall goals, the major points and supporting details that are to be included in the text, an overall sense of how the text is organised, and a representation of the readers – what they already know, what they are expecting to read, what they will find persuasive, and how they might respond to the text. Skilled writers constantly shift back and forth between planning, generating text, probing their memory for new content, reorganising or revising their writing, considering their audience, and coming up with appropriate language to convey their message. Writers must be able to choose appropriate words and syntactic structures to convey their message in a satisfactory way and attend to orthography and conventions such as punctuation and formatting, making and evaluating linguistic choices as they go along.

In short, writing is a highly complex cognitive activity that requires the coordination of numerous constraints and considerations. Because of this complexity it is not surprising that clear differences in both the process of writing and in the written product itself can be found between skilled and unskilled writers. These differences have been studied principally through three methodologies. One commonly

used methodology in the study of the writing process is the use of retrospective interviews or think-aloud protocols, in which writers describe out loud their thoughts as they write (for example Hayes and Flower, 1980; Flower and Hayes, 1980; Perl, 1979; Sommers, 1980; Zamel, 1983; Raimes, 1985; Cumming, 1989). A more recent methodological approach to the study of writing involves tracking the online production of text, measuring factors such as the length and duration of pauses, the amount of text written between pauses, and at what point in writing pauses occur. These studies often follow written production along with a secondary task, such as attending to background speech or trying to hold a list of words in memory. Examples of studies using this methodology include Ransdell and Levy (1996); Ransdell, Levy, and Kellogg (2002); and Olive, Kellogg, and Piolat (2002). Finally, differences between skilled and unskilled writers have been investigated through the analysis of the actual texts produced by different writers, frequently with the aim of discovering what aspects of the text are related to higher evaluations by raters (e.g., in L1: Nold and Freedman, 1977; Crowhurst, 1980; Grobe, 1981; Breland and Jones, 1984; and in L2: Homburg, 1984; Tedick and Mathison, 1995; Engber, 1995; Laufer and Nation, 1995).

The research on writing processes shows that expert writers spend more time planning and revising their work than novice writers, take into account the expectations of their readers, and tend to edit their writing for content and organisation rather than simply making surface changes to the text. Skilful writers tend to work recursively, going back and forth between planning, producing text, rereading, and revising, while less skilful writers tend to view writing as a more linear process, going from planning to writing to revising without going back to previous steps (Ransdell, Levy and Kellogg, 2002). Expert writers also are able to keep in mind a variety of considerations at the same time, paying attention to the overall message, the organisation, and the appropriateness of specific linguistic choices. Skilled writers have richer conceptualisations of their audiences, a better awareness of their own resources, and more highly developed schemata for the genres in which they are writing, than do less skilled writers.

Writing differs from other highly complex cognitive activities in that it is not necessarily less effortful for experts than for novices. This is largely due to the fact that expert writers are aware of a greater set of constraints than are novices, and set a more challenging task for themselves. Novice writers are much more likely than expert writers to engage in what Bereiter and Scardamalia (1987) call a **knowledge-**

telling strategy, which involves writing down information that is already organised in the mind of the writer and thus does not require a great deal of cognitive effort.

This can be contrasted with what Bereiter and Scardamalia call **knowledge transforming**, a recursive process by which writing is used not simply to express knowledge that one has, but to create new knowledge in the process. In knowledge transforming, writers deal simultaneously with problems of content and problems of rhetoric, where a decision in one area has implications for the other. For example, deciding to solve a problem of content by recommending a particular course of action brings up the problem of which rhetorical devices will be most effective in convincing the reader. In continuously recognising and addressing problems in both the content space and the rhetorical space, expert writers actually set up for themselves a more challenging task than the novice writer.

Studies of the online production of writers have demonstrated that expert and novice writers differ in their pausing behaviour, an indication of when and under what circumstances planning is taking place. Ransdell, Levy and Kellogg (2002) found that better writers wrote longer sentences, paused for shorter durations, and paused at clause boundaries more often than worse writers, which suggests that the better writers were able to plan longer stretches of discourse more efficiently. Skilled writers tend to plan more effectively and to go back and forth between intensive (writing/editing) and reflective (pausing/reading) modes (Pennington and So, 1993), in contrast to the more 'piecemeal use of pauses and rereadings' (Zamel, 1983, cited in Roca de Larios, Murphy and Marin, 2002, p. 23) found in the writing processes of less skilled writers.

In terms of the written product itself, textual factors that have frequently been associated with higher quality writing in L1 are text length (Nold and Freedman, 1977; Grobe, 1981; Breland and Jones, 1984); vocabulary (Grobe, 1981); and various syntactic measures such as syntactic maturity (Grobe, 1981); final free modifiers (Nold and Freedman, 1977); and the use of indefinite noun phrases (Sullivan, 1987, cited in Huot, 1990). One caveat about this literature should be mentioned, however, in the context of a discussion on expertise: in the majority of these studies, the focus is on the textual factors that are associated with judgements of higher quality, and expertise per se has not been defined operationally apart from these judgements. In other words, expertise is defined operationally as the ability to get a high score, with the assumption being that experts are those who can

produce high quality texts, although it is logically possible that expert processes could result in low quality writing (Roca de Larios, Murphy and Marin, 2002).

As for second language writers, Silva's (1993) extensive review of the relevant literature concluded that 'in general terms, adult L2 writing is distinct from and simpler and less effective (in the eyes of L1 readers) than L1 writing. Though general composing processes are similar in L1 and L2, it is clear that L2 writing is more constrained, more difficult, and less effective. L2 writers did less planning (global and local) and had more difficulty with setting goals and generating and organising material. Their transcribing was more laborious, less fluent, and less productive – perhaps reflecting a lack of lexical resources. They reviewed, reread, and reflected on their written texts less, revised more – but with more difficulty and were less able to revise intuitively (i.e., 'by ear').' (p. 200). Silva also noted that, compared to L1 writers, L2 writers wrote fewer words, made more errors, used more simple structures, and received lower evaluations; at the discourse level, their texts frequently used different patterns of organisation and were also stylistically different from L1 texts.

In summary, a large body of research on expertise in writing demonstrates that skilled writers are able to attend to a wider variety of considerations simultaneously, to use their resources flexibly in solving rhetorical and content problems, and to adjust their message to meet the needs of their audience. For second language writers, however, limitations in language proficiency and lack of familiarity with conventions and genres in the L2 make the process of writing more constrained, more effortful, and generally less effective than for first language writers.

Individual factors in writing

A cognitive perspective on writing focuses on the factors within the individual that are important in developing writing expertise. Numerous theorists have outlined areas of knowledge that are essential for writing expertise (see especially Hayes, 1996 for L1 writing; Grabe and Kaplan, 1996 for L2 writing; Weigle, 2002 for summaries of several models of writing expertise). While the details of these descriptions vary, the following summarises the essential areas of knowledge that are involved in writing.

Language knowledge. Models of writing based on first language writers (e.g., Hayes, 1996) tend to give short shrift to language know-

ledge, but clearly language knowledge is a central consideration for second language writers; in fact, some research suggests that second language proficiency is the most important predictor of L2 writing performance (Pennington and So, 1993; Sasaki and Hirose, 1996). Writers need to have fluent access to linguistic resources such as vocabulary, including collocations, grammatical knowledge (syntax and morphology), and orthography. Language knowledge is not limited to these basic building blocks, however; writers need knowledge of how language functions in discourse (e.g., knowledge of intra- and intersentential marking devices; knowledge of organisational structures, etc.) and in society (e.g., functional uses of written language and the constraints of formality, status, and so on in writing). An influential model of language knowledge for language use in general is found in Bachman (1990); see also Grabe and Kaplan (1996) for an extensive taxonomy of language knowledge specifically for writing. The area of language knowledge provides, of course, the most salient distinction between first and second language writers, but even among first language writers there is variation in language knowledge, and for many second language writers, L2 knowledge is only the most salient of numerous gaps in abilities.

Topic knowledge. Another important area of knowledge that is essential for writing is knowledge of the topic about which one is writing. Common sense predicts, and research confirms, that writing proceeds much more easily on a topic that is familiar than one that is unfamiliar (e.g. Bereiter and Scardamalia, 1987; McCutchen, 1986, cited in McCutchen, 2000). Topic knowledge has also been shown to affect the quality of revisions in both children and adults (DeGroof, 1987; Butterfield, Hacker and Plumb, 1994; McCutchen *et al*., 1997, cited in McCutchen, 2000). In second language writing, Tedick (1990) found that university-level ESL writers performed better on a discipline-specific writing prompt than on a more general prompt, although Hamp-Lyons (1986, cited in Hamp-Lyons, 1990) did not find such differences.

Genre knowledge. In order to write for a specific purpose, writers must know something about the genres in which they are writing. Hyland (2003) defines genres as 'abstract, socially recognized ways of using language for particular purposes' (p. 18); different written genres (letters, reports, songs, emails) make use of different conventions in terms of vocabulary, grammatical patterns, formatting, and so on, and writers need to know the socially agreed-upon conventions of a particular genre in order to write successfully in that genre. For example, a

science writer would write differently for a journal article, a textbook, and a popular science magazine. These differences might include choice of vocabulary, sentence structure, use of second person and other 'interactive' features of discourse (Biber, 1988).

Audience knowledge. Writers need to know something about the person who will be reading their writing, or at least be able to imagine what that person is like. Audience knowledge is important because the writer needs to take into account what the reader is likely to know about the topic, what vocabulary will be most important, what the reader will find persuasive, and what the reader's attitude towards the topic is likely to be. Writers use knowledge of their audience to select content, vocabulary, cohesive devices, and so on in an effort to make their writing meet the expectations and background of their readers. An excellent illustration of the use of audience knowledge in writing is presented by McCutchen (2000) in a protocol of a wine columnist writing for an audience of non-wine experts: 'Now I should say "esters and aldehydes," but if I did that, then I'd have to explain about esters and aldehydes ... why not just talk about smells and flavors?' (p. 19)

An interesting paradox in writing expertise is the fact that writers who are experts in certain fields frequently have difficulty writing for audiences who are not experts in that field, as they often are unable to anticipate what will be clear or unclear to an audience of novices. A well-known example of this phenomenon is the case of user manuals for high-technology equipment or computer software. Hayes (1996) suggests that writers frequently use themselves as their primary model for the audience if they are writing for strangers rather than friends or acquaintances. Fortunately, however, it appears that writers can be trained to write more clearly for novices through the use of reading protocols. Shriver (1987, cited in Hayes, 1996) conducted a study in which readers predicted which sections of a computer manual would prove difficult for readers, and then compared these predictions with protocols of readers trying to use the manual. Students who were trained with these protocols were better able to anticipate difficulties in science texts than those who received more traditional training.

Task schemas. Hayes (1996) proposes that through experience writers build up task schemas, defined as 'packets of information stored in long-term memory that specify how to carry out a particular task.' Task schemas include information about the task goals, processes to be used in accomplishing the task, how these processes are sequenced, and how the success of the task will be evaluated. Writers have task

schemas for such things as writing a letter, sending an email, and so on. One important task schema that Hayes discusses is a revision schema. Hayes argues that inexpert writers frequently have incomplete or faulty revision schemas and are thus less able to revise their writing appropriately. This notion of task schema is relevant to McCutchen's discussion of long-term working memory (LT-WM) discussed below.

Metacognition. In addition to these domains of declarative knowledge, expert writers also make good use of what is commonly referred to as metacognition, which can be defined as higher order thinking involving active management of the cognitive processes engaged in complex tasks such as writing (see also Livingston, 1997; Bachman and Palmer, 1996 for similar definitions). While metacognition is defined differently by different theorists, current formulations of metacognition generally include two main components: self-appraisal and self-management (Hacker, 1998). Self-appraisal involves knowing about one's own abilities, knowledge, and affective states, while self-management involves consciously monitoring and regulating one's knowledge, processes, and cognitive and affective states. In terms of writing, then, metacognition involves assessing the demands of a given writing task and one's available resources for completing the task; planning how to complete the task; and evaluating and monitoring one's success. Compensatory strategies for overcoming perceived gaps in one's knowledge about the task (using a dictionary, asking for help) can also be seen as part of metacognition.

The notion of working memory and its role in writing

Because of the complexities inherent in writing, writers need more than simply declarative knowledge and metacognition: they need to be able to access items from their long-term memory fluently and automatically, so that at the level of conscious thought more high-level concerns can be attended to; in other words, expertise in writing is only possible when writers are able to deal with all of these sources of knowledge within the limitations of human cognition. Recent models of cognition posit a system of mechanisms for short-term storage and processing of information needed for performing complex tasks; this is generally referred to as working memory (WM) (Baddeley, 1986). Working memory is distinct from short-term memory (STM), which contains the items or pieces of information that are currently the focus of attention and is limited in capacity to approximately 5–9 items (Miller, 1956, cited in McCutchen, 2000). Details of the structure of

working memory vary, but research in both text comprehension (e.g., Kintsch, 1998; Walter, 2004) and in writing (Ransdell and Levy, 1996; Ransdell, Arecco and Levy, 2001) have demonstrated that differences in WM capacity are related to differences in reading and writing ability. In particular, the differences between expert and novice writers appears to be due in part to highly efficient retrieval of knowledge from long-term memory and a rich store of task-specific knowledge that can be easily accessed. McCutchen (2000), following Kintsch (1998), distinguishes between short-term working memory (ST-WM), which has strict capacity limitations, and long-term working memory (LT-WM), which is limited only by the efficiency of encoding and retrieval structures and by the extent of task-specific knowledge in LTM to which these retrieval structures connect. Efficient retrieval structures come from knowledge that is highly stable and well practised, so that it can be accessed without making demands on limited cognitive resources, and from efficient encoding processes (e.g., lexical and syntactic access). McCutchen theorises that novice writers, because of their poor encoding skills, can only manage tasks that are within the constraints of ST-WM and thus rely on knowledge-telling rather than knowledge-transforming processes. Skilled writers, on the other hand, have the ability to link their developing sentences as they write to their extensive knowledge base in LTM. Thus, 'their sentence constructions (including word choice, syntax, and semantic content) can therefore be influenced by earlier text choices (stored in an LTM text representation), by structural constraints for the chosen genre, by knowledge about a specific audience, and by knowledge about the general topic. However, access to and co-ordination of these multiple sources of LTM knowledge become possible only when shifting from ST-WM to LT-WM.' (p. 21)

Extending this notion to second language writers, an LT-WM interpretation of the differences between L1 and L2 writing suggests that adults writing in their first language have automatic access to lexical and syntactic resources, while for many second language writers, particularly at lower levels of proficiency, these processes are not as automatic so writers need to focus conscious attention on them, making it difficult to access strategies and LT knowledge that are available to them when writing in their first language. Many scholars have proposed a threshold effect for language tasks as diverse as fluent reading (e.g., Alderson, 1984; Walter, 2004), lecture notetaking (Faraco, Barbier and Piolat, 2002) and writing (Sasaki and Hirose, 1996), below which L2 learners are unable to make use of their L1

knowledge and strategies, and the notion that these writers are unable to access LT-WM in L2 because of their lack of fluent L2 retrieval structures is consistent with these findings.

Social factors in writing

Cognitive explanations are useful in accounting for many aspects of writing expertise, but do not provide the complete picture of what it means to be a good writer. Many social theorists point out that writing expertise involves not only cognitive abilities, but also local, contextualised knowledge of a given writing situation, which can only be gained through participation in the social setting where a given text is written and read. This perspective on writing does not deny the importance of cognitive factors but provides an alternative focus. As Roca de Larios, Murphy and Marin (2002) state: 'From the cognitive perspective, composing is arguably conceived of as a problem-solving task and emphasis is placed on the complex, recursive, and individual nature of the writing process, independent of cultural and social influences. Social constructionists, in contrast, do not typically see writing as consisting of invisible processes occurring in the writer's head but rather as a situated activity that can only occur within a specific context and for a specific audience.'

From this perspective, then, the process of becoming an expert writer involves becoming a full member of a 'discourse community' (e.g., writers in biology or journalists) by learning how writing is used in that community for various purposes and with specific audiences in mind. In an academic setting, for example, each discipline has its own conventions and (often implicit) rules for writing. Students entering the discipline are exposed to the literacy practices of that particular discipline through reading texts, writing papers, and ultimately conducting and publishing their own research. Writing may involve, for each discipline, 'examining the kinds of issues a discipline considers important, why certain methods of inquiry and not others are sanctioned, how the conventions of a discipline shape text in that discipline, how individual writers represent themselves in a text, how texts are read and disseminated within the discipline, and how one text influences subsequent texts' (Spack, 1988, p. 38). The same can be said for non-academic discourse communities, such as businesses or government agencies. Writing in each setting relies on understanding how written texts are used to fulfil specific communicative functions, the roles of various participants, and so on. As Beaufort (2000) states,

'To be effective, a writer must be fully immersed in the social/political context of the discourse community, understanding the bigger picture of both immediate and long-term social implications of a given document in relation to the discourse community's goals and values.' (p. x)

Another way of looking at the social nature of writing and the attainment of expertise is through the lens of Vygotsky's (1986) sociocultural theory of learning. According to Vygotsky, learning takes place primarily through interaction with others, particularly those at a somewhat more advanced level. An important notion in Vygotskyan theory is the 'zone of proximal development' (ZPD), which is the difference between what a learner can do independently and what he or she can do with assistance. Learning takes place in the context of interactions in the ZPD, when the learner is in a sort of apprentice role, jointly working out a task with someone at a more advanced level. To extend Vygotsky's notions to the study of writing, becoming an expert writer involves an apprenticeship of sorts in a particular discourse community. Beaufort (2000) provides a real-world illustration of this form of apprenticeship in her ethnographic study of business writing. Beaufort's novice writers learned to write in the context of the business by gradually taking on more central roles in preparing grant applications and other important documents. The journey from novice to expert involved three dimensions: taking on more important roles in the writing process, working on texts that are of higher importance to the discourse community, and obtaining and using more specific, local knowledge.

Indeed, it is this specific, contextualised, local knowledge that is the hallmark of true expertise, according to many social theorists. Carter (1990), in a synthesis of cognitive and social perspectives on writing, proposes a continuum of writing expertise as follows:

- Beginners rely on global strategies not tied to any domain
- Advanced beginners have acquired some writing-specific strategies
- Competent writers have developed strategies that allow them to perform in different writing domains
- Beyond this level – i.e., true expertise – local knowledge is essential for improvement as a writer in a given domain.

This perspective on writing implies that an 'expert writer' can only be an expert writer in a given domain. For example, a journalist or a novelist might not be able to write grants or instruction manuals very well, unless they immersed themselves in the discourse of these particular genres and communities.

Cultural influences on writing

No discussion of writing expertise can be complete without consideration of cultural influences on writing, which has been of interest to scholars since Kaplan's (1966) well-known study of ESL essays, from which he claimed that different languages had different thought patterns that were revealed in writing styles. While Kaplan's original thesis has frequently been criticised (see Leki, 1992 and Hyland, 2003, for summaries of these criticisms), the notion of contrastive rhetoric has spawned a great deal of research looking at differences across languages and cultures in what is considered 'good writing,' and some interesting trends have been noted in the literature. For example, Arabic prose is frequently said to use more coordination and parallelism, unlike the subordination and hierarchical organisation preferred by writers of English (Ostler, 1987; Yorkey, 1977; cited in Leki, 1992). In Chinese, writers tend to provide a series of examples without stating the main point of the example or tying them together through a generalisation, in contrast to the English preference for transparent, explicit connections in prose (Matalene, 1985; cited in Leki, 1992). Some cultures, such as English, value a 'writer-responsible' style (Hinds, 1987), in which writers are expected to make explicit connections to their readers, while others value a more 'reader-responsible' style in which writers expect their readers to ferret out their meanings.

Grabe and Kaplan (1996) point out that variation in writing in different cultures does not reflect inherent differences in thought patterns but rather 'cultural preferences which make greater use of certain options among the linguistic possibilities' (p. 184). These variations are learned primarily through the educational system, either explicitly (as in English, where certain rhetorical patterns are taught directly) or implicitly, through extensive exposure to culture-specific patterns of discourse. Thus, these variations can be seen to some extent as reflections of cultural preferences as promoted through education.

To summarise, writing is both a social and a cultural activity, in that acts of writing cannot be looked at in isolation but must be seen in their social and cultural contexts. To some extent, the ability to write indicates the ability to function as a literate member of a particular segment of society or discourse community, or to use language to demonstrate one's membership in that community. Expertise in writing, from this perspective, entails full membership in a particular discourse community, with all of the local knowledge that is found in that community, and expertise beyond a certain level cannot easily be transferred from one domain to another.

Pedagogical implications

The review of writing expertise presented in this chapter suggest a number of possible implications for writing instruction. In this section, I will outline several of them.

Promoting second language proficiency

For many years, instruction in second language writing was heavily influenced by practices in L1 writing, with the assumption that teaching methodology in L1 could be transferred directly to L2 writing. One unfortunate consequence of that trend, however, was the neglect of specific language-related issues. Recently it has become clear that, in many cases, L2 writers need first and foremost to work on improving their language proficiency (see Hinkel, 2004, ch. 1 for a succinct review of the relevant literature). Clearly, language proficiency is one of the key factors in writing expertise; in particular, research suggests that there is a threshold below which writing skills cannot be transferred from L1. Until writers have fluent, automatised access to a wide range of lexical and syntactic choices, they will be hampered in their attempts to deal simultaneously with the multiple considerations of writing such as overall goals, audience, and genres; thus, the acquisition of vocabulary and syntax needs to remain a priority in writing instruction for these students.

The importance of vocabulary acquisition in particular cannot be overstated, as L2 learners frequently have far smaller vocabularies than their L1 counterparts. Hinkel (2004), citing a study by Nation and Waring (1997), points out that, while the typical native English-speaking university student has a vocabulary of 17,000 word families (that is, words with inflected and closely-related derived forms), an NNS of English after several years of instruction may only have a vocabulary of 5,000 word families. In academic settings, the need for vocabulary instruction is even more critical, since academic vocabulary is not frequently heard in conversation or more informal settings.

Recent approaches to language instruction go beyond traditional word lists and grammatical explanations, however. Advances in corpus linguistics have provided important insights into authentic language use in different settings and show promise in changing how we think about teaching vocabulary and grammar. For example, Biber and Reppen (2002) found that the vocabulary and grammatical structures that are most frequent in conversation are often not those that are found in widely-used ESL teaching materials. Similarly, Granger (1998)

found that NS and NNS had different intuitions about the appropriateness of two-word collocations using amplifiers (e.g., *very, completely, totally*), with NNS overusing certain amplifiers and underusing others. Information from corpora of native and non-native writing can be helpful to instructors by providing better information about how language is used in real-world discourse and thus which words and structures are most important for learners to gain control of.

In addition, approaches to grammar such as the systemic-functional approach of Halliday (1994) recognise that syntactic resources provide options to a writer that are more or less appropriate given particular contexts and goals. As such, grammar is seen not simply as a set of rules to be manipulated, but a resource available to writers to express their meanings. As Hyland (2003) states, 'the grammar we teach and the ways that we teach it need to be clearly related to the kinds of writing students are expected to do in their target contexts.' (p. 123). Byrd (1998) further argues that, since features of different writing types, or grammar 'clusters' appear in materials that are appropriate for all proficiency levels, it makes more sense to teach grammar according to the type of discourse that is relevant to students' needs, rather than according to the proficiency levels of students. For example, writers of narratives need to have control over the grammatical structures that occur most frequently in past time narration. These include simple past tense as the most important tense, with some use of past perfect and past progressive; proper nouns and personal pronouns to refer to the characters; time words and phrases; and use of compound and complex sentences. Informational writing, on the other hand, is characterised by long, complicated noun phrases, the frequent use of generic noun phrases, passive verbs, the present tense, and a limited set of verbs (Biber, 1988; Byrd, 1998).

In short, for many if not most second language writers, instruction must continue to focus on expanding lexical and syntactic resources. This may be profitably done through a variety of methods, from extensive reading (e.g., Krashen, 1984) to using computer-based concordances for investigating how specific lexical items are used in discourse (e.g., Fox, 1998) to analysing the characteristics of authentic texts in order to discern how the lexical and syntactic choices made by the author has implications for coherence, indicating stance, and other factors in writing.

Strategy training

While it is important to maintain an emphasis on language proficiency, it is also clear that language proficiency, particularly as it

relates to writing, develops slowly and is dependent upon extensive exposure to and practice with different texts, genres, and styles of writing over a number of years. Thus it is unrealistic to think that tremendous gains in fluency, accuracy, and range will be made in a single course of instruction. There are aspects of writing, however, that do not seem to be constrained by limited language proficiency, and many of these have been shown to be amenable to instruction. Roca de Larios, Murphy and Marin (2002) suggest that the following strategies seem to be independent of language proficiency: using heuristic searches to solve problems having to do with content, language, and textual organisation; taking risks, having a sense of audience, reasoning at high levels of generalisation, and using visual memory instead of auditory feedback to evaluate written texts; setting goals, organising ideas, and expressing them coherently; and planning, monitoring, and evaluating performance. This suggests that, at least at an intermediate level and above, writing classes should provide a balance between a focus on language and a focus on writing strategies.

The fact that metacognitive strategies can be taught has spawned a number of useful suggestions for writing instruction in the literature. Strategies that have been shown to be teachable and to improve the quality of writing among L2 learners include revision (Sengupta, 2000), self-monitoring (Cresswell, 2000), and using planning and revising strategies modeled on those used by expert writers (Cumming, 1995; Ransdell, Lavelle and Levy, 2002).

Another useful strategy for many second language writers is to use the first language for some of the more resource-demanding aspects of writing, such as brainstorming and organising ideas. Wolfersberger (2003) suggests that many lower-proficiency students benefit from using their L1 particular at the stages of generating ideas and outlines, if not complete drafts. Using the first language at the early stages of writing, while often discouraged by language teachers, may in fact be a beneficial strategy as it can reduce the cognitive load and allow writers to focus on generating ideas without having to worry overmuch about expressing them in the L2.

Exploiting the social aspects of writing

As discussed earlier in this chapter, writing is fundamentally an act of communication and thus an inherently social act, and learning to write is an activity that takes place in social settings. For this reason, it is important that writing not be practised for its own sake but as a means to a communicative end – writers need to write for genuine pur-

poses and real audiences. Furthermore, according to the Vygotskyan perspective, in order to extend their learning, writers need to be jointly involved in interactions in their ZPD. While it may not be possible in a classroom setting to set up opportunities to engage in authentic written communication, classrooms do provide opportunities for students to develop their sense of audience and to engage in the sort of collaborative writing activities that they may be called upon to do in their professional lives.

Beaufort (2000) points out that virtually the only role that students take on in writing classrooms is that of someone being evaluated, noting that social roles tend to be 'largely ones of having to invent or imitate a level of expertise that was inauthentic and that writing served no social function other than the school purpose of evaluating the learner's knowledge' (p. x). Writing beyond the classroom, however, requires that writers take on myriad roles, and Beaufort suggests that writing instruction could be made more fruitful if classrooms could be structured in such a way that students take on genuine roles as apprentices in their discourse communities. In university settings, this might involve collaborating on research with faculty, for example. Beaufort acknowledges that it may be unrealistic to expect classroom teachers to arrange for students to take on these genuine roles, but she argues that teachers and curriculum developers would 'do well (a) to consider finding ways to capitalise on social motives for writing, (b) to embrace collaborative rather than competitive models for individual and group performances so that novices get to participate in multiple ways in meaningful writing tasks, and (c) to find every means possible to make explicit the context-specific knowledge that aids a writer in achieving expert performances' (p. 218).

To address the first two of Beaufort's suggestions, two teaching strategies in particular may be useful to increase students' awareness of the social dimensions of writing: collaborative writing and peer feedback. Collaborative writing has been shown to be effective in promoting reflective thinking among first language writers, which can result in higher quality writing. As Kuiken and Vedder (2002) state, 'the very act of explaining and defending ideas to one's peers is thought to force students to take critical positions on their own ideas and writing' (p. 171). Kuiken and Vedder note that studies of collaborative writing in L2 settings are rare, however, so it is not clear whether and for what profile of students collaborative writing may be effective. One complicating factor is the cultural and educational background of students – students who come from educational systems where

individual work is preferred over collaborative work may be reluctant to participate in collaborative writing activities, for example. Another complication is varying levels of language proficiency – collaboration may be made more difficult if students at lower levels are expected to participate equally with students at higher levels. This is an area that deserves further research.

A more common teaching strategy that has been promoted to L2 settings from L1 settings is the use of peer response activities, or activities in which students react to and provide oral and/or written feedback on each other's writing. Liu and Hansen (2002) summarise many potential cognitive, social, and linguistic benefits that can come from peer response. Peer response activities can help students build up their own critical thinking skills as they engage in discussion about their own writing and that of their peers, and also develop an awareness of their audience by learning to anticipate what might be clear or unclear to their readers. Peer response activities also provide opportunities for linguistic input and practice as students negotiate meaning through discussion. On the other hand, some potential disadvantages of peer response are a tendency to focus on surface forms rather than meaning, a reluctance to use peers' feedback in revision, in part because of uncertainty about the value of such feedback, cultural reluctance to peer revision, and the potential for overly critical comments (Hyland, 2003).

In short, some of the important social aspects of writing – the sense of audience, the interplay of talking, reading, and writing, and the importance of feedback from others – can be replicated to some extent in classroom situations, but strategies such as collaborative writing and peer feedback should be adopted thoughtfully to get the maximum benefits from them. Several recent books on second language writing (Liu and Hansen, 2002; Hyland, 2003; Ferris and Hedgcock, 2005) offer useful suggestions for implementing peer response and collaborative activities in the classroom.

Teacher response to student writing

Teacher feedback to student writing is one of the most important means by which students can improve their writing. When it is done well, teacher feedback can help students by providing guidance appropriate to a student's ZPG; that is, by providing the right kind of scaffolding so that students can accomplish more than what they can accomplish independently. Feedback of this sort is most useful when it is given in a formative, rather than summative fashion, so that

students are able to make use of feedback to improve a current piece of writing rather than simply to attempt to make use of it in a future piece of writing.

Much has been written about various options in providing written feedback: whether teachers should provide feedback orally in writing, whether they should comment only on the content or should also focus on sentence-level errors, whether they should indicate errors directly or indirectly, whether they should provide positive comments or constructive criticisms, and so on. A full treatment of this subject is beyond the scope of this chapter; however, a few words may be in order. Research has demonstrated that L2 learners expect their teachers to correct and comment on their papers and that they particularly value feedback on their grammar (Hyland, 2003); learners frequently try to make use of the comments that their teachers give them, but often are unable to understand some of the comments and suggestions of their teachers. This suggests that teachers could benefit from specific training in responding to student writing so that they can provide the most appropriate feedback to help their students develop their writing ability. Again, recent volumes on teaching writing (Hyland, 2003; Ferris and Hedgcock, 2004; Ferris, 2002) provide many practical suggestions for teacher feedback on student writing.

Implications for research

This brief review of writing expertise suggests a number of areas in which additional research would be beneficial. Much work remains to be done to further our understanding of how people become experts in writing, the conditions under which expertise is gained, and pedagogical practices that help students develop their writing.

In terms of the cognitive aspects of writing, an interesting area of research is the extent to which measures of WM are related to second language writing expertise. This is a relatively new area of inquiry and there are several questions yet to be answered. For example, is there a measurable threshold of L2 proficiency at which learners are able to transfer their L1 writing skills, and is this constant across contexts and languages?

Another area of inquiry involves training of metacognitive strategies. For example, can research on the use of reader protocols to help writers gain audience awareness be transferred to L2 writing classes? What type of training is most effective, and at what levels of language proficiency is strategy training effective?

In terms of promoting the social aspects of writing, there is still relatively little research on the efficacy of using collaborative writing methods for L2 writers, and much controversy over the appropriateness of peer revision. Much of the research on peer feedback has been conducted in North American universities; it is unclear whether this practice would be effective in other settings and with other learners.

The cultural aspects of writing remain to be explored fully. We know very little about how genres vary across cultures, how writing is used and valued in different cultures and subcultures, and how those values shape the writing of L2 speakers.

Finally, the vast majority of research on writing had been undertaken in academic settings. We have very little information about how writing is used in everyday life, at home, in the workplace, or in community affairs. Research in this area would be particularly informative as it would shed light on areas of expertise that have hitherto gone unacknowledged.

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7
Training Language Learning Expertise

Steven McDonough

Introduction

Many years ago I encountered a remarkable language learner in a group of learners from a war-torn country who had won scholarships for further study in the UK and who were taking an intensive year's programme in English for Academic Purposes. In fact, the whole group consisted of remarkable individuals, given the situation they had temporarily left behind, and were all fairly high-powered in their own subjects.

This particular student stood out from a language learning point of view. She had a bilingual background; she had taken her first degree in Moscow for which she had learned Russian; and she was going to do research in a UK university in English. During the course, she developed from a level of approximately ELTS 2.5 to 6.5. We, the language teachers, noticed several obvious things about her language learning: her dogged application, her frequent questions about words and details, and her habit of including new words she had learned in one context into her next written assignment, almost whatever it was about. None of these observations explained adequately why she achieved so well. This was all not long after the publication of Naiman *et al.*'s (1978) Good Language Learner project, and it was evident that this person was a Good Language Learner. In those days the search for learner strategies as a way of describing what learners (good, average, and poor) actually did with the data was only just beginning. However, although my own interest in strategies did not begin until rather later, meeting this learner raised a number of questions that are still relevant, and inform this chapter on the assisted development of expertise:

a) Can we find out (or could we have found out) in detail how this learner was processing the language, organising her response to tasks set, and monitoring herself?
b) Can we distinguish sufficiently well between personal characteristics like motivation, intelligence, and procedural strategies, to establish lines of influence or even causality?
c) Can we isolate and compare the strategies of 'natural' or 'high-powered' learners and those of the average or poor learner whether in specialised or general language learning contexts in sufficient detail to be useful?
d) Can we improve learning efficiency for those who need or want such improvement by a combination of teaching them how to do what they do better, and how to use strategies employed by expert learners?
e) What are the advantages and disadvantages of including learner training of this kind in a language learning programme?

In the chapter that follows, I shall first look at some general considerations raised by the idea of learning to learn. Then I turn to the research evidence about learning strategies, about evaluation of strategy instruction programmes, and other relevant areas. Next I discuss the difficult 'chicken and egg' issue of whether strategies are the pre-requisites or the results of increased proficiency. The central issue of how to implement a strategy instruction programme follows. The last main section deals with evaluation of such programmes and the different kinds of success that might be envisaged, in terms of strategy use, proficiency, autonomy, and a number of other parameters. The chapter finishes with a discussion of some caveats that are worth raising.

Learning to learn

Investigating learning to learn is full of paradoxes. The first is the very idea that as the learning animal *sui generis* we need to learn that basic skill from others who have already learned it. Another is that as the language animal, we need to learn to learn the very communication skill that defines and distinguishes us from all the other animals. Another is that in learning to learn, we need assistance and guidance from a more experienced learner in what may be a completely natural developmental process. These background worries colour all attempts to discover how language learners gradually improve their language proficiency, but in doing so also develop language learning skills which may enable

them to become more efficient learners of another language or autonomous experts in one or both. And yet, as Macaro (2001, p. 1) observes, second language learning in normal educational settings is often perceived to be not very successful, implying that however natural the process might be, it requires some perhaps rather specialised outside assistance. Many people have suggested this can be some form of learner training: training in how to learn to learn a language. This is the argument which the present chapter seeks to explore.

Research evidence about the nature of expertise

There are several different research areas which have direct relevance to learner training. One is the rich descriptive tradition of investigating what strategies learners use and how they use them. This has direct bearing on our questions because this literature is the basis for what theoretical formulations of strategic behaviour we have. Unfortunately the field is rich in results, but, in my view, rather lacking in well-developed theory. However, there is now a fairly solid body of evidence that learners exercise a degree of choice in using mental techniques which enable them:

- to cope with the mass of language data they are exposed to,
- to extract significant information from it to use to build rule systems,
- to work out what to do in various situations, for comprehension and for production,
- to evaluate their own performance and pace themselves, and
- to regulate their emotional response to the learning situation.

Currently these techniques tend to be addressed under the heading of learner strategies. This body of research details learner strategies both in general terms, usually using a questionnaire or inventory approach (O'Malley and Chamot, 1990; Oxford, 1990) and in micro-detail, using versions of real time think-aloud verbal reporting (Cohen, 1998). Learning strategies have been documented in all four skills, reading, writing, talking, and listening, in vocabulary encounter and word-finding, in responding to instruction and participating in lessons, in different learning tasks such as de-contextualised grammar, in composition, in test-taking, and in self-monitoring and in regulating emotional reactions. Variations in strategy use have been documented as a function of motivation, proficiency level, culture, task, and personality factors.

The methodology of strategy analysis studies has been developed and refined considerably over the last thirty years, although there are still problems of validity and accuracy (McDonough and McDonough, 2001). There have been problems in developing a powerful theory of learner strategies that would allow:

- strategies identified in different situations using different methods of access to be compared and reliably categorised
- strategy and tactics to be distinguished
- multiple strategy use to be readily differentiated from single strategy use
- the conditions for successful strategy deployment to be specified.

Perhaps most seriously, and important in the arguments about developing strategy instruction, there is rather little to tell us how strategies relate to 'ordinary' learning processes. Use of strategies could be a normal part of learning, as cognitive and meta-cognitive procedures for organising memory, storage and retrieval of information. If this were to be the case, it is difficult to see what could be the role of instruction in a natural learning process, because there would be no sense in teaching people to use strategies they already know how to use. Alternatively, use of strategies could act as a compensatory or 'short-cut' mechanism to bypass more cumbersome, perhaps more thorough, but slower learning. Strategy use might act as an alternative, heuristic process to complement the autonomous processes of L2 grammar construction facilitated by universal grammar, working either directly or through L1. It is currently not clear how these possibilities may be theoretically discriminated and the truth empirically determined, despite thirty years' work in the field of L2 learning and longer in general educational studies. Perhaps, for the immediate discussion of whether and how expertise can be taught, it does not matter. It is probably more important to look at issues of implementation and evaluation, leaving the more theoretical problems for further analysis. However, we may have to revisit them when discussing the value of expertise training. Two issues which really require some theoretical clarification are, firstly, that putting curricular time into learning to learn could, under some proposals, reduce the time available for actual language training. Secondly, the kind of learner the learner has been trained to be may conflict with natural development in an unproductive way.

A second research area that has grown up, beyond the descriptive and analytical, is a tradition of evaluative studies of strategy training

interventions. These are difficult studies to undertake, partly because of the training time-scale (most have been remarkably short-term training sequences in a language learning curriculum that is usually measured in years) and partly because of the numbers of variables involved (the choice of strategies to be taught, the methods of classroom implementation, the definitions of success and the method of measurement, and the kinds of data required). But comparative evaluation is the only way to find out if training proposals actually work and under what conditions. There are, however, far fewer such studies than descriptive studies of strategy use. Since, in many authors' opinions, learning strategy research has always been concerned with finding more ways of teaching as well as discovering how students learn, evaluative research goes back to the early studies of the Good Language Learner project (Naiman *et al*., 1978), and of poor readers (Hosenfeld, 1984) and encompasses the small scale studies of O'Malley (1987) and Wenden (1987) as well as the much larger scale studies of Nunan (1997) and Cohen *et al*. (1996).

A third research tradition that is relevant is that of previous learning experiences and their relation to proficiency, but the principle of trying to discover what previous experience links to present proficiency applies to all channels of second language performance. Since Alderson (1984) sharpened up the question there have been several studies of what some called the threshold hypothesis: that is, whether there is some particular level of L2 proficiency at which the L2 learner can use the strategic competence which they already have in L1. If this were so, one could speculate that it might apply only to language use strategies, rather than language learning strategies, since there are few known candidates for strategies for learning L1, except perhaps for the written form.

Strategies for L1 performance in reading, writing, and talking are relatively familiar. Of course, one cannot assume that a language use strategy in L1 (for example, strategies for composing a narrative) cannot be used in L2 as language improvement strategies, and in any case the dividing line between strategies for use and strategies for learning is grey. Methods of practising may also be, but are not necessarily, methods of acquiring new knowledge. In the field of L2 reading, studies of antecedents have been conducted by Carrell (1991) in English L2 and Spanish L2 populations and by Bossers (1991) on Dutch L2 in Holland. Broadly, the results are compatible with the idea that at low level of L2 proficiency success in reading is more clearly associated with L2 proficiency than with L1 reading skill level, but at higher levels

of L2 proficiency it is better predicted by L1 reading skill level. The significance of this finding of a cross-over point, however it is defined in detail, for teaching, needs further discussion.

Chicken or egg? The relationship between proficiency and strategy use

When Hosenfeld (1984) compared good and poor L2 readers' strategy use she found that by and large the good readers were using more strategies than the poor ones, and different ones. She not surprisingly concluded that a way to raise the reading proficiency of the poor readers was to teach them to do a selection of what the good readers were doing. Her training study indeed showed that individual remedial work did equip her poor readers with new strategies for reading comprehension. Cohen and Aphek (1981) also found that teaching certain strategies did seem to make learning easier for their subjects. However, the assumption in these early studies was that strategy use somehow determined skill level or proficiency level. In general, the correlation between learners' ability to deploy a wide range of strategies and their proficiency, either in all the skills or in a particular one, was well established. But the correlation allowed the alternative explanation: that proficiency level itself facilitated the use of many strategies. Several commentators have adopted this point of view, in a critical stance on learner training proposals, notably Rees-Miller (1993). In any case, the relationship with proficiency is not linear, because in the higher reaches of proficiency, strategy use is less widespread since there are fewer problems to solve. In practice, the truth is probably more complicated: learners use strategies to develop their proficiency, and the increased proficiency allows them to use a wider range of strategies to consolidate, use the language more flexibly, and expand their experience. But there was a second problem with the early results, which is not clear from Hosenfeld but emerges from Sarig (1987), and this is the possibility that what distinguishes good and poor performance is not primarily the range of strategies (though that is usually part of the picture) but the individual's successful use of the strategy. This is seen starkly in good and poor readers' use of aids like glossaries and dictionaries. Good readers use these aids successfully, using contextual clues to home in on an appropriate sense of the word, and grammatical knowledge where necessary to isolate a citation form to look up. Poor readers use these aids less successfully, perhaps because they are not able to use technical information to find the right word, or cannot

discriminate between senses of the citation form because they have less contextual sensitivity. It is, then, not surprising the poor readers do not use those strategies they are least successful with. Thus, the proper role for strategy instruction may be to teach learners to use strategies successfully rather than to use different ones. Of course, that depends on discovering what they are doing wrong, which may not be easy.

Implementation

Carrell (internet) has admitted that in some of her own work too few details of the actual instruction in learner strategies were given. In fact her investigation into meta-cognitive strategy training for reading with Pharis and Liberto (Carrell *et al*., 1989,) gave quite a lot of detail about the teaching, but perhaps not sufficient for a full-scale replication study. It is generally true that, with some exceptions, reports have not given samples of the actual strategy teaching material used. The point is important, since different ways of implementing training may well produce different outcomes, as was demonstrated in the Carrell *et al*. study (*ibid*.). Such studies are necessarily a double evaluation: firstly of the principle of the success of strategy teaching and secondarily of the success of different methods of teaching.

Methods of introducing strategy instruction have been suggested by Ellis and Sinclair (1989), Willing (1989), O'Malley and Chamot (1990), and reviewed by Kinoshita (Internet) and Lessard-Clouston (Internet) among others. The basic instructional framework shared by these authors uses four general stages:

1 *Preview* (a) materials for useful strategies and (b) the students own current repertoire
2 *Present* a strategy by naming it and explaining when and why to use it
3 *Model* the strategy and provide practice opportunities
4 *Develop* students' ability to evaluate strategy use and develop skills to transfer strategy use to new tasks.

However, exactly how to accomplish these four steps depends on a number of other decisions, and research has not so far been very helpful to teachers looking for answers. One prior decision is, as Kinoshita puts it, between 'uninformed' and 'informed' modes of instructions. In uninformed instruction, students are given cognitive strategies through exercise instruction, procedural directions, and rubrics, but are not told about the strategy itself nor why it is to be used. The fate of such implicit

instructions is interesting; sometimes students do not actually follow those instructions but invent their own cognitive strategies, forgetting the right answers as in the case of Hosenfeld's Cora learning French grammar (Hosenfeld, 1979). Cora effectively made up her own successful way through the grammatical exercises as set, ignoring the teacher's instructions, to some advantage. Educational context may affect learners' preferences as well, as in Nakamura's (2000) study of vocabulary learning strategy differences between Japanese High School students learning English in Japan and students at an equivalent Japanese High School in London. The London based students used more contextual deduction than the Japan based students, which might have reflected their proximity to an ESL situation rather than an EFL situation, despite working to an identical syllabus and exam requirement.

Another crucial decision in implementing such a 4-stage framework is the language of instruction. In Wenden's (1987) (unsuccessful) strategy instruction experiment, the students, she judged, did not learn the strategies she attempted to teach them, but did appreciate the extra foreign language exposure time the extra L2 strategy instruction sessions provided. On the other hand, Cohen, Weaver, and Li (1996) prepared instructional materials for a summer school for teachers who were planning to use strategy based instruction for teaching in English to learners of lesser taught foreign languages like Norwegian, Hebrew, and Hindi. There has been no systematic comparison of teaching strategies in L1 v. L2, just as there has been no systematic comparison of teaching using L1 or L2 for procedural moves, despite many suggestions for advantages one way or the other. This point therefore straddles the divide between uninformed and informed strategy instruction.

Turning to 'informed' instruction, Macaro (2001, p. 128) describes a writing strategy instruction study in which think-aloud protocols were gathered before and after strategy instruction. The students were in an intermediate French class. They were instructed in strategies like brainstorming known language, focusing on the tense and aspect first when generating sentences, logging their dictionary problems when composing, monitoring noun clusters, and back-translating to see that the product made sense. These strategies were modelled and taught in the students' L1, English, using examples from the French writing tasks they were engaged in. Macaro is hesitant about claiming that the strategy instruction was the cause of any improvement found, but there is a clear implication that he believes this to be the case. However, the strategy instruction probably increased the use of L1 in preparing and accomplishing those L2 writing tasks. Macaro rightly

raises the question as to whether this aspect is desirable; there is no way of resolving the question from his data (or from anyone else's for that matter).

A dimension which always has to be taken account of is that of time. Time spent explicitly teaching strategies, especially if conducted in L1, could be construed as time not spent on teaching the language. Consequently it is arguable that advocating strategy instruction implies demonstrating that the use of teaching time for this does not disadvantage learners by reducing the time available for concentrating on language. In principle this applies to both uninformed and informed strategy instruction. In other words, strategy instruction should enable students to improve their proficiency more quickly, resulting either in achieving a higher standard in a given time, or reaching a given standard in a shorter time. Evaluating these options would, of course, be very difficult in the real world of classroom language teaching.

Evaluation

It is worth considering at this point what would constitute success for a learner training enterprise. It is possible to distinguish a number of definitions of success, which basically represent the claims made for learner training, and for each it is open to question both whether such success is desirable, or consonant with the notion of increased learner expertise, or actually demonstrable:

(a) *The use of particular strategies as taught*. This is the kind of result claimed in many studies, from Hosenfeld's (1984) reading remediation, Kern's (1989) seminal study on reading, to Carrell, Pharis and Liberto (1989), and in many small scale PhD researches in vocabulary learning, for example Al Seweed (2000). However, it is only worthwhile if the students adopting the new strategies learn to operate them successfully, since on one reading of the descriptive studies the problem may lie in poor students having less success with the same strategies compared to good students, rather than using the 'wrong' strategies. Unfortunately, strategy research being as it is, we often do not know why the use of a particular strategy works in one situation and not in another, which is what the unsuccessful students would want to know. However, there are sufficient reports of successful strategy training to be confident that there is a general gain to be made even if the details are elusive.

(b) *Development of students' own strategies*. It is characteristic of successful strategic behaviour, indeed of learning in general, that a crucial difference between the novice and the expert is the development of the expert's methods and procedures. A useful analogy is the way pilots learn to land a plane: novice pilots, who need to control their own fear as well as the plane, learn to survive all sorts of minor problems on landing, like rounding out too soon and bumping, ballooning, and bouncing (all different versions of failure to coordinate stopping flying with touching the ground at the right moment), which experienced pilots know how to prevent occurring in the first place. Probably the uncomfortable landings of the novice are a necessary part of the learning curve, but the point is that becoming an expert means adopting different kinds of strategies (in the pilot's case, of controlling information flow, throttle for height, attitude for speed, and balance in a co-ordinated pattern) to those used as a novice, for whom the number of variables involved and the corrections required – the workload – may easily exceed attention span. In language learning, developing expertise may therefore be more to do with developing flexibility and creativity in problem-solving than with applying a set of strategies as taught. The success of a strategy instruction programme may therefore be seen in the learner's development of their own strategic repertoire rather than in the continued use of a set of taught procedures. However, this would be difficult to evaluate, since it would be necessary to find a way of relating increased learner flexibility and creativity to the strategy instruction given.

(c) *Changing strategies*. There is a trend in the use of strategies, at least in the early and intermediate stages of language learning, for development to be characterised by changing strategic behaviour as the kind of problems change. Broadly, learners often discard simple strategies for more powerful ones, as the problems they regularly encounter get more difficult. An example is afforded by the gradual growth in sophistication of strategies for summarising. In the early stages of learning this task, summarising may be little more than selective copying; paraphrasing may come next, then more complicated actions such as sentence combining and developing macro-propositions occur. So another kind of successful outcome could be the development of an autonomous pattern of change in strategy use from simple to complex, or better, from weaker to more powerful.

(d) *Proficiency*. Since the whole point of strategy instruction is to improve some aspect of language proficiency, it would be reasonable to suggest that the most appropriate test of such instruction is a proficiency gain score. As with many kinds of evaluative research, however, such scores are difficult to use. This is simply because there are usually too many possible factors contributing to any increase for the researcher to be confident that the gain is solely due to the teaching intervention.

(e) *Motivation*. Another possible outcome concerns the effect of strategy training not on strategy use, nor on proficiency, but on other learner characteristics that may be themselves positively (or negatively, of course) related to success. An obvious candidate is motivation, perhaps through increased self-confidence or even self-esteem. Nunan's classic study (1997) showed clearly that one of the positive benefits of training was increased motivation. It seems his students felt that they had more chance of coping with the amount of information and the difficult language tasks before them after having undergone a strategy training programme in general language learning strategies. Nunan's conclusion was that the strategy instruction altered the students' perception of their task from one of expected difficulty and possible failure to one where they believed they had new means for coping with the language. It is noteworthy that this study was conducted in Hong Kong in the generally unsettling period preceding its return to China.

(f) *Autonomy*. A possible successful outcome which has been suggested, for example, by Wenden (1991) in a detailed book-length treatment, and by others occasionally, is the development of learner autonomy through strategic instruction. Several papers in Cotteral and Crabbe (1999) give details of teaching programmes which claim success in this sense. An obvious difficulty with this from a research point of view is simply the definition of autonomy, and therefore how to observe its development. Currently there is a considerable quantity of argument and discussion about this topic in language learning, but little agreement about reliable indices of students' development into autonomous learners. It might not even be right to claim there was sufficient agreement for observational adequacy, to say nothing of measurable indices. Crabbe (1993) points out, in this connection, that many teachers are expected to prepare students for autonomous learning, without being given training for this role in their teacher training programmes.

(g) *Learning outside the classroom*. Informally, several writers have also suggested in passing that a benefit of strategy training lies in more successful independent work by the student outside the classroom or between classes. This could plainly occur by a practical or technical route, the student knowing more about how to learn possibly in the absence of a teacher, or by an affective route, the students simply being more interested, less apprehensive, or more positive about their personal learning goals and capabilities. Patently, however, establishing this as an outcome involves measuring student behaviour outside the classroom where observation is more difficult than inside. A further corollary of this suggestion is that the development of learning expertise in a foreign language may bring the benefit of success in learning a third language. No one has as yet demonstrated this empirically, but since the ability to learn a third or even a fourth language has typically been thought to characterise high aptitude for foreign language learning, there is an interesting avenue here for research into the future of expertise training in raising aptitude levels. Classical conceptions of aptitude held that this trait was similar to, and perhaps related to intelligence, but specific for foreign languages, and it would not have been amenable to training.

Some caveats

Despite the obvious attractions and interest of both detailed descriptions of how learners tackle learning and language use problems, and of strategy training research to raise technical and affective coping ability, there are reasons to worry that what is being suggested may need to be carefully defended, and is not necessarily all positive. While it would be difficult to argue in the face of the evidence that raising reading comprehension ability by teaching is both feasible and undesirable, it is, for most people, much less clear cut to argue that teaching test-taking strategies is both feasible and desirable. Evidently, it is possible to score well on many tests by knowing a good deal of what Nevo (1989) called 'non-contributory' strategies, in other words, ways of handling the test questions that do not contribute to a valid measure of language proficiency only. Students who are 'test-wise' may simply be good at time management, a general educational and life skill, but more problematically, they may be able to spot the right answer in a multiple-choice item or in a reading comprehension test from clues in the way the test item is constructed (Cohen, 1998;

Anderson *et al.*, 1991). To that extent, the test is invalid, since it will be measuring the students' knowledge of test-taking strategies and not of the language per se. One can argue that this is a reason to teach every student such information, to ensure fairness, or to clean up the validity of the test items and refrain from teaching test-taking strategies. In practice most students want to get through the test, and most teachers want to help them, and the preferred action is clear. But the argument remains that teaching this aspect of expertise is a way of reducing the validity and increasing the facility value of test items. Apart from any ethical issues, the nub of the question is that teaching test-taking strategies develops an expertise which, though undeniably useful, is parallel to and not directly related to L2 competence. It is in some sense inauthentic. In the light of that argument, perhaps we need to re-evaluate the authenticity of second language competence in other areas, such as the four skills, classroom coping strategies, affective problems, and even self-monitoring meta-cognitive skills.

One well-known authority, Benson, has argued (internet) his objections to learner training in general terms in similar vein. For him, the danger of instructing learners in how to learn is that one may create a kind of limited and paradoxically dependent semi-autonomous learner rather than the kind of self-directed expert hoped for. Learner autonomy would therefore be a quality or a state that results from personal development rather than instructed expertise. In the absence of detailed descriptions and comparisons, there is no way to either support or refute this objection conclusively. However, it may turn out that, except for a small minority of learners who develop autonomy in Benson's sense through their own resources, the help that expertise training gives learners does improve their chances of mastering a language, at least to functional level which satisfies them. Whether such training could in fact damage learners in the minority seems unlikely, since there are several instances in the literature where good language learners at least appear to have ignored attempts to train them into prescribed ways of acting in favour of their own instincts.

Conclusions

Returning briefly to the student in my introduction, we can never know if that kind of special approach to learning language can be recreated in others to that level of achievement, since for that individual there was a unique combination of personal history, motivation, intelligence, subject knowledge, and strategy repertoire. In any case we

are not talking about 'cloning' autonomous or expert learners. The weight of evidence is that there are quite powerful ways of discovering what students actually do, by observation, questionnaire, and even verbal report; there are powerful strategy teaching techniques and work-plans, which have been shown to be successful; and there are measurable benefits in using them for many learners. Naturally, in such a complex area, there are many dangers to navigate as well, since there can never be a 'one-size fits all' policy for language teaching.

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Part III
Expertise in Language Teaching

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8

Expertise in Teaching: Perspectives and Issues

Amy B. M. Tsui

Introduction

Studies of expertise in teaching, similar to the studies of expertise in other domains, have been motivated by an intrinsic interest in gaining a better understanding of the special forms of knowledge held by teachers and the cognitive processes in which they were engaged when making pedagogical decisions. They have also been motivated by the need to establish the professional status of teachers by demonstrating to the general public, who tend to undervalue the work of teachers, that like experts in other professions who are held with high regard, such as surgeons, physicists, and computer scientists, experts in the teaching profession possess skills and knowledge which are no less complex and sophisticated (Berliner, 1992).

Much of the work on teaching expertise has been inspired by studies on expertise in other domains which began in the sixties (De Groot, 1965). There are two major approaches in these studies. One approach has adopted an information processing approach in cognitive psychology best represented by the work in artificial intelligence in getting computers to simulate the human mind in fields such as chess playing and physics problem solving (see for example Newall, 1963; Newall, Shaw and Simon, 1963; Chase and Simon, 1973; Chi, Feltovich and Glaser, 1981). This approach sees expert knowledge as sophisticated and highly organised with a good retrieval structure which enables experts to recognise salient patterns, to recall information and to solve problems very quickly and with relative ease (Wineburg, 1998). The other approach reacted against a rationalist approach to the human mind and has argued that at the core human expertise is 'knowing how' rather than 'knowing that' (see for example the highly influential

work of Dreyfus and Dreyfus, 1986; see also Benner, 1984; Benner, Tanner and Chesla, 1996). Expert knowledge is seen as embedded in the expert's action, intuitive, tacit, non-reflective and automatic. Such knowledge is acquired only after years of experience in a specific domain.

Both approaches compare the novice or less competent with the expert and expertise has been investigated as *a state* which is reached after years of experience. Although the Dreyfus and Dreyfus model is a developmental model in the sense that it outlines the stages of development from novice to expert, its focus is still very much on the characteristic behaviours of the practitioner as a state rather than as a process.

Investigations of the characteristics of expert teachers in the late eighties and the nineties mostly took the form of novice-expert comparisons. Expertise in teaching has been seen as a state reached after years of teaching experience. Most of these studies have adopted an information processing approach and examined the cognitive processes in which novice and expert teachers engage in making pedagogical decisions. A number of studies were conducted in laboratory conditions where novice and expert teachers were asked to respond to videoclips from authentic classroom teaching or classroom scenarios, or to perform a pedagogical task (see for example Berliner *et al*., 1988; Carter *et al*., 1987, 1988; Peterson and Comeaux, 1987; Sabers *et al*., 1991; Swanson *et al*., 1990). Expert knowledge has been considered as highly organised and easily retrievable and experts as having better self-monitoring and metacognitive skills. Other studies adopted a naturalistic approach and examined novice and expert teachers in action in the classroom through direct observation, interviews or personal narratives. They investigated teacher knowledge as situated and contextually bound (see for example Gonzalez and Carter, 1996; Leinhardt, 1988, 1989; Smith and Strahan, 2004; Turner-Bisset, 2001; see also Berliner, 2001). More recent studies have investigated teaching expertise from a developmental perspective and perceive expert knowledge as constituted by the teacher's participation in the social practice of teaching. Expertise has been understood as a *process* rather than a state (see Bereiter and Scardamalia, 1993) and the development of expertise over time has been explored (see for example, Bullough and Baughman, 1995, 1997; Tsui, 2003). These two different perspectives have yielded fairly different characterisations of teaching expertise. The aim of this chapter is to provide an overview of these characterisations and to discuss how these two different perspectives have led to differ-

ent understandings of the nature of expertise in teaching. As the characterisation of expert teaching necessarily raises the question of how one defines and identifies an expert teacher, I shall begin the discussion by briefly outlining the criteria used for identification and the issues involved.[1]

Identification of expert teachers

As Bereiter and Scardamalia (1993), amongst others, have pointed out, it is much more difficult to identify an expert teacher than an expert in other domains such as chess playing, computer science or physics.[2] This is because the act of teaching is a situated activity and it is much more difficult to have a set of objective criteria that can be applied across all contexts and cultures (see also Leinhardt, 1990). Nevertheless, studies of expert teachers have used one or more of the following criteria, some of which are supposed to be objective, and others are subjective.

The first criterion, which is also the most widely adopted criterion, is years of teaching experience, usually more than five years. In many studies years of experience is the only criterion used, and the terms 'experienced teacher' and 'expert teacher' were used interchangeably. However, as many researchers have noted, experience and expertise are not synonymous. While it is impossible to develop expertise without experience, the reverse is not true. In fact, an experienced practitioner could become complacent with their existing practice and allow their skills to become out-of-date (see Eraut, 1994; Ericsson, 2002).

The second most commonly adopted criterion is nominations or recommendations from school administrators, usually principals, or the school district board. In some cases, the nominations have been further screened by a research team (see for example Sabers *et al*., 1991). Additional criteria have also been used, such as being appointed as a co-operating teacher by the university or a mentor teacher by the school district board, and being awarded teacher of the year by the state (see for example, Copeland *et al*., 1994; Swanson *et al*., 1990; Turner-Bisset, 2001; Westerman, 1991). In such cases, the validity of the criteria used by the principals and/or the awarding bodies is very important. As Olson (1992) points out, in some cases, it is not clear what criteria have been used. Moreover, the judges of the awarding bodies are often from professions outside of teaching, untrained and inexperienced (Berliner, 1986). In some studies, comments from peers and from students have also been taken into consideration (Sanchez, Rosales and Canedo, 1999).

The third criterion, which has become increasingly important, particularly in the United States, is student achievement scores on the ground that it is objective and that learning outcome is an integral part of teaching. This criterion has been used in some research studies. For example, in Leinhardt and Greeno's study (1986), mathematics teachers whose students' achievement scores were within the top 15% for three consecutive years were identified as expert teachers. In Leinhardt *et al*.'s study (1991), this was also one of the criteria for identification.

The use of student achievement scores on standardised tests is problematic on several counts. First, the expertise of teachers is determined indirectly through the performance of their students. This is different from other domains where expertise is determined directly through the performance of the expert. Second, the underlying assumption that there is a linear causal relationship between teacher expertise and student performance is problematic. Student achievement results, as we know, are intertwined with a number of factors, such as their socioeconomic background, peer influence, school context and so on. Third, whether the assessment instrument is able to reflect differences in the quality of teaching is crucial. For example, in Bond *et al*.'s (2000) research programme to set up objective criteria for identifying expert teachers through specifications of classroom performance and professional behaviour, a comparison was conducted on the performance of experienced teachers who were certified by the National Board of Professional Teacher Standards (and hence can be identified as expert teachers) and those who were not. The findings showed that while there were significant differences between expert and non-expert teachers in most of the prototypic characteristics that they proposed, there was no significant difference in student achievement evaluated through written assignments. It was in the student work samples that significant differences were found: 74% of students taught by Board certified teachers demonstrated understanding at a higher level of abstraction compared to 29% of students taught by non-Board certified teachers. In other words, if the comparison had relied solely on the assessment tool, the study would not have been able to identify the expert teachers.

Another difficulty in establishing common criteria for identifying expert teachers is that there might be cultural differences in perceptions about what constitutes expertise in teaching. For example, in Japan, emotional commitment to students is of paramount importance, particularly at the elementary level. A central concept in the Japanese cultural theory of teaching is 'kizuna' or 'kakawari', close

interpersonal relations, which is considered to be a primary condition for teaching and for children to learn from the teacher. Developing 'kizuna' takes precedence over developing technical competence in teaching (Shimahara and Sakai, 1995, p. 169). However, in the People's Republic of China, 'good teachers' have been defined not only in terms of commitment to students but also commitment to the subject of teaching (see Ma, 1992). The latter embraces cognitive and affective dimensions. The good teacher should be genuinely interested in and feel excited about the subject that he or she is teaching. While commitment to students is probably shared across cultures, the interpretations may be different. Commitment to the subject as an attribute of good teachers is probably alien to many cultures. Student participation may be highly valued in the West but not perhaps in some countries in the East. For example, Alexander (2000) documented vast differences in what is acceptable in teaching in five countries. He found that teacher to individual student interactions were around 70% in US classrooms but none in Indian classrooms. Student to student interactions were found in 70% of the lessons in the United States classrooms, but none in Indian classrooms. Lin's study (1999; cited in Berliner, 2001) of expert and novice teachers in Taiwan yielded similar findings.

Unlike domains such as competitive sport or music, so far no commonly accepted criteria for identifying expert teachers have been established. Given the reasons outlined above, one could question whether it is at all possible or even meaningful to establish criteria which could be applied across cultures (see however the Sternberg and Hovrath, 1995, for their prototype model which allows for cultural variation). Nevertheless, this does not render studies of teaching expertise meaningless, as the last section of this chapter shows.

Studies of expertise as a state

Expert-novice comparisons

As mentioned above, studies of expertise in teaching mostly took the form of expert-novice comparisons. A number of studies have been heavily influenced by an information processing model of the mind in cognitive psychology (Calderhead, 1996) and they focused on teachers' cognitive processes in different phases of teaching: the 'preactive' planning phase, the 'interactive' classroom implementation phase and the 'postactive' reflection phase (see Jackson, 1968; Clark and Peterson, 1986). Since the 'postactive' phase is not really

separable from 'preactive' phase because of the cyclic nature of the teaching process, most of the studies distinguish between only the 'preactive' and the 'interactive' phases.

Characteristics of novice and expert teachers in preactive teaching

In the preactive phase, the cognitive processes in which teachers are engaged when planning a lesson or a unit have been considered to be most important because they reflect how teachers translate syllabus guidelines, institutional expectations and their own beliefs into pedagogical actions (Calderhead, 1984). Therefore, most of the studies of teacher thinking in this phase have focused on lesson planning. The findings have yielded four main characteristics on which expert teachers differ from novices.

First, novice teachers plan according to procedures and rules which are devoid of context whereas expert teachers *exercise more autonomy*. Expert-novice comparisons found that typically novice teachers' lesson planning followed closely the procedures that were laid down by planning models whereas expert teachers seldom followed such models. They were much more ready to take responsibility for their own decisions and to make modifications to suit the needs of their students and their own goals (Borko and Linvingston, 1989; Westerman, 1991). Novice teachers also tended to follow closely the instructional objectives stated in the curriculum guides, even when they felt that other alternatives might be better whereas expert teachers exercised their own judgement about the coherence of the activities and were more concerned about what could be achieved over time (Clark and Peterson, 1986; Brown and McIntyre, 1992).

Second, expert teachers are much more *efficient* in lesson planning. Expert teachers were found to spend much less time on lesson planning and yet their plans are much more effective (cf. Berliner *et al*., 1988). This was because they were able to draw on well-established routines based on their past experience and they rarely had to design classroom activities from scratch (Leinhardt and Greeno, 1986). They could recall similar lessons that they had taught before and make amendments, if necessary. Because of this, similar to the experts in other domains, expert teachers demonstrated *automaticity* and *effortlessness* in lesson planning. By contrast, novice teachers spent an inordinate amount of time on planning each and every lesson. Their lesson plans were very detailed and included the questions that they would ask and the answers that they would provide. Consequently, they had little spare capacity to engage in longer term planning (see Borko and

Livingston, 1989; Kagan and Tippin, 1992; Westerman, 1991). Unlike expert teachers, novice teachers cannot rely on 'what normally works' in their own classrooms and they have no routines to rely on. What is interesting, however, is that expert teachers' mental planning is continuous and their planning thoughts are very rich (McCutcheon, 1980). Their mental dialogs often involve rehearsing the lessons and reflecting on what has happened when a similar lesson was taught and whether amendments needed to be made. They also engage in longer term planning, including yearly planning, term planning and weekly planning during which decisions about instructional objectives and content are made (Sadro-Brown, 1990). This raises the questions of how far the expert teachers' planning can be considered automatic and effortless, a point to which we will return in a subsequent section.

The third characteristic is that expert teachers are much more *flexible* and they are much more ready to depart from their plans in response to the contextual variations. These variations include students' responses, availability of resources, and disruptions. They are sensitive to the constraints and possibilities presented by the specific contexts. Because of their rich experience, they are often able to anticipate possible situations and they have contingency plans to deal with them. Novice teachers, by contrast, are much less able to anticipate problems and much less flexible in their planning (Borko and Livingston, 1989; Carter *et al*., 1987; Cleary and Groer, 1994; Housner and Griffey, 1985; Sato, Akita, and Iwakawa, 1993). The flexibility of expert teachers is perhaps a manifestation of a more profound difference. Expert teachers see context as very much part of the teaching act whereas novice teachers tend to see context as external and can be ignored.

The fourth characteristic is that expert teachers' planning thoughts are not only much richer than those of novice teachers, they also reflect a much more *integrated knowledge base*. The findings showed that expert teachers were capable of relating individual lessons to the entire curriculum, to integrate each lesson with previous ones, and with other curriculum contents. Novice teachers, on the other hand, had difficulty making sense of how the curriculum was organised and consequently they planned lessons as discrete units (Schram *et al*., 1989). Expert teachers were also able to draw on knowledge in a wide range of domains when they plan. Studies of teachers' planning thoughts have found that expert teachers always started their planning with statements about their students' prior learning whereas novice teachers seldom did (see Carter *et al*., 1988; Leinhardt, 1989). Expert teachers also drew on their knowledge of the students not only as a group but

also as individuals. They were familiar with the difficulties that individual students had and were able to come up with strategies to deal with them (Calderhead, 1984; Housner and Griffey, 1985). Novice teachers, by contrast, tended to focus very much on teacher action, that is, what they wanted to get through in the lesson and to ignore student action, that is, how students responded to their teaching.

Characteristics of novice and expert teachers in the interactive phase

The interactive phase of teaching is characterised by multidimensionality, simultaneity, immediacy and unpredictability of classroom events (Doyle 1979; Jackson, 1968; Smith and Geoffrey, 1968). Teachers need to attend to multiple events which take place simultaneously and very often the course of events at a given moment is unpredictable. Therefore various attempts have been made to capture teachers' cognitive processes in this phase of teaching. The findings have yielded four main characteristics on which expert teachers differ from novices.

First, similar to master chess players, expert teachers are able to *recognise patterns in classroom events and assign meaning to them very quickly* because of the hundreds and thousands of hours that they have spent in the classroom (Berliner, 1986; Peterson and Comeaux, 1987; Sabers *et al*., 1991). Comparisons have been made on how expert and novice teachers perceive and monitor classroom events which occur simultaneously. The findings showed that while novice teachers were overwhelmed and baffled by the multiple simultaneous events, expert teachers were able to make sense of them in a meaningful way. Expert teachers were also more analytic and interpretive about the classroom events whereas novice teachers were more descriptive and failed to see the relationship between the events (see for example Carter *et al*., 1988; Cushing *et al*., 1989).

The second characteristic that distinguishes expert teachers from novice teachers is *selectivity*. The term 'selectivity' refers to the ability to single out important information from salient but incidental information (Corno, 1981). Expert teachers are able to separate classroom events that are critical and needed immediate attention from those which are less critical and therefore could be attended to later or not at all. The former are often related to instructional objectives.

They usually take note of information about students which is pertinent to pedagogical decisions but not those which are not. For example, in Carter *et al*.'s study (1987), novice and expert teachers were provided with detailed information about a class of students that

they were to take over, including their demographic data, grades and teachers' comments. Expert teachers noted the number of students in the class and a visually impaired student but not the number of male and female students nor their ethnicity. The first two pieces of information were important to decisions regarding the organisation of activities and presentation of teaching materials. Novice teachers, by contrast, remembered more details indiscriminately. In interactive decision-making, a number of studies have found that when a lesson did not go according to what had been planned, expert teachers did not consider a large number of possible alternative routines or strategies. They simply zeroed in on the best routine that could move the lesson forward (Shavelson and Stern, 1981). This is similar to master chess players who do not consider a large number of possible alternatives but focus on only the best move. Novice teachers were found to attend more to classroom events which were related to classroom discipline and less to those related to instructional objectives. By contrast, expert teachers focused much more on the achievement of instructional objectives and tended to ignore minor interruptions which did not jeopardise student learning (Veenman, 1984; Copeland, 1987; Sabers *et al*., 1991; Reynolds, 1992).

The third characteristic relates to the immediacy and unpredictability of classroom events. Expert teachers respond to classroom events with *automaticity* and are able to improvise when the events are unpredicted. Borko and Livingston (1989) reported that the expert mathematics teachers they studied were much *more skilled in improvising*. They were able to generate examples and mathematical problems to illustrate concepts, to use students' responses as springboards for further discussion, to deal with individual students' questions without derailing the lesson. The novice teachers, on the other hand, had difficulty responding to students' questions and keeping the lesson on track. Consequently, they ignored students' needs in order to get through the content. In other studies, novice teachers were found to reduce the complexity of classroom events by focusing on only one region of the classroom or one task at a time (Doyle, 1977; Westerman, 1991). It has been pointed by a number of studies that expert teachers are better able to act with automaticity and to improvise because, similar to experts in other domains, they have developed a repertoire of pedagogical routines that they can call on to deal with a variety of situations. Embedded in such routines are teachers' conceptions of how the classroom should be organised to facilitate learning (Carter *et al*., 1987; Leinhardt and Greeno, 1986; Olson, 1992). This enables

them to free up mental resources to deal with events which are unpredicted (see Brophy and Good, 1986; Doyle, 1986).

The fourth characteristic is that expert teachers are able *to interpret classroom events in a principled manner, to provide a deeper analysis of problems, and to provide justifications for their practices*. For example in Peterson and Comeaux's study (1987), when expert teachers were asked to analyse problems in three classroom scenes and suggest alternatives to handle them, their analyses demonstrated a sophisticated knowledge of effective classroom procedures, and their suggestions were well supported by pedagogical principles. Novice teachers, by contrast, gave comments and suggestions with little justification (see also Berliner, 1994; Kagan and Tippins, 1992). Therefore, similar to experts in other fields like physics and social sciences who were able to represent and solve problems in a principled manner, expert teachers were found to have a more sophisticated knowledge base which enables them to represent and analyse problems at a deeper level.

From the above summary of the findings of novice-expert studies, we can see that the characteristics of expert teachers found in the both phases of teaching are interrelated. Expert teachers, with their years of experience, have developed rich and integrated knowledge of various aspects related to teaching and learning, including the students, both at group and individual levels, the curriculum of their own subject as well as other curricula, the school context, and so on. This enables them to recognise patterns in the classroom very quickly, to make sense of classroom events, and to be selective in attending to events which are important. It provides a sound basis for them to take responsibility for their own teaching, to exercise autonomy and flexibility in their pedagogical decisions. Expert teachers have also developed a repertoire of pedagogical routines which they can call on to deal with a variety of situations. This contributes to the automaticity and effortlessness that they appear to demonstrate in the act of teaching. The availability of routines allows expert teachers to free up mental resources to deal with multiple events happening simultaneously even when some of them are unpredicted. It also enables them to be responsive to contextual variations.

It has been pointed out by a number of researchers that among these characteristics, the most important is the rich and integrated knowledge base of expert teachers. Shulman (1986) criticises the conceptualisation of teacher knowledge as practical and idiosyncratic for presenting a truncated view of teacher knowledge. He proposes that an analytical framework for investigating teacher knowledge includes

knowledge of the subject matter, pedagogy, context, other curricula and educational aims. He refers to the special form of knowledge held by teachers in representing the subject matter effectively to students as 'pedagogical content knowledge'. According to him, this form of knowledge is firmly grounded in a sound knowledge of the subject matter. The work of Shulman has inspired another strand of research in novice-expert comparisons which focuses on how subject matter knowledge affects the process and quality of teaching, though the number of studies are relatively smaller.

Studies of the knowledge of expert and novice teachers have found that the critical difference lies in their pedagogical content knowledge. When novice and expert teachers with significant knowledge of the subject matter were compared in terms of the organisation of the curriculum, the activity structures and routines, the lesson plans, the explanation and representation of subject matter content, these studies showed that there were a number of ways in which their representations of the subject matter to students were different. Expert teachers had a comprehensive overview of the curriculum. They were aware of different ways of structuring the curriculum and their pros and cons. Their mental plans demonstrated an awareness of the critical points in content learning. Their lessons were not only characterised by fluidity but more importantly by transparent goals and cohesive structures. Their explanations were clear and well-connected. They were also able to represent the subject matter content in multiple ways and in manageable bits. By contrast, novice teachers did not have a coherent overview of the curriculum. There was a lack of coherence between the lessons within and across topics. Their lesson structures were fragmented, with ambiguous goals that were often abandoned. Their explanations were not well-connected and they contained mistakes that caused conceptual confusion amongst students (Gudmunsdottir and Shulman, 1989; Leinhardt and Smith, 1985; Leinhardt and Greeno, 1986, Leinhardt, 1989; Leinhardt *et al*., 1991; Wineburg and Wilson, 1991). Wineburg and Wilson (1991) observe that knowledge of subject matter is central to teaching but is not the only determinant of expert teaching. It is the ability to draw on a range of pedagogical possibilities in relation to the representation of subject matter content that distinguishes expert teachers from novices. Similarly, Turner-Bisset (2001) concludes that one of the important characteristics of expert teaching is the usage of the 'fullest form' of pedagogical content knowledge which underpins the act of teaching (p. 141).

Studies of expertise as a process: the development of expertise

The characterisations of teaching expertise generated by novice-expert studies have been criticised by a number of researchers for not being able to accurately reflect teachers' work. One of the most insightful critiques of the expert-novice comparisons is Bereiter and Scardamalia (1993). They were among the first to question the image of expert performance as efficient, automatic and effortless. They found that in their study of novice and expert writers, the latter worked much harder and longer hours than the former and consequently they produced much higher quality work. In a similar vein, Wineburg (1991; 1994) found that it was the student historians (novices) who formed quick interpretations, not the university historians (experts). The latter had doubts about their own interpretations and were cautious about their conclusions. Wineburg (1998) argues that the two images of expertise are not necessarily conflicting; they represent two different aspects of expertise. When experts work in their own specific domains, their expertise is characterised by automaticity, fluidity and effortlessness. When they work in areas outside of their specific domains, they are capable of adapting their expert knowledge to the new situation but their performance is typified by perseverance in solving the problem at a deeper level. The former has been described as 'routine', 'crystallised', 'specific' and the latter as 'adaptive', 'fluid' and 'generic' (see also Berliner, 2001; Hatano and Inagaki, 1986).

Bereiter and Scardamalia (1993), however, argue that the conflicting images could have resulted from two major flaws in these studies. First, the automatic and effortless image of the expert could be generated by the research design of assigning the same task to both the expert and the novice. The task is usually within the capability of the novice but can be completed by the expert with little effort. Bereiter and Scardamalia propose that the critical difference between the novice and the expert lies not in the efficiency and automaticity in solving problems but in the *kinds of problems* that they solve or *the way they choose to solve the problems*. Experts, according to them, solve problems, or choose to solve problems, that are progressively more difficult and thereby extend their competence and increase their expertise. Non-experts either solve fewer problems or choose to solve problems that do not require them to extend their competence. Bereiter and Scardamalia identify this characteristic as 'progressive problem solving'.

Second, in many studies, experienced teachers were presumptively taken as expert teachers. Some of the features identified are characteris-

tic of experience but not expertise. For example, all experienced practitioners have developed routines of some kind and they draw on these routines in practice. What distinguishes the experts from the experienced non-experts is that the former re-invest their mental resources freed up by the use of routines to tackle more difficult problems and problematise what appears to be routine or unproblematic. In the process of doing this, they 'work at their edge of the competence' (Bereiter and Scardamalia, 1993, p. 34) and develop expertise in their own specific domain. By contrast, as experienced non-experts establish more and more routines over time, they rely more and more on these routines and they minimise their opportunities for growth. Bereiter and Scardamalia identify this characteristic as 'reinvestment of resources'. According to them, 'reinvestment' and 'progressive problem-solving' are two aspects of the same process which is continuous.

The characterisation of expertise by Bereiter and Scardamalia provides a new perspective for understanding expertise in general and expertise in teaching in particular. As pointed out in the previous section, most of the research studies investigated expertise as a state that has been reached after years of experience. The focus has been very much on the characteristics of expert performance. What has been somewhat neglected is the understanding of expertise as a process.

While there are numerous studies on teachers' professional growth over time, not many have been done from the perspective of expertise as a process. Ericsson (2002) laments the lack of systematic study of experts' development and the anecdotal nature of the evidence. His observation applies to expertise in teaching. In the ensuing discussion, I would like to focus on two major studies which have adopted a developmental perspective on teaching expertise; they are Bullough and Baughman (1995) and Tsui (2003). The former conducted a longitudinal study of a teacher, Kerrie, and focused on her development of expertise when she was recognised as an expert teacher after five years of teaching when she moved to a new school (see also Bullough and Baughman, 1997). They focused on how Kerrie handled three problems in a new context, two of which were new problems, dealing with mainstreamed students and an English Learning Program which required working with a team of highly experienced teachers and a novice teacher. The third was a writing programme, something she had done very well in her former school.

Tsui (2003) conducted case studies of four teachers working in the same school, one of which was an expert teacher, Marina. The case

studies focused on the developmental paths of these four teachers. They focused on how and why Marina developed into an expert teacher and whereas two of her colleagues remained experienced non-experts. The findings of these two studies yielded the following characteristics of teaching expertise.

First, while many expert studies have pointed out the importance of a rich and integrated knowledge base of experts and the use of such knowledge base to solve problems more effectively (Sternberg and Horvath, 1995; Berliner, 1994), Tsui (2003) observes that vital to developing and maintaining expertise is the renewal of knowledge. She argues that it is the interaction between formal knowledge and personal practical knowledge that underpins Marina's experimentation and exploration to bring about more effective teaching and learning. She describes the interactive process as 'theorizing practical knowledge and practicalising theoretical knowledge' (p. 257). Similarly, in Bullough and Baughman's study, the formal knowledge that Kerrie received at an academic conference was crucial in providing the impetus for her implementation of the writing programme in her new school.

Second, it is the capability and propensity to 'problematise the unproblematic' that distinguishes expert from the non-expert (Tsui, 2003, p. 267). Similar to Bereiter and Scardamalia's (1993) finding that the expert writer worked much harder on a writing task than the novice writer, Tsui found that the expert teacher, Marina, spent a great deal of time preparing lessons, making detailed plans and even rehearsing the steps mentally. Instead of just relying on her pedagogical routines, she tried to modify her teaching materials to suit the specific needs of her students and give them variation. Inherent in the process of problematising the unproblematic is the expert's engagement in reflection and conscious deliberation. For Marina, reflecting on her own practices was very much part of her professional life rather than something that she engaged in only when something unusual occurred. She reflected on the good discipline in her classroom, something she finally managed to achieve after four years of teaching but at the expense of making learning enjoyable. Consequently, she reframed her understanding of keeping discipline and making learning enjoyable as mutually constitutive rather than dichotomous. Similarly, she agonised over her teaching of writing and the lack of evidence of student learning outcome, and decided to change from a product-oriented to a process-oriented approach to writing. In other words, reflection and problematisation are two aspects of the same process.

Similar to Marina, in Bullough and Baughman's study, Kerrie was not unhappy with her own approach to the teaching of writing, but she was bothered by the fact her students were not realising their potentials. She introduced changes to the writing curriculum in the first school she taught and when she moved to a new school, she did not simply replicate what she had done before but made modifications in response to the specific context. In other words, in both studies, the expert teacher problematised what appeared to be unproblematic.

Third, closely related to the second characteristic, expert teachers respond to their context of work in such a way that extends their competence. They were able to see 'situated possibilities' and to maximise their opportunities for professional growth (Tsui 2003, p. 253). Bullough and Baughman (1995) found that Kerrie tackled the problems in such a way that 'pushes the boundaries' (p. 461) of her competence. For example, having several mainstreamed students in her class pushed the limit of her expertise as she had no experience in handling them. She worked hard and learnt by trial and error even though she had no support from the school. When she implemented the writing programme in the new school, she introduced important modifications in response to the context. She changed her approach to conferencing with students because of the greater time constraint, the composition of class which required her to monitor two mainstreamed students, and the availability of a computer laboratory. She also provided more guidance in the writing tasks she gave to her students. When she was working on a demanding English Learning Program led by intellectually powerful experienced teachers, she sought greater involvement in planning and actively offered ideas and suggestions. By contrast, the other novice teacher involved in the same programme played a much more passive role of implementing others' ideas. Kerrie found the work interesting and professionally challenging whereas the other novice teacher did not. In other words, she was able to respond to the demands as opportunities for professional growth.

Similarly, Tsui (2003) found that Marina was able to transcend the contextual constraints and exploit situated possibilities for effective teaching. She was not only able to respond to the challenges that presented themselves but also able to identify challenges even when they did not present themselves as such. For example, when she was presented the challenge of monitoring her colleagues' grading of student assignments, a task that the head of the English department had been assigned by the school, instead of simply carrying out the task, she changed the quality assurance mechanism to an opportunity for

learning how to help students improve. She also introduced changes to the English curriculum that had been in place for a long time, moving from simpler goals such as incorporating the teaching of phonetic symbols to junior students to more complex tasks such as adopting a process-oriented approach to writing in all junior classes. In both studies, the expert teacher engaged in progressive problem solving by reinvesting their energy into something that increased their expertise. Tsui (2003) further observes that what distinguished Marina from another experienced non-expert teacher, Eva, who was also constantly seeking challenges, was that Marina was able to take on challenges which required her to work *at the edge of her competence* whereas Eva took on those which was way above her level of competence. The consequent demoralisation was a major hindrance to Eva's professional development.

The nature of expertise in teaching

In the discussion so far, I have outlined two different perspectives on teaching expertise: expertise as a state and expertise as a process. They generate characterisations which seem to be diametrically opposed. The former states that expertise is characterised by effortlessness, automaticity, non-reflectivity, fluidity and efficiency. The latter, however, states that expertise is characterised by long hours of hard work in which the expert is engaged in reflection and conscious deliberation, in problematising the unproblematic, and in maximising opportunities afforded by the context to extend one's competence in problem solving. Yet, our knowledge of outstanding teachers suggests that there seems to be some truth in all of these characterisations. In this section, I shall discuss what light these characterisations throw on our understanding of the nature of expertise.

Expertise in teaching as a prototype

Sternberg and Hovrath (1995) address what appears to be conflicting images of expertise by proposing a prototype view of teaching expertise. They have criticised the definitions of expertise, such as reflective practice, as too restrictive and the descriptions of observable differences between experienced and inexperienced teachers as too ad hoc. On the premise that it would be difficult to define standards that should be met by all experts but not by non-experts, they have proposed a prototype view of expert teaching based on the psychological concept of 'category' in which members of the same category bear family resemblance in the clusters of features that they share. Each

cluster, according to them, consists of 'cognitive mechanisms and / or abilities that are thought to be related to expert performance' (p. 9). Drawing on work of other researchers, they have proposed three critical differences which distinguish expert teachers from novices and around which clusters of features will be found. First, expert teachers' knowledge is rich, integrated and highly organised in memory so that they are able use it to solve problems in their domains more effectively. Second, their performance is more efficient, automatic and effortless in the domain of teaching because of the availability of well-established routines. These routines enable them to devote their energy to higher level tasks. Third, expert teachers have better insight and are able to notice and effectively integrate information that is important for problem solving. Hence, they are more likely than novices to come up with novel and appropriate solutions to problems. Among these three differences, the first one is most important and underlies all other differences or clusters of features. This prototype model has been considered to be particularly useful for establishing and validating professional standards for certification purposes (see Bond, Smith, Baker, and Hattie, 2000) and has been adopted by Smith and Strahan (2004) in a case study of three expert teachers to determine the 'family resemblance' among them. The model reconciles the apparently conflicting images by allowing for variation and diversity among expert teachers and offers a principled way of distinguishing experts from experienced non-experts. However, it does not offer new insights on the nature of expertise in general and in teaching in particular. The delineation of clusters of features basically takes expertise in teaching as a state of performance rather than as a process.

Expertise and expert performance

Tsui (2003) addresses the apparently conflicting images of expertise by suggesting two plausible reasons. The first reason is that the kinds of expertise that Dreyfus and Dreyfus (1986) delineated in the five-stage model, such as driving, involve technical skills which are characterised by intuition, automaticity and non-reflectivity. However, not all kinds of expertise involve such skills. As we have seen in the discussion above, teaching involves much more than mastering technical skills.

The second reason, and I venture to say that it is the main reason, is that what Dreyfus and Dreyfus have characterised seems to be *expert performance* rather than *expertise*. By 'expert performance' I mean when experts are actually engaged in the act of performing. For example, during a performance, a ballerina acts intuitively and non-reflectively.

As soon as she thinks about what the next step will be, her performance will not be smooth and fluid, as Dreyfus and Dreyfus have argued. Expert performance is a *state* that is reached after years of experience and thousands of hours of practice. By 'expertise' I mean the *processes* which mediate or support experts' superior performance. For example, in order to reach a state of superb and flawless performance, the ballerina must have undergone a *process* of very tough training, constant reflection on her numerous rehearsals and performances, and setting higher and higher goals for herself to extend her existing level of competence. In recent studies of expertise, even the term 'expert performance' has been taken in the sense of a process rather than a state. For example, Ericsson (2002) distinguishes 'expert performance' in domains such as competitive sport and musical performance from everyday skill such as driving. He points out that while everyday skill is rapidly stable automatisation, expert performance is continued improvement with increased experience and deliberative practice. He points out that it is precisely the resistance to automaticity that distinguishes the expert from the non-expert.

> Expert performers counteract the arrested development associated with automaticity by deliberately acquiring and refining cognitive mechanisms to support continued learning and improvement. (Ericsson, 2002, p. 39).

Ericsson's observation echoes Bereiter and Scardamlia's (1993) contention that the learning mechanisms that mediate the development of expertise are critical. While investigating the detailed characteristics of superior performance is an important part of understanding expertise, investigating the processes and learning mechanisms which mediate and support the development of expertise is critical to understanding *the nature of expertise*. The process of development of expertise and expert performance are both sides of the same coin. As Tsui (2003) points out,

> … in the process of attaining and maintaining expert performance in all kinds of skills, experts engage in continuous efforts to improve themselves. Once they lose the characteristics outlined in the development of expertise, they cease to perform at an expert level; they cease to be an expert (p. 279).

Much of work on expertise in teaching, as pointed out at the beginning of this chapter, has been motivated by the need to raise the status of the

teaching profession by demonstrating to the public that like experts in other professions, experts in teaching possess knowledge and skills which are no less sophisticated. It is also motivated by the need to set benchmarks for the teaching profession and to set goals towards which members of the profession should aspire (Berliner, 2001; Sternberg and Hovrath, 1995). However, what is perhaps even more important is that the profession needs an ever-increasing critical mass of expert teachers to bring about quality learning in schools. To achieve this, an understanding of the processes and learning mechanisms which mediate the development of expertise is crucial. Such understanding would enable mentor teachers and teacher educators to identify emerging characteristics of expertise among young members of the profession and to ensure that they are well supported and appropriately challenged at the various phases of their development.

Notes

1. One could even question how one defines the notion of 'expert teaching'. As Turner-Bisset (2001) has pointed out, various terminologies have been used to describe teaching of very high quality, such as 'good teaching', 'effective teaching' and 'outstanding teaching' (see for example Brown and McIntyre, 1992; Cooper and McIntyre, 1996; DfEE, 2000). However, we shall not go into this issue here.
2. It should be noted, however, that recent studies of expertise have emphasised the social nature of expertise. For example, Ferrari (2002) proposes that notions of excellence are culturally specific – it is what a culture and an individual considers important (see also Mieg, 2001).

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9

Teacher Cognition in Language Teaching

Simon Borg

Although it is of course possible to consider language teacher cognition without the focus of attention being on expertise, it is the case that the study of cognition represents an important part of language teacher expertise research. This chapter concentrates on cognition. It is an extract from a review article written by Simon Borg, entitled Teacher cognition in language teaching: a review of research on what language teachers think, know, believe, and do. *It appeared in Language Teaching (Vol. 36, 81–109), and is reproduced here with the kind permission of the author and the publisher, Cambridge University Press. The original article is a lengthy and comprehensive survey of work done in the field of language teacher cognition. The section appearing here deals with one central field:* cognition and classroom practice, *and it includes a particularly relevant sub-section dealing with* cognition and experience. *The section is prefaced by a discussion taken from an earlier part of Borg's article in which he represents a conceptualisation of teaching indicating the role cognition plays within it. This is shown in his Figure 9.1. In the extract which follows, square brackets – [ ] – enclose small changes in the original wording made by the editor to render the extracted text coherent. When portions of the original text have been omitted, this is signalled thus: [.....].*

Introduction

I use the term teacher cognition here to refer to the unobservable cognitive dimension of teaching – what teachers know, believe, and think. Mainstream educational research in the last 25 years has recognised the impact of teacher cognition on teachers' professional lives, and this

has generated a substantial body of research. Several reviews of this work have been undertaken (Calderhead, 1996; Carter, 1990; Clark and Peterson, 1986; Fenstermacher, 1994; Richardson, 1996; Verloop, Van Driel and Meijer, 2001)[1] and the assumptions on which it is based are now largely uncontested: teachers are active, thinking decision-makers who make instructional choices by drawing on complex, practically-oriented, personalised, and context-sensitive networks of knowledge, thoughts, and beliefs. Key questions addressed in teacher cognition research include the following:

- what do teachers have cognitions about?
- how do these cognitions develop?
- how do they interact with teacher learning?
- how do they interact with classroom practice?

Figure 9.1 (Borg, 1997) summarises the answers to these questions. It indicates that teachers have cognitions about all aspects of their work, and lists recurrent labels used to describe the various psychological constructs which I collectively refer to here as teacher cognition. The diagram also outlines relationships suggested by mainstream educational research among teacher cognition, teacher learning (both through schooling and professional education), and classroom practice. In brief, there is ample evidence that teachers' experiences as learners can inform cognitions about teaching and learning which continue to exert an influence on teachers throughout their career (e.g. Holt Reynolds, 1992); there is also evidence to suggest that although professional preparation does shape trainees' cognitions, programmes which ignore trainee teachers' prior beliefs may be less effective at influencing these (e.g. Kettle and Sellars, 1996; Weinstein, 1990); and research has also shown that teacher cognitions and practices are mutually informing, with contextual factors playing an important role in determining the extent to which teachers are able to implement instruction congruent with their cognitions (e.g. Beach, 1994; Tabachnick and Zeichner, 1986).

Figure 9.1 represents a schematic conceptualisation of teaching within which teacher cognition plays a pivotal role in teachers' lives. It is within this framework, grounded in an analysis of mainstream educational research, that language teacher cognition research has emerged (see Freeman, 1996; 2002), and in the review which follows I will use Figure 9.1 as a point of reference.

[…..]

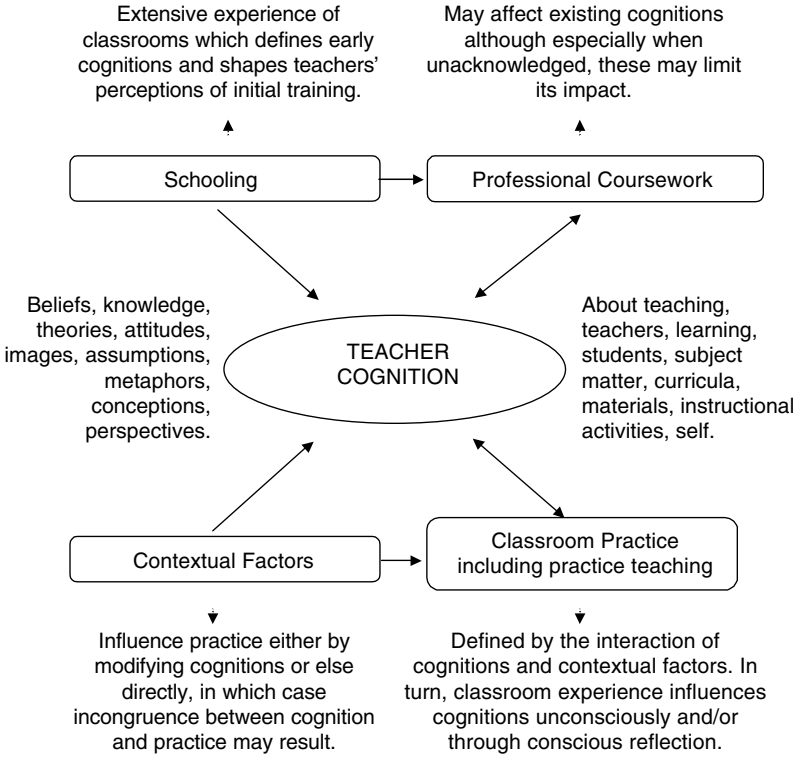

Figure 9.1 Teacher cognition, schooling, professional education, and classroom practice (Borg, 1997).

Teacher cognition and classroom practice

Numerous studies in mainstream educational research have shown that teacher cognition and classroom practice exist in 'symbiotic relationships' (Foss and Kleinsasser, 1996: 441). Several studies have also studied these relationships in the field of language teaching (Bailey, 1996; Bartels, 1999; Breen, 1991; Breen, Hird, Milton, Oliver and Thwaite, 2001; Burns, 1996; Gatbonton, 1999; Golombek, 1998; Johnson, 1992; Lam, 2000; Nunan, 1992; Richards, 1996, 1998a, 1998b; Richards, Li and Tang, 1998; Smith, 1996; Ulichny, 1996; Woods, 1991, 1996). Reflecting findings from the mainstream literature, these studies collectively show that language teachers' classroom practices are shaped by a wide range of interacting and often conflicting factors. Teachers' cognitions, though, emerge consistently as a powerful influence on their practices, though, as I discuss

later, these do not ultimately always reflect teachers' stated beliefs, personal theories, and pedagogical principles.

As Table 9.1 shows, the cognitions shaping language teachers' classroom practices have been described in various ways in the studies listed above. These practices have been accounted for in terms of instructional concerns or considerations teachers have, principles or maxims they are trying to implement, their thinking about different levels of context, and the pedagogical knowledge they possess. In addition, the bases of teachers' instructional practices have been explained in terms of their personal practical knowledge (Golombek, 1998), beliefs (Smith, 1996; Woods, 1991), and, as shown by Lam's (2000) study of L2 teachers' use of technology, teachers' personal convictions.

Table 9.1 Cognitive influences on language teachers' classroom practices

Source	Cognitive influences
Bailey (1996)	Teachers' in-class decisions to depart from their lesson plan were based on a number of principles: (1) serve the common good (2) teach to the moment (3) further the lesson (4) accommodate students' learning styles (5) promote students' involvement; and (6) distribute the wealth
Breen (1991)	Seven pedagogic concerns, focused on three main variables: Focus on the learners: concern with the learners' (a) affective involvement (b) background knowledge (c) cognitive processes assumed to facilitate learning Focus on the subject matter: concern with language as (a) usage (b) use Focus on the teacher: concern with (a) guidance (b) classroom management.
Breen *et al*. (2001)	Five superordinate categories of teacher concern: a concern with how the learner undertakes the learning process a concern with particular attributes of the learner a concern with how to use the classroom and its human and material resources to optimise learning a concern with the subject matter of learning – with what is being taught and learned

Table 9.1 Cognitive influences on language teachers' classroom practices – *continued*

Source	Cognitive influences
	a concern with the specific contributions that they can make in their role as teacher
Burns (1996)	Three interacting contextual levels of teacher thinking:
	thinking about the institutional culture teachers' beliefs about language, learning, and learners thinking about specific instructional activities
Gatbonton (1999)	Six general domains of pedagogical knowledge:
	knowledge of how to manage specific language items so that students can learn them knowledge about the students and what they bring to the classroom knowledge about the goals and subject matter of teaching knowledge about techniques and procedures knowledge about appropriate student-teacher relationships knowledge about evaluating student task involvement and progress during the lessons
Johnson (1992)	Eight categories of instructional considerations:
	student involvement and motivation instructional management curriculum integration student affective needs subject matter content student understanding student language skills and ability appropriateness of teaching strategy
Richards (1996)	Teachers explained their decisions in terms of maxims:
	The maxim of involvement: follow the learners' interests to maintain student involvement The maxim of planning: plan your teaching and try to follow your plan The maxim of order: maintain order and discipline throughout the lesson The maxim of encouragement: seek ways to encourage student learning The maxim of accuracy: work for accurate student output The maxim of efficiency: make the most efficient use of classroom time The maxim of conformity: make sure your teaching follows the prescribed method The maxim of empowerment: give the learners control

It is important to acknowledge [.....] the different research traditions on which these studies draw. Though a more detailed analysis would identify a range of positions, two contrasting perspectives can be highlighted here. One derives from the educational literature on decision-making (see, for example, Shavelson, and Stern, 1981), the second from that on teachers' personal practical knowledge (Elbaz, 1981; Clandinin and Connelly, 1987). While both perspectives recognise the role of teachers' mental lives in shaping classroom events, the work on decision-making adopts a somewhat technicist view of teaching which focuses on identifying the antecedents for teachers' interactive decisions and describing effective decision-making procedures. Several studies which I discuss here acknowledge this perspective (without necessarily endorsing a technicist view of teaching). The personal practical knowledge perspective examines teaching more holistically, taking into account, for example, the role of affective, moral and emotional factors in shaping teachers' classroom practices. This perspective is less explicitly adopted here, Golombek (1998) being a notable exception.

Looking beyond the terminological diversity evident in these studies and the range of conceptual traditions they reflect, though, several recurrent themes are apparent in this body of work and I discuss these in turn below.

Common reasons for instructional decisions

Studies have attempted to identify the reasons most commonly cited by teachers in explaining their instructional decisions. In Breen (1991), a concern for the cognitive processes which facilitated learning was the most common reason given.[2] In Gatbonton (1999), a concern for language management (e.g. explaining vocabulary, creating contexts for meaningful use) was overall the most common focus of teachers' pedagogical thoughts.[3] Johnson (1992) reported that the preservice teachers in her study made most decisions to ensure student understanding and motivation as well as for instructional management reasons. She also concluded that 'unexpected student behaviour is the prominent antecedent condition of preservice teachers' instructional behaviour' (p. 527). Nunan (1992), in contrast with Gatbonton, found that teachers' comments on their decisions did not reveal a concern for language (especially in the case of the inexperienced teachers in his study); in this case, teachers' concerns related mostly to the pacing and timing of lessons, the quantity of teacher talk, and the quality of their explanations and instructions. Richards (1996) analysed data from a corpus of teacher narratives and interviews (without, however, analysing actual teaching) to suggest that teachers accounted for their

pedagogical choices with reference to maxims (i.e. personal working principles – see Table 9.1). Similar principles were reported in the work of Bailey (1996), which I discuss below.

Departures from lesson plans

The notion of improvisational teaching has been examined in the educational literature (e.g. Borko & Livingston, 1989) and studies of language teacher decision-making have also looked specifically at the reasons teachers give for departing from their lesson plans. Ulichny (1996) presents a case study of a teacher who started a lesson with specific plans and principles in mind (e.g. promoting learner-centred reading) but who during the lesson had to modify her plans in the face of the unexpected difficulties the students experienced in completing the planned activities. The outcome was a lesson in which the teacher engaged in practices which did not reflect her principles (e.g. the lesson became very teacher-centred). Bailey (1996) found that teachers' in-class decisions to depart from their lesson plans were based on a number of principles (see Table 9.1). For example, one principle was 'serve the common good'. This means that when an unexpected issue or question arises during a lesson, a teacher may depart from the plan to deal with it if it is perceived to be of general relevance to the whole class. In his study of teachers' use of lesson plans, Richards (1998b) also found evidence of 'on-the-spot modification of planned activities in order to maintain students' engagement and interest level' (p. 115). These modifications (more common in the work of experienced teachers) were prompted by pedagogical factors (e.g. the need to simplify a task) and by a perceived need for more focused language work. Smith (1996) too highlights the distinction between planned and unplanned interactive decisions; in her study, unanticipated decisions were prompted by student factors (e.g. students' affective state) or teacher factors (e.g. forgetting to bring a key resource to class). Smith reports that student misbehaviour and student noncomprehension, two factors typically associated with unplanned interactive decisions, were not in evidence in the classes she studied. Rather than seeing teachers' departures from lesson plans as a shortcoming in their work, then, teacher cognition research shows that such departures are the result of the constant interaction between teachers' pedagogical choices and their perceptions of the instructional context, particularly of the students, at any particular time.

Cognition and context

In Borg (1998) I referred to several studies from the educational literature which show that teachers' practices are also shaped by the social,

psychological and environmental realities of the school and classroom (this phenomenon is also highlighted in the framework provided in Figure 9.1). These factors include parents, principals' requirements, the school, society, curriculum mandates, classroom and school layout, school policies, colleagues, standardised tests and the availability of resources. There is evidence to suggest that, unsurprisingly, such factors may also hinder language teachers' ability to adopt practices which reflect their beliefs. Burns (1996, p. 162), for example, talks about the 'organisational exigencies' of the context in which the teacher she reports on worked, and of the ways the teacher's awareness of the broader institutional context had an impact on decisions about lesson planning and content. In their study of novice teachers, Spada and Massey (1992) found differences in the extent to which classroom practices reflected the principles the novices were taught in their teacher education programme, and suggest that this may have been due to the contextual factors of the school in which different teachers worked. Contrasting two teachers, they write that:

> It will be recalled that Alice was teaching in a private school and given considerable flexibility as to what she could do in her classroom. It was a tranquil school setting with exemplary behaviour exhibited on the part of the students. It is possible that this factor was an important one in that it enabled Alice to use the knowledge she obtained in her training and concentrate on the development and application of her lessons in creative ways without any distractions. Neil, on the other hand, was teaching in a public school known to have serious discipline problems. As indicated earlier, this meant that he was rarely able to follow through with his lesson plans and spent most of his time managing student behaviour. (p. 33)

The reference to discipline problems is interesting here as, in contrast to the attention it has received in mainstream educational research, problem behaviour rarely seems to be an issue in the classrooms described in the literature on language teacher cognition. This, of course, is a reflection of the fact that much of this research has been conducted in language learning settings which are not necessarily, in a global sense, typical (e.g. small classes with adult learners in universities or private institutions).

Crookes and Arakaki (1999) also found strong evidence that difficult working conditions affected what language teachers did; in their study, teachers had to cope with heavy workloads (approximately 50 hours a week), which meant that time for preparation was limited. This had a

powerful impact on teachers' pedagogical choices. As one teacher explained, 'I will often choose or create an exercise [even though] I know there could be a better one, but I just can't do it within the time that I have' (p. 18). Further evidence of how context may conflict with cognition comes from Johnson (1996), who reports on a student teacher on a practicum who finds herself struggling to adopt practices which reflected her principles. In this case, there was a key tension between covering all the material and dealing with students' questions, and with the need for coverage exerting a powerful influence the teacher found she was unhappy with her practices:

> I don't like it when I see myself teaching this way. I want it to be more student-centred and not teacher-centred, but sometimes it's just easier to stand up there and tell them what they need to know. This is not my vision of good teaching but sometimes I find myself doing it anyway. (p. 37)

Johnson reports how the teacher's initial enthusiasm was gradually overcome by what she saw as contextual realities she felt were beyond her control. One final example to mention here of how context can constrain what language teachers do is provided by Richards & Pennington's (1998) study of teachers in their first year of teaching in Hong Kong. These teachers had been trained in a version of the communicative method, yet almost without exception their practices during their first year diverged from communicative principles. This was due to the impact of large classes, unmotivated students, examination pressures, a set syllabus, pressure to conform from more experienced teachers, students' limited proficiency in English, students' resistance to new ways of learning, and heavy workloads. As the authors conclude:

> Such factors discourage experimentation and innovation, and encourage a 'safe' strategy of sticking close to prescribed materials and familiar teaching approaches. Without any relief from these factors and without any reward for innovating in the face of them, the teachers would naturally be led back toward a conservative teaching approach to align themselves with the characteristics of the existing teaching context. (pp. 187–88)

Cognition and experience

As suggested by Figure 9.1, cognition not only shapes what teachers do but is in turn shaped by the experiences teachers accumulate. Although

no studies of language teachers have specifically examined this issue,[4] several do refer to the impact of experience on cognition (e.g. Breen *et al*., 2001; Mok, 1994). Crookes and Arakaki (1999) discuss this issue in some detail; in examining the sources of ESL teachers' ideas, they found that accumulated teaching experience was the source cited most often by the teachers in their study. They report that:

> many of these teachers spoke about their teaching experience as being a personally unique and self-contained entity …. It was a personal history of knowledge and information gained through trial and error, concerning which teaching ideas (and their sources) were effective in which circumstances. As one veteran teacher stated simply, 'As you have more practice, then you know in the classroom what will work and what will not work.' (p. 16)

Studies comparing experienced and less experienced language teachers also shed light on transformations in teacher cognition which may occur over time. Earlier, I referred to the finding by Nunan (1992) that experienced language teachers' decisions showed greater attention to language issues than those of less experienced teachers, who were more concerned with classroom management. This suggests that with experience teachers learn to automatise the routines associated with managing the class, and can thus focus more attention on issues of content. Richards (1998b) also found that experienced teachers engaged in more improvisational teaching than inexperienced teachers. He argues that 'this suggests that as teachers develop their teaching skills, they are able to draw less on preactive decision-making (the type of planning that occurs prior to teaching) and make greater use of interactive decision-making as a source of their improvisational performance' (pp. 117–118). In comparing novice and experienced teachers' approaches to a reading lesson and to teaching literature, Richards, Li and Tang (1998) also identified four areas of language teaching which novice teachers were less skilled at: (a) thinking about the subject matter from the learner's perspective; (b) having a deep understanding of the subject matter; (c) knowing how to present subject matter in appropriate ways, and (d) knowing how to integrate language learning with broader curricular goals.

None of the above studies, however, were longitudinal and thus one can only deduce some of the possible processes language teachers go through in developing the cognitions and skills more characteristic of experienced teachers. Woods (1996) does, though, provide a more detailed example which shows how a teacher's understandings of L2

teaching – particularly his notion of the roles of teachers and learners – changed over time as a result of the difficulties he experienced teaching Japanese students. This teacher initially equated the notion of 'purpose' in language learning with providing students with opportunities for communicative practice in the classroom; when students failed to respond to this approach, he gradually broadened his view of purpose so that it included students' perceptions of the purpose of their studies (in this case, passing an exam). Consequently, he modified the manner in which he approached L2 instruction with these students.

PPK, BAK, and pedagogic principles

Three further studies merit special comment here (Breen *et al*., 2001; Golombek, 1998; Woods, 1996); not only do they go beyond the study of instructional decisions as described above, but they also extend, conceptually and methodologically, our understandings of the relationships between language teachers' cognitions and practices.

Golombek (1998) takes the notion of personal practical knowledge (PPK) from mainstream educational research and uses this as the basis for an examination of the practices of two ESL teachers. The accounts presented go beyond an analysis of interactive decisions and of the immediate factors motivating these; rather, the study shows how the teachers' work was shaped by four overlapping and interacting categories of PPK (knowledge of self, of subject matter, of instruction, and of context) which the teachers held and used in a holistic manner. Echoing Freeman's (1993) use of the term, Golombek shows the working of these categories by exploring tensions in the teachers' work. For example, in one case the tension is discussed in terms of the teacher's desire to achieve a balance in her lessons between attention to both accuracy and fluency; however, her own negative experiences of language learning, where she was hypercorrected, discourage her from attending to accuracy as much as she would like to (and is expected to) for fear of making her students feel bad too. The multifaceted nature of this teacher's PPK surfaces as she articulates and attempts to make sense of this tension. The study illustrates how L2 teachers' PPK is 'personally relevant, situational, oriented towards practice, dialectical, and dynamic as well as moralistic, emotional, and consequential' (p. 452) and concludes that classroom practice and PPK exert a powerful and continual influence on one another:

> The teachers' personal practical knowledge informed their practice by serving as a kind of interpretive framework through which they

> made sense of their classrooms as they recounted their experiences and made this knowledge explicit. The teachers' sense-making processes were dynamic; the teachers' practice at any point represented a nonlinear configuration of their lived experience as teachers, students, and people, in which competing goals, emotions, and values influenced the process of and the classroom strategies that resulted from the teachers' knowing. Thus, personal practical knowledge informs practice, first, in that it guides teachers' sense-making processes; that is, as part of a teacher's interpretive framework, it filters experience so that teachers reconstruct it and respond to the exigencies of a teaching situation. Second, it informs practice by giving physical form to practice; it is teachers' knowledge in action. Because teachers use this knowledge in response to a particular context, each context reshapes that knowledge. In this way, L2 teachers' personal practical knowledge shapes and is shaped by understandings of teaching and learning. (p. 459)

Woods (1996) conducted a longitudinal study of planning and decision-making in ESL classrooms in Canada. Drawing on interviews, observations, video-based stimulated recall, teachers' logs, and document analysis, this study tracked a group of teachers as they went through the process of planning and teaching their courses. This work provides detailed insight into teachers' decision-making processes and the factors shaping these. These factors relate not only to immediate antecedent conditions, but also to influences stemming from teachers' professional lives as a whole (e.g. their prior language learning experiences). Woods divides these factors into two groups, which he labels external and internal:

> External factors are situational factors which teachers take into account in making decisions (or to be accurate, what teachers know, assume and believe about these factors). Internal factors are ones internal to the decision-making process itself, i.e. the internal structuring of decisions and the relationships of decisions to each other. (p. 128)

As an example of the complex range of external factors which impact on the decision-making process, Woods (p. 129) cites the following list which emerged from the analysis of one teacher's approach to planning a lesson:

- how many students will probably turn up
- availability of photocopying

– knowledge about students' prior course experience
– a recent conversation with another teacher
– estimation of the complexity of a task
– estimation of how well the students as a group are moving
– estimation of what the group can handle
– estimation of how well particular individuals in the class are moving
– estimation of what particular individuals can handle
– class dynamics and individual dynamics in class

Internal factors relate to temporal and logical relationships amongst instructional decisions. Teachers need to organise instruction chronologically and hence to make decisions about what comes first, what follows, and so on. Logical relationships refer to the different levels of generality at which planning occurs (e.g. course, lesson, activity, text); teachers' decisions are thus also shaped by their understandings of the relationships among different levels of course units.

Woods' data also highlighted for him the problems [.....] in attempting to distinguish between constructs such as belief and knowledge. He thus proposed the notion of BAK (beliefs, attitudes, knowledge) to reflect his view that, rather than being distinct concepts, beliefs, assumptions, and knowledge are points on a spectrum of meaning.

The study by Breen *et al*. (2001) also makes a distinctive contribution to our understanding of the relationships between cognition and practice in language teaching. Through observations and elicitation procedures, five researchers examined the relationship, at both an individual and group level, between the practices and principles of 18 teachers working in a similar context in Australia. An analysis of the profiles generated by this study showed that individual teachers realise specific principles through particular sets of favoured practices, and that at an individual level these configurations of practices and principles are unique. At group level, though, there were several pedagogic principles which were common to the majority of the teachers (e.g. a belief in the importance of taking individual differences among students into account). An analysis of the practices which were justified by the teachers with reference to these shared principles showed that any one principle was realised through several distinct practices (see Figure 9.2 for an example).

- Shows interest in students' personal lives; e.g. asked about a student's relative who was sick.
- Accepts all students' responses without saying they're wrong: 'You would be understood, but a better way to say that is...'.
- Integrates within lessons items needed for competencies to be covered in the term.
- Assesses students individually when they say they are ready.
- Goes from individual to individual during desk work to check understanding or correctness.
- Makes worksheets on same topic but at different levels.
- Links vocabulary/concepts back to students' culture/experience (e.g. 'gnome': do they have similar creatures in their culture).
- Models orally and on board as visual support.
- Uses colours to mark inflections of works on board.
- Uses variety of resources: video, tapes, & workbook exercises.
- Accompanies oral input with written, pictorial, diagrammatic, input using colour coding.
- Uses videos, real experiences, tapes, gesture, mime, groupwork.
- Listen to everyone, asks their opinions, asks when they want a break.
- Incompleted homework, inability to do a task, or being late to class not admonished by the teacher(s).
- Pairs stronger person with one with less developed English.
- Negotiates breaks and outings.
- Explains detailed rules, exceptions, generalisations.
- Much input to whole class, especially feedback when groups reporting back.
- Chooses topic that is seen as relevant to students' daily lives ('fast food').
- Corrects sentences in students' writing.
- Uses students' names to illustrate comparative/superlative forms of adjectives.
- Chooses topics that are 'jazzy/groovy' to suit 18–20 age group.
- Video replay of students' own oral presentations.
- Adopts informal, non-authoritarian manner.
- Explains how a person could take a book from the local library.
- Get feedback from students on their community involvement (e.g. conversations with other parents at their children's school).

Figure 9.2 Practices realising the principle of accounting for individual differences (Breen *et al.*, 2001, p. 490).

However, the set of practices related to any one principle was largely distinct from the set related to a different principle. The study thus showed that teachers working in a similar context may implement a set of shared principles through diverse practices, but that behind this apparent diversity of practices there is 'a collective pedagogy wherein a widely adopted classroom practice is … an expression of a specific and largely distinctive set of principles' (p. 496).

Summary

[In this chapter] I have discussed relationships between cognition and practice in language teaching with respect to five issues: (a) reasons for teachers' decisions; (b) teachers' departures from their lesson plans; (c) cognition and context; (d) cognition and experience; and (e) PPK, BAK, and pedagogic principles. [Some of the issues which emerge from the above discussion are the following].

1. Decision-making is the most researched aspect of language teacher cognition. Studies have approached this issue from various perspectives, though there is a shared interest in describing the kinds of decisions language teachers make and understanding the reasons (usually immediately antecedent ones) for them. More research, though, into the less immediate factors behind language teachers' decisions – e.g. prior learning and professional experience – is required. Such work, drawing on notions such as personal practical knowledge, would contribute to a more holistic understanding of language teachers' practices and cognitions.
2. This body of work is characterised by conceptual, terminological and definitional variability. Though understandable during the decade of change in this field of research, the emergence of unifying, rather than disparate, frameworks for understanding language teacher's cognitions and practices would seem to be an appropriate goal as we move into our decade of consolidation in this domain of research.
3. As Burns (1996) argues, greater attention to the social and institutional contexts of classrooms is required in studies of what language teachers do. In some of the studies above, little reference is made to the contextual factors which may have facilitated or hindered the kinds of decisions teachers were able to make. In the light of what we know about the impact of contextual factors, Bailey's (1996) admission that 'the small and highly interactive classes, the teachers' preparation, and the use of a teacher-controlled syllabus and

flexible materials all may have influenced their decision making' (p. 24) downplays what were inevitably powerful influences on the outcomes of her study. In particular, the extent to which teachers have to follow a set curriculum (as in the studies of Hong Kong teachers) or are free to develop their own courses (as in the studies by Bailey and Woods, for example) seems to be crucial in understanding the decisions language teachers make.

4. Related to this point, there is also a need for more research in contexts which, globally speaking, are more representative of language classrooms. I am thinking here of classrooms in state schools, taught by non-native teachers, and where syllabuses are to various degrees prescribed. Hardly any of the settings studied in research I have reviewed here reflect these characteristics.
5. Further research into the processes through which language teachers' cognitions and practices are transformed as they accumulate experience is also required. Much existing insight into this issue is based on comparisons of experienced and novice teachers; longitudinal enquiries of how teachers actually change would be an important addition to existing research here.
6. Most current research highlights the idiosyncratic nature of language teachers' cognitions and practices. While continued attention to the study of individual cases will remain central to this field, the search for patterns of cognitions amongst groups of teachers working in similar contexts is another direction for further research.
7. None of the research reviewed here attempts to explore relationships between cognitions, practices, and learning outcomes. The lack of attention to learning has probably been a reaction to the process-product models of research on effective teaching which dominated the literature for many years; in these studies, learning outcomes were all that mattered, and the teachers' active role in shaping what happened in the classroom was ignored. Now that teacher cognition research is well-established, though, it is time to consider how what language teachers think, know, and do, relates to learning.[5]
8. An important methodological issue in studying teachers' practices is the extent to which accounts of their instructional decisions which teachers provide after lessons capture the interactive thinking occurring during the lessons. Teachers' accounts may be retrospective and/or ad hoc rationalisations of what they did largely unconsciously, and these rationalisations may also be shaped by the manner in which the researcher prompts teacher to reflect on their work. Bailey

(1996), for example, comments on this issue, but it is one that merits further consideration in continuing work of this kind.

9. One final methodological observation is that it is positive to see that teacher cognition in language teaching has generally been studied with close attention to what happens in classrooms. This may seem an obvious requirement for research which is ultimately aimed at developing better understandings of teaching. However, earlier work in teacher cognition had been criticised (see, for example, Kagan, 1990; Richardson, Anders, Tidwell and Lloyd, 1991) for relying on paper and pencil measures of teacher cognition (e.g. questionnaire responses) without examining these in relation to practice. The research I have reviewed [.....] is, in most cases, not open to such criticism.

Notes

1. Visit http://www.education.leeds.ac.uk/~edu-sbo/cognition/index.html for further detail on the background to teacher cognition research.
2. This means that techniques were chosen by teachers in the belief that these techniques would engage the cognitive processes the teachers felt were most conducive to L2 learning.
3. This study also provides the interesting statistic that the two groups of teachers in the study averaged 3.48 and 3.77 pedagogical thoughts per minute respectively.
4. Editor: Since Borg's original review was published some work on this topic has appeared, for example Tsui (2003).
5. This is, though, one of the themes being explored as part of the Teacher Knowledge project at the School for International Training, Vermont, USA, under the directorship of Donald Freeman. This project is not concerned solely with language teaching. See http://www.sit.edu/tkp/index.html.

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10

Expertise in Teacher Education: Helping Teachers to Learn

Alan Waters

Introduction

Research and theorising in applied linguistics has long been centrally focused on the learner and the learning process. This is for good reason, of course: only the learner can do the learning, and so is at the heart of the learning process; and the learning process itself, because it can only be investigated indirectly, is a highly complex and frequently unyielding subject of enquiry, and thus demands sustained and multi-faceted study.

However, during the 1990s in particular, the importance for learning of teaching and the teacher, and thus also the significance of teacher education, began to receive increasing attention, as the series of important publications on the topic which appeared throughout the period testify (e.g. Richards and Nunan, 1990; Wallace, 1991; Flowerdew *et al*., 1992; Li *et al*., 1994; Richards and Lockhart, 1994; Freeman and Richards, 1996; Medgyes and Malderez, 1996; Woods, 1996; Hayes, 1997; Richards, 1998; Roberts, 1998; Wallace, 1998). This focus on teacher education has recently begun, in its turn, to generate interest in the skills and knowledge needed by the teacher educator, as a small but important and growing literature indicates, e.g. McGrath, 1997; Malderez and Bodóczky, 1999; Vilches, 2001. Such a development is logical, since quality of learning is affected by quality of teaching, which, of course, is influenced in turn by the quality of the education the teacher receives, ultimately a matter for which the teacher educator has considerable responsibility.

This chapter is therefore concerned with attempting to throw light on possible answers to the question: what is the nature of the expertise – the skills and knowledge – needed by the teacher educator? Such a

question, of course, begs several others, such as: 'what is meant by the term "teacher educator"?', 'why does the role of teacher educator exist?', and so on. This chapter therefore begins by first of all addressing questions of this kind. Then, in the light of the answers, it considers the implications for identifying the kind of expertise needed by the teacher educator, and describes some of its characteristics. It concludes by discussing some of the possible directions which future research concerned with teacher educator expertise might take. However, it should be noted from the outset that there is relatively little theorising and research on the topic of the teacher educator, both within and outside applied linguistics. Thus, in what follows, the attempt has been made, by drawing on a variety of sources, to lay down an initial, overall foundation of understanding, and then to use this as a basis for formulating an agenda for further investigation.

Teacher education and the teacher educator

Firstly, then, in what sense is the term 'teacher educator' being used here? There is a long-standing tradition in language teaching of making a tripartite distinction between 'teacher training', 'teacher education' and 'teacher development' (see, e.g. Allwright, 1997), and thus, by extension, between teacher trainers, educators and developers. Teacher training has generally been seen to involve the provision of work on practical, classroom-based skills; the coinage of the second has been viewed as 'background' theories, research, and so on; and the third has been seen as bound up with concerns such as raising awareness about and fostering self-growth; a set of distinctions which can also be referred to as a focus, respectively, on 'doing', 'knowing' and 'being'. In addition, as Allwright (*ibid.*) points out, there has also been a tradition of regarding the first two as the product of external agency, and the third as an exclusively self-directed activity (though Allwright very cogently argues against the third of these views). In this chapter, however, 'teacher education' is regarded as the superordinate concept, on the grounds that it involves acquiring knowledge of all three kinds, i.e., of practical skills, theories and research, and self-awareness. This occurs because one can become educated about or in all three of these areas. However, one cannot be 'trained' in ideas and research (vs. research techniques), or self-awareness, nor does the notion of being 'developed' in teaching skills and academic theorising carry appropriate connotations. Thus, in the context of this chapter, teacher education is seen to involve the acquisition of all of the three main

types of knowledge, and teacher educators therefore regarded as requiring the expertise to operate effectively in all three of these domains of teacher learning.

Secondly, *why* teacher educators? It is beyond the present scope to enter into debate about this question at a philosophical level. In other words, it is assumed that at the very least, the long-established presence of teacher educators indicates that, in general, they are regarded as capable of making a positive contribution of some kind. The concern here, therefore, is with the identification of the role of the teacher educator as a means of clarifying the nature of teacher educator expertise – in other words, in overall terms, what kind of difference can it be assumed teacher educators should make? To answer this question, the view is taken here that the primary role of the teacher educator must be the same as for any other kind of educator, i.e. to attempt to facilitate learning. In the case of the teacher educator, the subject-matter to be learned is teaching itself, and thus teacher educators are engaged in attempting to facilitate learning about and of teaching on the part of would-be or serving teachers. The teacher educator's primary role, in other words, is to be a facilitator of teacher learning. The term 'facilitator of teacher learning' is chosen for describing this role because 'learning' is seen as the primary factor, i.e. teacher education, like any form of teaching, does not (or should not) exist or be defined *sui generis*, but rather only in relation to its potential to effect learning on the part of the learner. No teacher can learn for the learner (though learners can, of course, learn without teachers): thus, teaching of any kind, including teacher education, can always only be an attempt to facilitate learning on the part of the learner.

If the core task of teacher educators is to help teachers to learn, then the type of expertise the teacher educator requires is, in essence, a) a knowledge of how teachers learn, linked to b) practical skill in translating such understanding into teacher learning opportunities, with a view to maximising the potential for their uptake. What, thus, is there for teacher educators to know about how teachers learn? In what follows, this question is addressed in terms of i) the context of learning, ii) the psychology of the teacher as a learner, and iii) the process of learning.

The nature of teacher learning

Learning contexts

Like other professionals, teachers have traditionally acquired knowledge through two main contexts, viz. via courses about teaching of

one kind or another, i.e. 'off-the-job', on the one hand, and, on the other, via on-the-job learning. These two forms of learning can be viewed as corresponding to opportunities for the acquisition of the two main types of knowledge traditionally distinguished in epistemology, i.e. propositional (or declarative) knowledge, on the one hand, and experiential (or procedural) knowledge on the other (Eraut, 1994). Thus, off-the-job learning tends to favour the acquisition of knowledge in the form of explicit theoretical principles, whereas on-the-job learning lends itself mainly to the accumulation of tacit 'know-how'.

It is nowadays generally recognised that a central issue in teacher education (as, in epistemology itself, at a generic level – see, e.g. Polanyi, 1958; Elliott, 1986) is the way that, because of the contextualised, 'learning-by-doing' nature of learning how to teach, teachers frequently have difficulty in transferring propositional, off-the-job knowledge from the context in which it is studied to the work-place (Joyce and Showers, 1984; Freeman, 1994; Eraut, *ibid*.). There is therefore something of a consensus that, because teaching is quintessentially an 'applied', 'doing' type of activity, greatest emphasis needs to be given to opportunities for teachers to acquire an adequate level of procedural knowledge via sufficient exposure to 'on-the-job' learning (Oldroyd and Hall, 1991).

Nevertheless, the primacy currently given to 'learning-by-doing' should not be seen to imply that off-the-job teacher learning opportunities do not also have an important role to play in teacher education, nor that both types of learning cannot be inter-connected. In the past, both within and beyond language teaching, the inherent limitations of a main or even sole focus on propositional knowledge for building up expertise in teaching were not always recognised (Freeman, *ibid*.; Eraut, *ibid*.; Elliott, *ibid*.). Instead, there tended to be an assumption that the practical application of propositional knowledge was a relatively simple, straightforward matter. More recently, however, the applied linguistics literature has included a number of accounts of teacher education programmes which acknowledge the limitations inherent in a primarily course-based approach to teacher learning (see, e.g. Ramani, 1987; Breen *et al*., 1989; Lamb, 1995; Richards and Pennington, 1998; Roberts, 1998). Furthermore, there is evidence from studies concerned with teacher education in general that, for teachers, like many other professional practitioners, learning opportunities can be greatest when they occur within the context of a teacher education programme which links together both on- and off-the-job forms of learning, rather than via a scheme which is predominantly either course- or workplace-based (see, e.g. Rudduck, 1981; Joyce and Showers, 1984; Kinder *et al*.,

1991; Oldroyd and Hall, *ibid*.; Fullan, 2001; Adey, 2004). This is the case because both types of learning contain complementary sets of potential benefits and drawbacks.

Thus, as Table 10.1 below indicates, off- and on-the-job teacher learning opportunities tend to have the following typical strengths and weaknesses (Rudduck, *ibid*.; Hopkins, 1986; Oldroyd and Hall, *ibid*.; Hargreaves, 1994; Hopkins *et al*., 1994; Fullan, *ibid*.; Waters, 2001):

Table 10.1 Strengths and weaknesses of off- and on-the-job modes of teacher education

Off-the-job teacher learning		**On-the-job teacher learning**	
Potential advantages	*Potential disadvantages*	*Potential advantages*	*Potential disadvantages*
Facilitates introduction to new perspectives.	Perspectives insufficiently informed by practical realities of school situation.	Existing priorities and perspectives can be more directly addressed.	Perspectives can be parochial, incestuous.
Contact with wider professional collegium, providing moral support and a broader range of perspectives.	Peer-based working relations often in stark contrast to 'individualistic' culture of normal school situation.	Colleagues usually already know each other well and share in-depth understanding of a common frame of reference.	Existing negative professional/social relations re-inforced. Lack of alternative personal perspectives.
'Distancing', i.e., removal from the everyday teaching world and its accompanying schematic 'baggage'.	Ideas become idealised, and thus impracticable in terms of subsequent application.	Ideas can be presented in terms of theoretical and practical perspectives suited to the realities of the teaching situation.	Ideas divorced from wider theoretical and practical bases, leading to impoverished or diluted understanding.
Time, energy and mental 'space' to come properly to grips with new ideas.	Ideas that may be clear during this phase take on a much more complex and confusing form when applied under normal pressures of time, energy, mental space and so on.	Ideas can be translated into practice under conditions closely approximating to workaday norms.	The full potential of ideas is not addressed due to lack of sufficient time, energy, support, etc., for on-the-job learning.
Initial conditions necessary for eventual ownership of ideas can be established.	True ownership of ideas difficult to develop outside normal working context.	Possibility of eventual ownership of ideas by teacher/ school is enhanced.	Lack of external support may dampen enthusiasm for full ownership to develop.

As this table indicates, both off- and on-the-job forms of teacher education, in mutually-reinforcing ways, are capable of making important contributions to the development of teacher learning. The two can thus be seen as forming a potentially complementary relationship, in which one is closely linked to the other. Mapping them on to Kolb's well-known 'experiential learning cycle' (Kolb *et al.*, 1979), as in Figure 10.1 below, helps to clarify this concept.

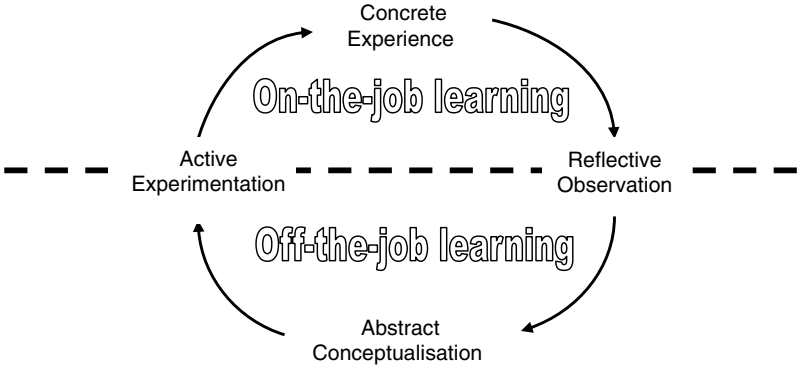

Figure 10.1 The teacher learning cycle (based on Kolb *et al.*, ibid.).

As the diagram indicates, in order to capitalise on their true potential, both off- and on-the-job modes of teacher learning can be conceived of as forming a synergetic cycle. In this way, teacher learning involves a dynamic interplay of propositional and experiential knowledge. A detailed development and empirical study of the workings of a teacher education system based on a model of teacher learning of this kind can be found in Waters (*ibid.*). However, the primary concern here is with the implications that a comprehensive vision of teacher learning of this kind has for the expertise needed by teacher educators. In essence, such a model of teacher education requires teacher educators to have the knowledge and skills necessary to operate effectively within both of the main potential contexts of teacher learning (off- and on-the-job), and to be able to devise and operationalise the means of coherently connecting together the two main types of potential learning outcomes which off- and on-the-job teacher learning lend themselves to.

Thus, in order to facilitate *off-the-job* teacher learning opportunities, teacher educators need the interpersonal skills for negotiating appropriate course content; the skills involved in course and teacher learning activity design (see, e.g. Wallace, 1991; Ellis, 1990); administrative

skills of budgeting, co-ordination, team-building, and so on; 'training room' skills, i.e., those involved in providing input to, setting up, managing and handling outcomes from course-based teacher learning activities, and so on (see Vilches, 2001; Waters and Vilches, 2003). Closely-related to and interwoven with such skills will also be possession of the right levels of knowledge of, e.g., the educational and wider socio-cultural systems that the teacher education relates to; main landmarks in the recent history of as well as current developments in the theory and practice of language teaching/applied linguistics; likewise with regard to teacher education itself, especially within the field of language teaching, and so on (cf. Strevens, 1977).

Similarly, in order to facilitate *on-the-job* teacher learning opportunities, teacher educators need the skills and related knowledge involved in devising and implementing appropriate pathways for linking together off-and on-the job forms of teacher learning (see Rudduck, *ibid.*; Oldroyd and Hall, *ibid.*; Fullan, *ibid.*; Waters, *ibid.*), as well as those involved in operating within an on-the-job teacher learning context, e.g., clinical supervision skills (Rudduck and Sigsworth, 1985; Wallace, 1991; Rogers and Farson, 1979), the skills involved in liaising with school staff in 'downward', 'upwards' and 'sideways' directions (see Buchanan and Boddy, 1992 and Boddy and Buchanan, 1992, and section below), 'mentoring' skills (Malderez and Bodóczky, *ibid.*), and so on.

However, important as expertise of this kind is, it ultimately depends on other and further understandings, not only of the contexts of teacher learning, but also of i) the characteristic psychological make-up of the teacher, and ii) the way that teachers typically experience the learning process. Each of these concerns will therefore be addressed in turn in the remainder of this section.

Teacher 'networks of meanings'

Partly in reaction to earlier, behaviourist-influenced notions of the learners as 'tabula rasa', it has nowadays become commonplace for them to be viewed instead as active constructors of meaning (see, e.g. Kohonen, 1992). It is thus widely recognised that what learners already know and how they feel will have an important influence on what is converted from potential into actual uptake of learning opportunities during the learning process (Allwright and Bailey, 1991). This perspective has also influenced recent views of teacher learning as well (see, e.g. Calderhead, 1988; Woods, 1996; Richards, 1998. In other words, factors such as the amount of teaching experience (Berliner, 1987), the prevailing socio-educational ethos (Kennedy and Kennedy, 1998), the professional culture of the teaching institution (Holliday, 1994), as well as the amount and

type of teacher education undergone (Richards and Pennington, 1998), will all shape and mould the psychological make-up of the teacher. This internal framework of ideas and attitudes will, in turn, strongly affect the potential for the uptake of teacher learning opportunities.

Malderez and Bodócsky (*ibid*.) illustrate the inner nature of the teacher via an iceberg metaphor (a simplified version of their diagram is provided in Figure 10.2 below). At the surface level are visible professional behaviours. However, as the two-way arrow indicates, these are influenced by and in turn influence a much larger substratum of 'ideas' (e.g. knowledge of and about language, knowledge of the learners, etc.) and 'attitudes' (e.g. beliefs about the purpose of education, views about teacher and learner roles, etc.). Similarly, various features of the surrounding socio-cultural and educational contexts (e.g. friends, family, membership of wider social groupings, the prevailing educational 'ethos', examination pressures, class size, organisational policies, etc.) will interact with the different levels of teachers' inner identities, thus also shaping their development. The teacher's internal network of meanings is thus complex and multi-layered, and it is *via* such a web of perceptions that potential teacher learning opportunities will be mediated. Teacher educators therefore obviously need to understand and take into account this picture of the teacher when attempting to foster teacher learning.

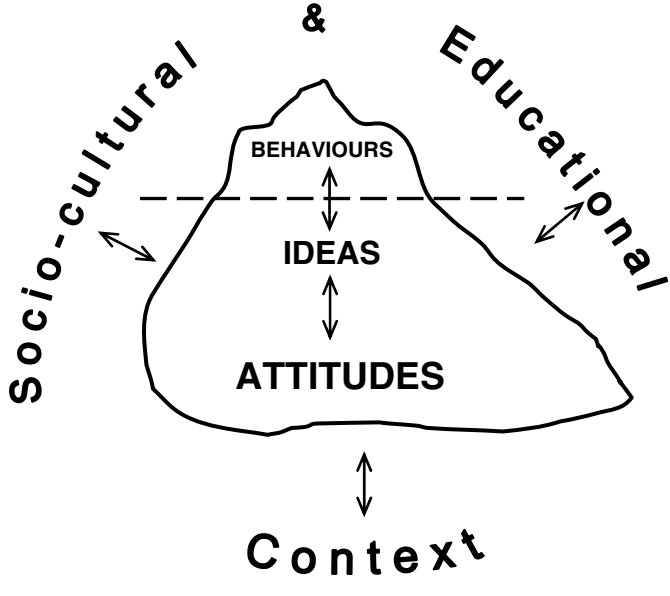

Figure 10.2 The teacher iceberg (based on Malderez and Bodocsky, 1999, p. 15).

The work of Kelly and his colleagues (1980) can be usefully mapped onto this view of the teacher (see Figure 10.3 below), in order to further clarify some of the issues involved. Kelly's research indicates that, for teachers to be willing to adopt a new teaching idea, three basic criteria have first of all to be satisfied. Thus, the idea first of all has to be seen as *feasible* in terms of classroom practice; secondly, it has to be perceived as *relevant* to teaching-learning needs; and third, it has to be *acceptable* in terms of the teacher's underlying view of education. Thus, in order for teacher learning to occur, each of these personal criteria have to be satisfied. Each of them can be associated, as shown in Figure 10.3, with different levels of the teacher's make-up. Any attempt by the teacher educator to effect teacher learning therefore needs to address all of these levels.

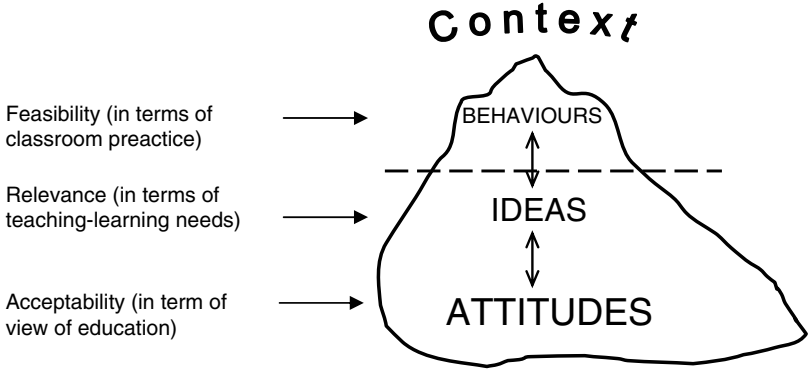

Figure 10.3 Kelly's criteria and the teacher iceberg.

In terms of the expertise required of teacher educators, the obvious implication is that they must be adept in the skills needed for fostering teacher learning at all three of Kelly's levels. Thus, the teaching ideas they propose have to be seen to be feasible at the classroom level from the teacher's perspective. This involves first of all having the necessary knowledge and understanding of the realities of the teachers' working situations, and an appreciation of what will be truly practicable in terms of the everyday constraints within which they operate. Secondly, it also involves trying to work out – once again, from the teacher's point of view – whether what is feasible by way of a new teaching idea is also likely to be seen to be relevant. Thus, while it may be feasible to introduce, e.g. pair and small group work into a given classroom, whether it

will be seen by teachers as worthwhile in terms of their perceived teaching-learning priorities may well be, of course, another matter. It may be the case, for example, that pair and small group work, however feasible, is seen to take away from the need for the learners to prepare for major public examinations, which they will sit for on an individual rather than a partnered basis. Thus, the perception may be that the learners need practice in the more independent kind of behaviours that the test will require rather than the more interdependent ones involved in collaborative ways of working, such as small group work. And then, of course, even assuming the idea is perceived as both feasible and relevant, the issue of consonance with the teacher's underlying belief system remains. It may be that, for example, teachers view 'learner-centred' forms of classroom organisation as depriving them of opportunities to pass on to learners the knowledge they need, while forcing learners to play a role that they are ill-equipped for. Thus, ability in recognising and taking into account teachers' philosophies of teaching and learning is also an essential part of the teacher educator's expertise.

In many ways, thus, teacher educators need the kind of expertise which can enable them to play a role akin to being ethnographers of teachers and their teaching situations. It is through the prism of their working context and their individual, professional and personal identities that teachers view teacher learning opportunities, and so teacher educators therefore need to base their attempts to stimulate teacher learning on a thorough 'reading' of the typical perceptions that these factors give rise to. Furthermore, as Kelly shows, since the fundamental basis of teachers' willingness to learn is their sense of to what extent new teaching proposals match their views of education, any meaningful teaching learning process that they are exposed to will have to be based, at root, on a 'normative re-educative' approach (Chin and Benne, 1976), i.e. one which involves a two-way, 'values clarification' process. This is the case because what is involved is not only the attempt by the teacher educator to influence mastery by the teacher of a new technique, but, rather, the development of new attitudes and concepts. Teacher educators therefore need an understanding of the underlying principles and practical procedures which are involved in operating a normative re-educative approach to learning, as well as the interpersonal skills and personal qualities – patience, tact, understanding, the ability to construct 'win-win' solutions, and so on. Kennedy (1987) and Ramani (1987), in their different ways, provide excellent illustrations of the exercise of many of these procedures and skills within the context of language teacher education.

The transition process

The final aspect of teacher learning to be considered concerns the nature of the teacher learning process. How, in other words, do teachers typically experience the learning of new teaching ideas? The perspective adopted here is one which views all learning as a sub-species of the genus *change*. Teacher learning in particular, as already indicated, involved the realignment of underlying belief systems. As will be seen, models of the change process can therefore be especially helpful in throwing light on the nature of learning processes of this kind.

A fundamental insight yielded by the literature on the change process is that the prospect of significant change of any kind typically arouses feelings of fear, anxiety, hostility, and so on, and is thus usually met with resistance (Fullan, 2001). Reactions of this kind are triggered by the 'conservative impulse' (Marris, 1977), a psychological 'defence mechanism' which automatically strives to preserve the stability of our 'schemata' for coping with everyday existence – the mental representation of the routines, habits, sets of expectations about the behaviour of others and how our own behaviour will be responded to, and so on which we rely on in order to achieve the necessary level of basic security and predictability in our lives. Major change disturbs the structure of these schemata – our 'network of key meanings' (Blackler and Shimmin, 1984; Hutchinson, 1992), resulting in a process of psychological imbalance which makes familiar events difficult to cope with, unless a new set of key meanings – ones which successfully assimilate the change – are gradually developed.

In this connection it is also important to note that a good deal of an individual's existence is given significance by their participation in social groupings of various kinds (Maslow, 1970; Blackler and Shimmin, *ibid*.; Hutchinson, *ibid*.). Through membership of groups we typically gain status, respect, privileges and forms of power which are denied to us without such affiliations. Our identification with groups of various kinds thus forms an important element in the construction of our network of key meanings. Therefore, when change occurs, it is often perceived not only as a potential attack on our individual identity but also on the values of the groups to which we belong. As a result, we will tend to resist change not only on an individual basis, but also by invoking the power of the group to join in the resistance, and by typically allowing group norms to over-ride individual judgement (Blackler and Shimmin, pp. 51–2: *ibid*.).

Because of its impact on internal schemata and group norms, the change process typically follows a pattern of events known as the

'Transition Curve' (see, e.g. Scott and Jaffe, 1989; Manchester Open Learning, 1993; Mevarech, 1995; Bridges and Mitchell, 2000; Bridges, 2002), as shown in Figure 10.4. As stage 1 in this diagram indicates, those undergoing the change will first of all usually 'freeze': the change is so overwhelming that existing key meanings cannot cope with it, and so a kind of numbing effect occurs, resulting in inertia. Teachers' professional competence will typically dip, as they become incapable of more than 'going through the motions', due to the anaesthetising effect of the change. The second stage is characterised by an attempt to block out the change, to deny its reality – a 'burying one's head in the sand' strategy. Competence typically rises temporarily at this stage, because the full measure of what the change involves is not appreciated, and a superficial ability to cope is mistaken for a deeper level of understanding. Inevitably, however, the illusion provided by this false perception soon wears off, and awareness of incompetence in coping with the change is increasingly realised (stage 3) (cf. Fullan, 2001, the 'implementation dip'), eventually resulting in the nadir of competence which coincides with stage 4.

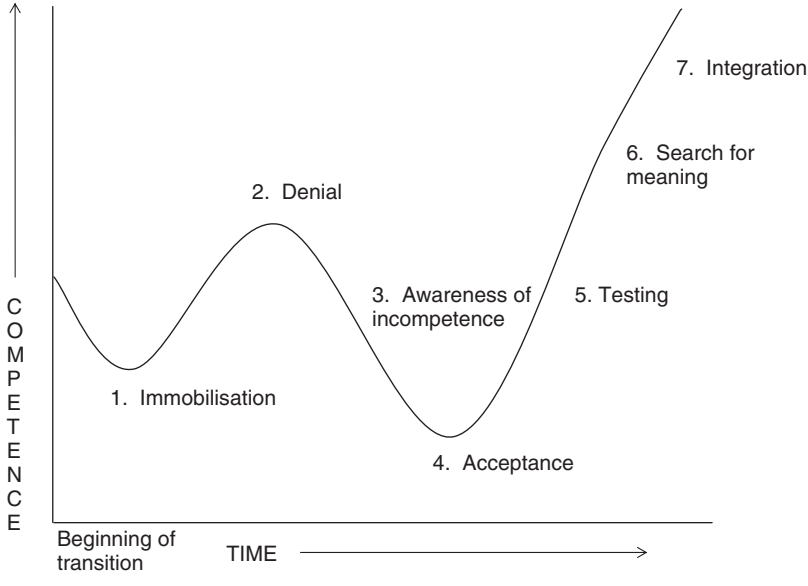

Figure 10.4 The transition curve.

It is at this point that those who will eventually manage to successfully negotiate the change begin on the one hand to face up to the need to somehow accommodate the new future, and, on the other, to bring themselves to 'let go' of previous attitudes and behaviours which no longer suit the changed world they now inhabit. The remaining stages all involve a gradual deepening and strengthening of this process of re-integration of key meanings and an associated steady increase in level of competence. This begins with a Testing (or 'recipe-book') stage, where the new kinds of skills and knowledge required are sought after and tried out, usually on the basis of following a relatively narrow, rule-oriented approach – in other words, a search for clear and concrete guidance about the nature of the change that must be accommodated, motivated by a need to reduce the level of uncertainty to manageable proportions. Teachers at this stage will typically be concerned about 'doing the thing right'. This initial phase of attempting to come to grips with the new reality is then followed by a further stage where a deeper understanding of the significance of the change is sought – some of the scaffolding associated with the previous stage is, as it were, stripped away, as a more solid foundation is constructed. Finally, a further stage is reached, in which the new ways of behaving and perceiving become fully integrated with previous ones, and the process of redevelopment is completed, resulting in 'ownership' of the change. Teachers who reach this stage will typically show confident mastery of new teaching ideas, and will have begun to mould and adapt them so that it is often in the form of their underlying principles more than their original surface shape that the new ideas appear in the teachers' repertoires: an overall interest in 'doing the right thing'.

It is obvious that this picture of the change process, encompassing as it does the kind of deep-level reconfiguration of meanings associated with teacher learning, has a number of important implications for the type of expertise needed by teacher educators. Thus, in overall terms, they need to be able to act appropriately to reduce to manageable proportions the perceived level of threat that change/learning typically induces, and to maximise the potential for growth in ownership of the change. Also, given the importance of the role played by group norms in the transition process, they also need the ability to formulate a teacher learning strategy that can take into account both the teacher not only as an individual but also as part of a wider professional group. Thus, Manchester Open Learning (*ibid*., p. 73) lists the following 'requirements' if support for a change is to be won from those undergoing the transition process:

- they need the 'big picture', the background and context for the proposed change, and what it is meant to achieve
- they need to be able to visualise themselves and their situation as they will be after the change
- they need to feel that their personal security and esteem is not in doubt
- they need to be involved in the planning and implementation as early as possible
- they need to see change as part of an endless process in which the company seeks continuous improvement in performance, quality, service, [etc.].

Similarly, Bridges and Mitchell (2000, p. 33), who conceive of the transition curve as constituting three main parts – an initial 'saying goodbye' phase, then a 'neutral zone', and, finally, a 'moving forward' stage – advocate the following set of transition management strategies.

1. … describe the change and why it must happen…
2. Be sure that the details of the change are planned carefully and that someone is responsible for each detail…
3. Understand … just who is going to have to let go of what – what is ending (and what is not) in people's work lives and careers – and what people … should let go of.
4. Make sure that steps are taken to help people respectfully let go of the past. These may include 'boundary' actions (events that demonstrate that change has come), a constant stream of information, and understanding and acceptance of the symptoms of grieving, as well as efforts to protect people's interests while they are giving up the status quo.
5. Help people through the neutral zone with communication (rather than simple information) that emphasises connections with and concern for the followers … keep reiterating the '4 P's' of transition communications:
   The *purpose*: Why we have to do this
   The *picture*: What it will look and feel like when we reach our goal
   The *plan*: Step-by-step, how we will get there
   The *part*: What you can (and need to) do to help us move forward.
6. Create temporary solutions to the temporary problems and the high levels of uncertainty found in the neutral zone.
7. Help people launch the new beginning by articulating the new attitudes and behaviours needed to make the change work – and then

modeling, providing practice in, and rewarding those behaviours and attitudes.

Similar guidelines can be found elsewhere in literature on this topic (e.g. Fullan, 2001). It is therefore clear that teacher educators need, as part of their expertise, a command of such strategies, in order to help teachers cope with the type of change process that teacher learning involves. Many involve high-level communication, organisational, interpersonal and leadership skills. Such skills are associated, of course, with the study and practice of management in general and of innovation management in particular. Thus, the expertise needed by the teacher educator can in many ways be likened to that of the 'change agent', as characterised by Buchanan and Boddy (1992) and Boddy and Buchanan (1992) (also cf. Kennedy, 1999). Briefly, Buchanan/Boddy see the expertise of the change agent as residing chiefly in the ability to simultaneously address three inter-connecting agenda, namely those of 'control' (organisational and administrative aspects of managing change), 'content' (technical knowledge of the change in question) and 'process' (people management skills). It is those of control and process which would appear to come particularly to the fore in the transition management strategies above, especially the latter. In their research, Buchanan and Boddy (1992, pp. 92–3) identified a number of process agenda competencies used by change agents, of which the following are representative:

- Clarity in specifying goals, in defining the achievable.
- Team building abilities, to bring together key stakeholders and establish effective working groups, and clearly to define and delegate respective responsibilities.
- Networking skills in establishing and maintaining appropriate contacts within and outside the organisation.
- Tolerance of ambiguity, to be able to function comfortably, patiently and effectively in an uncertain environment.
- Interpersonal skills, across the range, including selection, listening, collecting appropriate information, identifying the concerns of others, and managing meetings.
- Personal enthusiasm, in expressing plans and ideas.
- Stimulating motivation and commitment in others involved.
- Selling plans and ideas to others, by creating a desirable and challenging vision of the future.
- Political awareness, in identifying potential coalitions, and in balancing conflicting goals and perceptions.

- Influencing skills, to gain commitment to project plans and ideas from potential sceptics and resisters.
- Helicopter perspective, to stand back from the immediate project and take a broader view of options.

In order to manage the transition/learning process, as characterised in earlier parts of this section (as well as, for that matter, in relation to many aspects of the roles of the teacher educator as outlined in the preceding two sections), competencies such as these can be seen as forming a significant part of the expertise needed by the teacher educator. Viewing the expertise of the teacher educator in this way – as someone concerned with bringing about change within the particular context of teacher learning – helps to open up the way to the application of further potentially fruitful insights from studies concerned with the expertise of other forms of change agency, such as those within the field of human resource management in general (see, e.g. Hersey and Blanchard, 1993). At the same time, there is a need for further empirical investigation, focusing directly on uncovering further evidence for the types of skills and knowledge actually possessed and deployed by expert (language) teacher educators themselves, and the following (and final) section of this chapter therefore considers this issue.

Researching language teacher educator expertise

As indicated at the outset, there appears to be strikingly little empirical research concerning the expertise of the teacher educator, both outside as well as within the language teaching field. Thus, for example, apart from the study undertaken in Vilches (2001), in which aspects of the 'training-room' expertise used by two skilled teacher educators were investigated, there do not appear to have been any in-depth studies of the expertise used by teacher educators in designing and implementing off- and on-the-job teacher learning systems of the type outlined in section 1. above, in terms of any of the different forms of activity involved. Research on this area could therefore usefully seek answers to questions such as: how do skilled teacher educators set about framing and developing teacher learning opportunities, at both the macro (programme or course) and micro (activity or task) levels; what skills and knowledge, in addition to those investigated by Vilches (*ibid*.), do these activities call upon for their implementation; is there any evidence of 'clustering' of elements within this picture (cf. Buchanan and Boddy, 1992), i.e., can a core set of teacher educator 'competencies' be identified; how do the findings of such research compare with the

picture of expertise developed in other fields, both within and outside the domain of education?

In terms of its approach and methods, research into teacher education expertise might usefully learn from the procedures and techniques used for investigations into the nature of skilled performance in allied areas, such as task design (Ridgway *et al*., 1999), (language) teaching (Moskowitz, 1976; Calderhead, 1987 and 1988) and project management (Buchanan and Boddy, *ibid*.). These studies have employed a variety of research approaches, but most have been characterised in overall terms by an emphasis on descriptive, 'insider' accounts of skilled performance as a main form of data. Thus, in the manner of Ridgway *et al*. (*ibid*.), expert and novice teacher educators could be asked to describe their thinking processes while carrying out activities which simulate the design of teacher education activities, or, in the manner of Buchanan and Boddy (*ibid*.), to record (orally and/or in writing) their observations about the rationale for their choice of action, e.g., when observing and providing feedback on teaching. Also, in order to enrich and enlarge the picture, such research could incorporate a number of other comparative dimensions, such as an investigation of potential differences between types of expertise employed at the pre- vs. in-service teacher education levels, and how expertise might vary between and among 'native speaker' and 'non-native speaker' teacher educators.

Conclusion

This chapter began by observing that the field of applied linguistics has, in recent years, expanded to include a focus on the language teacher as well as the language learner, and there are now signs of growing interest in the work of those involved in the education of language teachers as well. Although theorising and research in this area was seen to be still in its infancy, the view was advanced that a 'clearing of the ground' regarding the type of expertise needed by the language teacher educator could be achieved by a study of first principles. To this end, the principal role of the teacher educator was identified as facilitating teacher learning. The core expertise needed by the teacher educator, it was therefore argued, was an understanding of the nature of teacher learning and an ability to translate this knowledge into practice in such a way as to maximise the potential for the uptake of teacher learning opportunities. The next part of the chapter therefore surveyed a number of key features of (language) teacher learning

(namely, its contexts, the teacher as a learner, and the nature of the teacher learning process), and considered the implications for the types of knowledge and skills needed by the (language) teacher educator. In the final section, a number of suggestions were made for how a programme of research aimed at further exploration of the nature of teacher educator expertise might be undertaken. In conclusion, it is hoped that a programme of this kind will lead to the study of the expertise of the teacher educator beginning to occupy the place it merits in applied linguistics, as an important complement to the existing but currently much more well-developed research traditions concerning the study of learners and teachers.

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11
Expertise in Pedagogic Task Design

Virginia Samuda

The focus of this chapter is expertise in the design of second language pedagogic tasks. Tasks themselves have been an important influence in second language teaching and research for over two decades, but task design remains relatively under-explored as an area for empirical inquiry. In this chapter, I explore the kinds of empirical insights that might be derived from studying task design from an expertise perspective, the kinds of pedagogic problems such insights could address, and the role such insights could play in training novice designers and preparing teachers to work with tasks. The chapter is divided into three sections. Section 1 situates tasks and task design in their pedagogic and research contexts and explores the 'task' of task design with a view to teasing out what task design entails, and what this implies for researching task design expertise. Section 2 illustrates how issues raised in Section 1 have been researched to date by focusing on two recent studies of second language pedagogic task design expertise. Section 3 discusses the implications and the limitations of current research and maps out directions for future study; the chapter concludes by considering some of the ways that applying findings from task design expertise research could contribute both to the development of design expertise in non-expert designers, and to the professional development of teachers working with tasks.

Section 1 Tasks, task design, and task design expertise

1.1 Tasks in second language pedagogy and research

Tasks have become a familiar, although often controversial, part of the second language pedagogic landscape. For many teachers, tasks were initially brought into focus through Communicative Language

Teaching as a means for providing opportunities for the creation, interpretation, and negotiation of meanings, and as a means for developing fluency and communication skills (Breen and Candlin, 1980; Johnson, 1979). Subsequently however, the term came to be associated with more specialised pedagogic initiatives, as reflected in various approaches to Task-Based Learning (Long, 1985; Willis, 1996;) where tasks were seen as the central organising unit for instruction, shaping and defining curriculum, classroom activity and modes of assessment. From a 'post-method' perspective (Kumaravadivelu, 1994, 2001) however, tasks can be viewed more broadly as simply one element in the teaching repertoire that teachers draw on; they may be more or less central to an overall programme of instruction and exploited in different ways to enrich the curriculum or provide additional learning opportunities; this view of tasks is increasingly referred to as Task-Supported Learning (Bygate, 2000; Ellis, 2003). Over the years, 'task-based' has been widely used as a general catch-all term, especially by publishers of ELT materials, to refer to *any* use of tasks no matter how central or how peripheral to the curriculum, and so the task-based/task-supported distinction helps tease out the various pedagogic purposes that tasks may serve and the varying degree of emphasis with which they may be used. In this chapter, the term 'task' is used in the broader, task-supported sense.

Tasks have also emerged as a significant focus in second language research; a major strand in the empirical study of tasks has focused on task performance, and particularly on the impacts of different types of task and/or implementation conditions on learner performance, language processing and second language development, for example, Doughty and Pica (1986); Yule *et al*. (1992); Skehan and Foster (1997); Mackey (1999); Ellis (2001); Bygate (2001); Robinson (2001); Bygate and Samuda (2005), *inter alia*, while other approaches have focused on the role of tasks in relating language, academic content and the development of contextual understanding (Mohan and Marshall Smith, 1992; Dufficy, 2004, *inter alia)*. Much of this work has been undertaken with at least some interest in developing insights that could ultimately inform pedagogical decisions, such as the selection and sequencing of tasks for classroom use, and many of the findings from studies of task performance suggest (albeit in different ways) that the way a task is designed may have differential effects on the kinds of opportunities that are created for language use, processing and development. Thus, although not necessarily concerned with task design *per se*, studies of task performance raise issues of potential relevance to task designers.

1.2 The empirical study of task design from an expertise perspective

Although it is widely acknowledged in the literature that tasks are complex constructs intended to give rise to multiple levels of integrated language, task *design* is commonly treated as a potential 'beneficiary' of findings derived from the study of task performance rather than a topic of serious applied linguistic interest in its own right. This may be due in part to a perception of materials development as an essentially atheoretical activity, and thus unrewarding as an area of research, and in part to the problematics associated with focusing on the task-as-workplan, (that is, the task as designed, reflecting the designer's intentions), over the task-in-action (the task as enacted, reflecting the ways that learners redefine and reinterpret those intentions in carrying out the task, Breen, 1987; Coughlan and Duff, 1994; Lantolf, 2000). As a result, the broad applied linguistic implications of a number of questions relating to tasks as 'designed' events have been little explored. Such questions include: What is involved in creating a task designed to generate multilevel integrated uses of language? What can this tell us about the applied language understanding of those who design tasks? What can this tell us about this particular kind of applied language knowledge?

Recent empirical work on task design from an expertise perspective however (notably Ridgway *et al.*, 1999; Johnson, 2000, 2003; Samuda, in preparation) has begun to shed light on questions such as these. By focusing on the working practices of expert and non-expert designers, this body of work highlights a number of issues of potential relevance not only to professionals engaged in task design, but also to teachers working with tasks, teacher educators preparing teachers to work with tasks and researchers studying task performance. An expertise perspective problematises empirical questions about task design in terms of designer expertise; some examples of such questions include: Are there differences in the kinds of design problems that expert and non-expert designers engage with, and in the ways that they engage with them? Are there differences in the ways they approach design and in the design decisions that they take? Are there distinctive ways in which we can characterise expertise in task design? What does it mean to be an 'expert' designer? Can knowledge about task design expertise be of use in the training of non-expert designers? Are there domain-specific knowledge and skills, and if so, how they are acquired and how do they develop? Are there observable differences in the tasks designed by experts and those designed by non-experts? Are there differences in the

ways those tasks are subsequently evaluated by teachers and enacted by learners? In Section 2 we take a look at how some of these issues have been researched to date, but before then, let us consider what expertise in task design might entail.

1.3 Understanding the 'task' of task design

A logical starting point for understanding expertise in pedagogic task design is an understanding of what task design involves. One way of doing is this is to attempt to tease out what Bereiter & Scardamalia, 1993, call 'the constitutive problem' of the domain. According to Bereiter and Scardamalia, the constitutive problem of a domain comprises a class of problems recognised as 'endlessly complex', but that need to be addressed in the course of working in the domain. These problems, it is argued, are of particular relevance for the study of expertise since we might expect experts and non-experts to engage with them in different ways.

However, teasing out the 'task' of task design in terms of core problems that need to be addressed is not straightforward. This is partly due to a notorious lack of agreement on what a task is and what it is not, as reflected in the mass of definitions, re-definitions and counter-definitions that have proliferated in the literature over the years (Long, 1985; Candlin, 1987; Swales, 1990; Breen, 1987; Skehan, 1998; Bygate, Skehan and Swain, 2001; Ellis, 2003; Littlewood, 2004, among many others), and partly due to a lack of agreement over the degree of centrality that tasks should occupy in pedagogic practice. As a result much of the debate in the research and practitioner-oriented literatures has been characterised by divergence and difference, with one definition of 'task' or one approach to task implementation commonly pitted against others (see for example the exchange between Skehan and Bruton in *ELT Journal*, 56(3), 2002). In contrast, the search for a core set of domain problems implies an element of consensus on the definition of the object of design – 'task' itself. To this end, Ellis' 2003 survey of definitions from the research literature usefully highlights areas of common ground, from which Ellis derives a set of commonly agreed on features, comprising criterial task properties. We adopt a similar commonality-oriented approach to the definition of task here; however since our purpose is understanding what is entailed in design, and since as Bygate, Skehan and Swain (2001) note, task definitions may vary according to the purpose for which a task is being defined, we broaden the scope to include not only researchers' definitions of tasks, but also those of materials writers and teachers routinely engaged in

task design. A broad sample of task definitions drawn from interviews with teachers and materials writers, and from the research and practitioner-oriented literatures (Samuda, in preparation) gives rise to a small set of common properties, summarised below:

A pedagogic task:

1. Poses some kind of challenge, relevant to the learners for whom it is intended, that needs to be met through the use and/or processing of the target language, and that gives a purpose for engaging in that language use/processing
2. Engages aspects of language use and language processing, with the overall purpose of promoting language development
3. Has some kind of outcome/goal/objective as an end point
4. Has some kind of information/data/content material as a starting point
5. Requires some kind of action to be taken on the initial data via a process of thought/transformation/manipulation as a means of reaching those outcomes

We might argue then that the constitutive problem of task design lies in the development of pedagogic activities that incorporate the properties listed here. However, as is evident from the above, these properties are very broad, and this means that realising them in concrete design terms is likely to open up a number of different, and more narrowly-focused, types of design challenge. Such challenges could relate to basic design logistics, as implied in Properties 3–5 (how to demarcate goals and outcomes, for instance), but others might relate to ways of engaging target language use and channelling processing, as implied primarily, but of course not exclusively, by Property 1 (how to create contexts for learners to engage with the target language holistically in order to make meanings, for example), and others would relate more directly to engaging language learning processes, as implied by Property 2, either during task completion or through the task outcome or through combinations of both.

The breadth of the design challenges outlined here also suggests that in order to adequately meet those challenges, designers need to be able to mobilise background knowledge from a range of relevant, and at times overlapping, sub-domains, relating for example to norms and expectations about *tasks* themselves, *context, language, learners,* and *language learning*.

All this speaks to the complexity of the constitutive problem of task design, and following Bereiter and Scardamalia, we might expect expert and non-expert designers to construe and respond to this complexity in distinctive ways. But what we do not know of course is whether the problems and challenges highlighted here are anything like those that designers actually do engage with; neither do we know how designers approach the problems and the challenges that they do address. Until recently, most accounts of what is involved in the process of materials development have been largely based on experienced writers' own intuitions of what they do, and examples from published materials (for example, Low, 1989; Jolly and Bolitho, 1998); these accounts are often intended as support for teachers new to materials development. However, we cannot always be sure that even highly experienced materials writers actually do what they say they do, or how far materials on paper reflect the underlying processes involved in their production. Likewise we cannot be sure what kinds of knowledge designers actually do draw on when they design tasks. This means that no matter how plausible or sensible such guidance appears, it nevertheless rests on understandings of the 'task' of task design that are highly speculative. One advantage of taking an expertise approach to the study of task design is that it seeks to create a window on what designers really do, and therefore has the potential to develop understandings that are grounded in actual practice; such understandings could in turn shed light on a number of pedagogic problems associated with the use of tasks.

1.4 Why study second language pedagogic task design expertise?

A major reason for studying task design expertise is that some element of task design is undertaken by a wide range of professionals in the field: materials writers, teachers, testers, curriculum developers, researchers and learners all engage in task design, albeit in different ways, to different degrees and for different purposes. Task design involves 'original' design work (the development of new tasks from scratch) as well as 're-design' work, (tweaking, adjusting and adapting existing materials to suit particular needs), which may entail small changes to the surface details of a task (localising names and places for instance), or larger changes to elements of its internal structure (changing the order of steps for enacting the task, for example). Task design is an activity that is carried out by 'specialists' (professional materials writers and curriculum developers, for example) and by 'non-specialists' (teachers and second

language acquisition researchers, for example). Although we would expect task design to be a central part of the work of specialist designers, it is likely to be more peripheral in the work of non-specialists – an SLA researcher, for example, might design or adapt a task in order to elicit performance data or a teacher may design a task to fill a gap in a lesson plan. This means that although non-specialist designers may be highly specialised in activities central to their professional spheres (research design or lesson planning, for example), they may not necessarily be specialists in task design *per se*.

An increasing amount of design work is being undertaken by non-specialists. In particular, the current move away from 'one-size fits all' instructional packages towards context-responsive, locally-driven materials development has opened up new challenges for teachers as task designers, as seen in this extract from curriculum documents for Hong Kong secondary school teachers: 'All English teachers must take on the responsibility for selecting and adapting suitable tasks from different materials or designing tasks for their own learners.' (Curriculum Development Council, Hong Kong, 1999, p. 48). The clear expectation here is that both re-design and original design work will be incorporated into a second language teacher's 'normal' professional repertoire. However, many initiatives towards localised materials production, such as the one quoted here, appear to rest on the assumption that the addition of task design to the teaching repertoire is essentially unproblematic, either because it is assumed that teachers have already acquired the relevant design skills to develop tasks likely to engage the properties highlighted in the previous section on a regular and sustained basis, or because it is assumed that task design is a non-specialist activity that is easily picked up on the side. In either case, this is also to presuppose that for most teachers the use of tasks is non-problematic, and that in undertaking design work, teachers are working from a solid grasp of the possibilities and limitations of 'task' as a pedagogic construct.

That none of these positions can be taken for granted is reflected in Tsui's 2003 case studies of teacher expertise. For example, the least expert teacher in those studies (who, interestingly in light of the curriculum initiative referred to above, was a Hong Kong secondary school teacher) 'never considered the question of how to design the tasks in a way that would make it necessary for the students to collaborate for task completion' (Tsui, 2003, p. 174), nor did she 'have any principles on which to base her judgment of whether the activities [were] well designed' (*ibid.*, p. 219). This is not always the case of

course; an interesting contrast can be found in Mohan and Marshall Smith, 1992, which focuses on a group of Chinese students following a post-graduate course at a Canadian university and shows how the instructor's careful planning, structuring and implementation of tasks contributed to the Chinese students' participation and to the development of their contextual understanding of the course content. Similarly, aspects of Samuda's 2001 case study of task implementation show how a teacher exploited specific elements of the task design to enable students to make new form/meaning connections during task performance. What studies like these suggest is that an element of expertise in task design 'awareness' may be of value to teachers in designing or adapting tasks, as well as in planning and framing content, and guiding on-line decisions in the classroom. However, since task design is not commonly treated as a specialist component in its own right in teacher education programmes, studies such as these also bring into focus the thorny questions of how such awareness is acquired, how it is fostered and how it develops.

An element of task design awareness could also be of value to other non-specialist designers (including task researchers), albeit in slightly different ways. For example, in a study of aspects of learner performance on different task types, Swain and Lapkin (2001) attribute some unanticipated findings to a shared design feature that was not apparent when the tasks were initially selected for use. In a different vein, a number of problems identified in other studies of task performance have been attributed to problems with task-based instruction in general (Seedhouse, 1999; Nakahama *et al*., 2001; Mori, 2002 among others); inspection of the tasks actually used in those studies however, suggests that many of the problems raised, particularly those relating to quality of talk, could be associated with undetected design flaws in the specific tasks used. Examples such as these indicate that design awareness could have a useful part to play in the design/adaptation of research tasks and in the interpretation of results, and that it could also have a useful part to play in disentangling issues relating to instantiations of specific tasks from issues relating to 'task' as a broader pedagogic construct.

Approaching the study of task design from an expertise perspective, then, has the potential to shed light on real world problems like those raised above. Apart from deepening understandings of the constitutive problems of task design itself, it is possible that studying what 'expert' designers do could be used as an element in the training and support of novice designers, preparing teachers to work with tasks and raising

design awareness for the purposes of task research – though what aspects of design could be usefully brought into focus, and in what ways, are among the empirical questions that would need to be addressed. Although a strand of the general expertise literature has long been concerned with ways in which aspects of expert knowledge and performance can be drawn on for the training of novices (Schoenfeld, 1985 in the domain of mathematical problem-solving, for example, or Sternberg *et al.*, 2000 in relation to a number of domains, including business management and military leadership), disagreement about the efficacy of using expertise to develop expertise (for example Ericsson and Harris, 1989) raises questions about the scope and format that any such training should ultimately take; these are issues that are revisited later in this chapter.

Section 2 Applying an expertise perspective to the empirical study of pedagogic task design: a focus on two studies

In order to illustrate some of the ways in which an expertise perspective can inform the research of second language pedagogic task design, we turn now to two recent studies, Johnson (2003) and Samuda (in preparation). These studies can be considered complementary in that they draw on the same database to explore different aspects of design expertise, although each also stands alone in its own right. Johnson's study is a detailed procedural analysis of the ways that more and less expert designers engage with the process of second language pedagogic task design, while Samuda's study focuses on the tasks developed by those designers, and on the design knowledge underpinning them. As we see below, the two studies adopt a broadly similar cumulative case study approach to the analysis of their respective data sets, proceeding from detailed qualitative analyses of individual cases to gradually build up generalisations across cases, permitting some element of quantification for making comparisons between designers and tasks.

Since the studies draw on a shared database, the section begins with a description of the background from which both studies developed, and then goes on to focus on each study separately, outlining the analytical approaches adopted and a brief overview of the main findings.

2.1 Background to the studies

The studies discussed here grew out of a broader study of task design expertise in two different domains – mathematics assessment and second language instruction – in which both researchers were involved

(Ridgway *et al*., 1999). The full data set for that original study included semi-structured interviews with mathematics and second language task designers with varying degrees of design expertise, evaluations of 'typical' tasks in each domain, card sorts, in which participants were asked to categorise a set of typical tasks along dimensions of their choosing, thinkaloud protocols of expert and less expert designers developing a task in their domain, and the tasks finally produced (for a fuller description of the Ridgway *et al*. study, see Johnson 2003, Chapter 1). The two studies focused on in this chapter draw on sub-sets of those data: the thinkaloud protocols of expert and less-expert second language task designers, and the second language pedagogic tasks finally produced.

2.1.1 Data collection procedures

In order to create a window on what designers do, it was first necessary to find a context in which to observe designers engaging with the kinds of design challenges discussed earlier in this chapter. One way of tapping into the invisible processes that come into play as a task is being developed is through the use of concurrent verbalisation, and this was the approach adopted in the work described here. Sixteen designers with varying levels of design background were presented with the same design problem in the form of a design brief (see below for details), and asked to 'think aloud' as they responded to it. The designers' verbalisations of what was going through their minds while they developed their tasks were video- and audio-taped, and the subsequent transcriptions used as a basis for analysis and comparison. These individual design sessions, each lasting approximately $2\frac{1}{2}$ hours, gave rise to sixteen transcribed thinkaloud protocols and sixteen accompanying tasks. For a detailed discussion of the pros and cons of the data collection procedures adopted, particularly the use of concurrent verbalisation, see Johnson (2003, Chapter 3).

2.1.2 Participants

Of the sixteen second language task designers studied here, eight were considered 'specialist' (S) designers (that is, with at least five years experience of task design as a major focus of their professional work, and who were, or at some time had been, professional materials writers) and eight 'non-specialist/teacher' (NS/T) designers (that is, second language teachers with at least five years experience, with task design as an occasional focus of their professional work). Thus in these studies, the terms 'specialist/non-specialist/teacher' are preferred

over the more standard 'expert/novice' distinction. This is because technically, as will be evident from the foregoing, the participants were 'specialists' in two different, but related, areas – materials writing and language teaching – that share task design as a sphere of professional activity, rather than expert/novice designers *per se*. The S designers, as professional materials writers are perhaps more likely to be widely recognised as 'experts' in the domain of task design, while the NS/T designers, although possibly recognised as expert teachers, may be less widely considered 'experts' as designers (but this of course is an interesting empirical question in itself). As a result, both groups might be expected to approach design work with different degrees of professional specialism. The specialist/non-specialist distinction is an authentic (and important) distinction for our field since as we have already seen, a considerable amount of design work is carried out by 'non-specialists'. Differentiating participants on the basis of their professional orientation to design may give rise to a more dynamic conceptualisation of design expertise than that allowed by the standard expert/novice distinction since it has the potential to reflect degrees of more and less 'expert-like' behaviour within and across the groups. This could also have important implications for the support and development of non-specialist designers.

2.1.3 The design brief

The design brief given participants is shown in Figure 11.1 below:

Design Brief:
You are asked to imagine that you have been teaching, or writing materials for an adult, monolingual group of students at intermediate level. The group is studying a general English course in their own country, meeting for a two-hour class once a week. There are approximately 15–20 students in the class.

In recent lessons you have been dealing with the general functional area of *describing people*. This has included simple descriptive statements of the *He/she is very tall/short* sort, but also more complex descriptions of character as well as physical appearance.

You now wish to give these learners a 'communicative activity' to practise this area further. You want the students to interact as much as possible and involve as many different members of the class as possible. Although reading and writing may be involved, you are most concerned to provide opportunities for speaking skills. You want the activity to last roughly between 15 and 30 minutes.

The materials you produce are to be used in the next day or so, and your activity needs to be worked out in sufficient detail for this to happen. This should include preparation of any worksheets. It would be useful for us if you were to include clear written instructions on how to use the activity. If you are a teacher, you might imagine these instructions to be for a colleague who is to teach the activity. If you are a materials writer, the instructions might take the form of Teachers' Notes.

Figure 11.1 The design brief given to participants.

It was hoped that asking the participants to engage with the same design brief would provide a reliable basis for exploring potential areas of difference, both in the ways that the problem was addressed during the process of design, as well as possibly in the tasks finally produced. The design brief was therefore intended to provide a challenge that was reasonably authentic for both S and NS/T designers, with specifications that were narrow enough to permit comparison across designers but broad enough to reflect individual style. In requiring relevant student materials and teachers' notes to be included with the final designs, the brief also sought to push participants to be as precise as possible in the development of their design ideas.

The absence of the word 'task' in the design brief reflects a deliberate attempt to circumvent the various technical interpretations of 'task' that the participants might have brought with them, and to avoid associations with any one approach to language teaching. Interestingly however, all participants spontaneously referred to the type of activity envisaged by the brief as a 'task', and used the term freely throughout the design process, which suggests some degree of convergence in their construal of 'task' as a general design construct. Again, for a detailed discussion of the pros and cons of the particular brief selected, see Johnson (2003, Chapter 3).

2.2 Study 1: The task design procedures of specialist and non-specialist designers

Motivated by an interest in what designers 'do', Johnson (2003) explores whether specialist and non-specialist/teacher designers carry out task design in different ways. The starting point for analysis was the designers' thinkaloud protocols. Treating each protocol as an individual case, and through a gradual and iterative process of 'complementary cyclical development', Johnson derived a coding system, TADECS, that was initially grounded in each case, but that eventually allowed generalisations to be made across cases. Categories of analysis included *macro-stages* (main episodes in the design process), *events* (the smallest elements identified in the design process, dealing with one single issue, for example 'timing'), and *micro-stages* (intermediate elements between macro-stages and events, combining aspects of both). Analysis was carried out using ATLAS-*ti,* which enabled representation of the macro- and micro-stages within which an event occurred, as well as the plotting of decision-making processes and dependencies within events. Full details of the coding system and examples of the analysis can be found in Johnson (2003).

Johnson's procedural analysis of the design process finds a number of differences in the ways that S and NS/T designers approached and developed the design brief. At the broadest level, the study finds greater richness and complexity in the S design protocols, and shows how the S designers explored more design variables and visualised design details more concretely, in more depth and at greater levels of complexity than the NS/T designers. In contrast, Johnson finds that the NS/T designers were more likely to draw on tasks already familiar to them through existing ELT materials, and adjust them to fit the requirements of the design brief. Interestingly, many of these general findings are broadly in line with Bereiter and Scardamalia's, 1993, expertise 'paradox', wherein it is experts rather than non-experts who work harder at resolving problems by exploring more alternatives, setting themselves more complex challenges, and thereby possibly extending their existing knowledge in order to fit the demands of the task; in contrast, non-experts are more likely to approach problems as a matter of finding a match between the problem and their existing knowledge, and then to be quickly satisfied with the first 'fit' made, whether fully appropriate or not, thus effectively rendering new problems solvable by making them conform to what is already known. The approach adopted by non-experts has also been characterised as 'satisficing' (Simon, 1981), and Johnson's study suggests that the N/TS designers were generally much more willing to 'satisfice' than the S designers, and much less inclined to seek out new solutions to the design problems posed by the brief.

Johnson summarises the details of his findings as a set of hypotheses about the characteristics of 'good task designers'. These characteristics are associated with findings relating to S designers, and are divided into two main areas: *logistical control*, which includes procedures and strategies for the handling of task design, and *enrichment*, which relates to what designers do to ensure that their design is sufficiently detailed and rich.

Regarding logistical control, Johnson concludes that good task designers have 'concrete visualisation capacity', that is they are able to envisage possibilities and problems in some degree of concrete detail, which they do in two major ways: a) by simulating input and output (this includes imagining what learners and teachers could be doing or thinking at various points as the task unfolds) and b) exploring possibilities rapidly, but in some detail (this includes mapping out a range of possibilities quickly). Good task designers also have 'easy abandonment capacity', that is they are prepared to abandon a task or part of a

task even after a considerable amount of time has been spent developing it. Johnson also concludes that good task designers tend to do one thing at a time; spend more time analysing the design problem that they face; identify procedures and highlight important considerations early on; practise 'consequence identification' by seeking the design consequences of issues highlighted; make higher level decisions before lower level ones by designing the whole before the parts; design cyclically in a series of stages, each adding more detail; descend into detail evenly, designing parts of the task in roughly the same degree of detail, and maintain a tally of task modifications and developments by constantly reviewing and changing accordingly.

Regarding 'enrichment', Johnson suggests that good task designers show awareness of problems and issues relating to the mechanics of setting up and conducting class activities; show sensitivity to learners and their context; create choices by exploring alternatives; have maximum 'variable control', that is they give attention to a wide range of variables so their tasks are sensitive to a wide range of issues and constraints, and indulge in 'self-imposed complexification' by introducing issues not strictly necessary for designing the task with minimum effort.

This is not to imply that 'good' designers adopt these procedures in the same way, and indeed Johnson finds considerable individual variation among the designers studied, suggesting the possibility of different design 'styles', even in response to the same brief. He also finds considerable flexibility in design approach, reflected in the fact that many S designers do not necessarily do what they explicitly state they will do at the outset, and in fact that they often design in an 'opportunistic' way, that is dealing with issues as they arise, rather than as planned in advance.

This account gives only a broad sweep of Johnson's main findings, and a more detailed discussion of the complete set of hypotheses can be found in Johnson (2003, Chapter 7). However the overall message from this work is that the process of task design is certainly not a matter of working through the development of a task from beginning to end in a linear fashion, nor does it entail orderly progressions through checklists of guiding principles. Task design is a complex, highly recursive and often messy process, requiring the designer to hold in mind a vast range of task variables relating to the design-in-process. In order to keep track of how a design is unfolding, the designer has to be able to troubleshoot for problems, simultaneously anticipating how aspects of the design could unfold in the classroom,

recognising ways in which changes to one part of the design might have an impact on others, and adjust accordingly and recognising when to jettison all or part of a design that does not pan out, even at an advanced stage of production. In this, specialist designers are likely to work harder at their designs than non-specialists, and be less easily satisfied with their results. A number of these findings are compatible with findings from studies of expertise in other domains, and are thus of considerable interest for understanding task design expertise in terms of underlying processes; we come back to their implications for the development of design expertise later in the chapter. In the next section, however, we explore some of the questions about task design expertise in terms of 'product' that Johnson's findings open up – if there are differences in the ways that S and NS/T designers engage in the process of design, is it reasonable to expect that those differences in the design process will be reflected in the tasks produced?

2.3 Study 2: The tasks designed by specialist and non-specialist designers

Motivated by an interest in tasks and the nature of task design 'knowledge', one part of Samuda's study explores whether there are observable differences between the N- and NS/T-designed tasks in the dataset; the other part explores relationships between different design features deployed in the tasks finally produced, and conscious decisions articulated by their designers during the design process.

The starting point for analysis was the tasks as finally produced on paper. Initially, the tasks were coded on the basis of two currently influential task models from the research literature (Pica *et al.*, 1993 and Skehan, 2001, 2003), with categories of analysis derived from parameters relating to task type from Pica *et al.*'s model, and to task characteristics from Skehan's. Interestingly, no major differences between S- and NS/T-designed tasks were found, but a number of problems in applying the categories of analysis to the tasks in the data set suggested that both S and NS/T designers may have been drawing on a wider range of task design features not fully captured by the models drawn on (see Samuda, in preparation for details). To explore the issue further, a further, finer-grained analysis was carried out. Each task was treated as an individual case, and coded successively. The starting point was a broad three-phase schematisation of 'task' drawn from the interview data with designers and teachers, and the relevant literatures noted in Section 1, with tasks comprising a 'beginning' (initial task

data and rubrics), an 'ending' (final outcomes) and a 'middle' (ways of working on initial data in pursuit of an outcome). This three-phase view of tasks permitted a flexible initial framework within which it was possible to tease out finer degrees of detail over successive coding cycles and to develop a coding system grounded in each task. Detailed inventories of the design features deployed in each task were thus built up on a case by case basis, enabling close description of 'within-phase' micro features, as well as broader macro-features reflecting aspects of the whole task; these were subsequently used for within- and cross-group comparison of S and NS/T-designed tasks.

This analysis captured a number of differences between S and NS/T-designed tasks that were not uncovered in the initial phase of analysis, both in terms of 'surface level' features, and in terms of features relating to the internal structuring of the task. Surface level features were characterised as aspects of the tasks readily apparent on the page, primarily in terms of task content, format and layout. Examples of differences here include range of topic and genre, with NS/T tasks based on 'standard' ELT topics (police investigations, crime reports, characteristics of a familiar person) and genres (role play interview, 'describe and guess the identity'). While such differences may be due to differences in repertoire, they may also, in line with Johnson's findings, reflect a greater willingness on the part of the NS/T designers to 'satisfice' by drawing on familiar material. Other examples of surface level difference include the use of titles ('Casting a Play') and overview statements (signalling pedagogic purposes and non-linguistic task outcomes) in the S tasks. The S designs also made greater use of what mathematics task designers call 'structured stationery' (Jim Ridgway, personal communication), that is, blank charts or boxes for recording interim responses at various stages of task completion. Differences such as these give an indication of the greater level of detail specified in the S tasks, but they also suggest that this type of design detail (in this case, the provision of advance organisers and within-task thinking 'space') is dependent on a robust schematisation of the task as a whole, as well as an eye for the detail of its parts.

Areas of greatest difference relating to the internal structuring of the tasks were found in the deployment of what we might term 'implementation-oriented' design features, that is, elements of design that appear to anticipate how the task could unfold in action, in particular, points in the task where there could be a change or transition in learners' attentional focus. We see this, for example, in differences in the ways that the S and the NS/T tasks were 'staged', that is the ways in

which the whole task was broken down into distinct stages or phases. The S tasks chunked movement through the task as a series of steps and sub-steps, with step boundaries corresponding to shifts in interaction, sub-topic and/or task focus. In contrast, although all the NS/T tasks had some element of staging, the rationale was not always apparent: in the majority of the NS/T tasks boundaries between stages did not necessarily correspond to potential transition points within the task or to overall task focus. Other examples of differences in the deployment of implementation-orientated features relate to interactivity, with more of the S tasks allowing for a variety of 'chained' interaction types, with interaction type leading into another – individual work feeding into pairwork, for example. Other types of difference related to iteravity and the degree of creative iteration built into the task in various ways; this was reflected for example in the use of 'constructive repetition' (Bygate & Samuda, 2005), with more S tasks providing opportunities for engaging and re-engaging with different interlocutors at different stages of the task; it was also reflected in the use of iterative closures, with more S tasks providing an element of in-task closure at different stages of the task, with the 'outcome' of one stage creating 'input' for the next; the S tasks also closed the task in final plenary mode. Although each feature is relatively modest in itself, the cumulative effect may be seen as contributing to the amount of within-task support that is built into the overall design, particularly in combination with a number of the surface level details discussed above.

The deployment of implementation-oriented design features by the S designers raises some intriguing questions about design expertise. Since, as we have seen, these features appear to anticipate task enactment, they could be considered design correlates of some of the designer characteristics identified by Johnson as markers of the 'good' task designer, particularly 'concrete visualisation capacity' and 'consequence identification'. The S designers' deployment of implementation-oriented features thus indicates some of the ways that Johnson's hypotheses about designer characteristics might be operationalised in concrete design terms in specific tasks. Although the use of implementation-oriented design features was more marked in S tasks, the study also finds some within-group difference in their deployment in NS/T tasks, suggesting this may be an area where it would be possible to identify degrees of more or less 'expert-like' behaviour in non-specialist designers, and thus a potential site for observing and tracking the development of design expertise over time.

An interesting aspect of the implementation-oriented design features noted above is that they appear to embody a number of elements generally associated with good pedagogic practice – closure, iteration, pacing, and so on. However, precisely because those elements are more widely associated with classroom procedure than with task design *per se,* they are not usually included in discussions of design features, either in the pedagogic or the research literatures. The present findings suggest that the S designers might have been drawing on a layer of implementation-oriented design features not normally taken into account as variables in the task literature, but which could complement and interact with those commonly discussed variables (outcome type or distribution of task information for example) in interesting ways during task performance. The study also suggests that taking implementation-oriented design features into account could broaden our understandings of how some generalised task characteristics thought to be influential in shaping task performance (for example, 'degree of support', Skehan, 2001) may be realised as specific design features. However whether the design features discussed here actually do make a difference *vis à vis* task performance remains an issue for further empirical work.

Another aspect of Samuda's study focused on relationships between differences among S and NS/T tasks and the design decisions underlying them. Here the study explored whether a number of the design features that differentiated S and NS/T tasks were deployed with conscious deliberation on the part of the designer during the design process. This was done by cross-referencing design features deployed in the tasks with the relevant thinkaloud protocols. Samuda found that S designers frequently articulated decisions about surface level features (for example, choice of topic) and often framed those decisions in terms of task dimensions commonly discussed in the literature ('information gap', 'survey task' for example); however, they did not necessarily articulate decisions relating to the implementation-oriented features that they deployed (ending the task in plenary mode, for example). In line with Bereiter and Scardamalia's (1993) discussion of general aspects of expertise, this suggests a degree of proceduralisation that might effectively free up space for S designers to attend to other facets of the design. However, since it is those 'unarticulated' decisions that appear to differentiate S and NS/T tasks, this also suggests that the design features that the S designers appeared to deploy without conscious deliberation could be part of their 'hidden' (Bereiter and Scardamalia, 1993) or 'tacit' (Sternberg *et al*.,

2000) domain knowledge. This type of knowledge, characterised as 'knowledge gained from everyday experience that has an implicit, inarticulated quality' (Sternberg *et al.*, 2000 p. 105), is thought to underpin expert performance in significant ways, and thus the nature of the tacit knowledge that S designers draw on could be highly relevant for understanding design expertise, particularly in the light of Sternberg *et al.*'s claims that the tacit knowledge held by experts can be brought to awareness and subsequently used as an element in the training of novices.

The overall picture from the parts of Samuda's study discussed here then is that a number of the S-NS/T differences in the design process identified by Johnson are reflected in the tasks produced, but that those differences may relate to task parameters not commonly discussed in the relevant literatures. The study provides concrete examples of ways in which a number of Johnson's 'good designer' hypotheses may be realised as specific design details in actual tasks, both in terms of what Johnson terms 'logistic control' and 'enrichment'. The study also highlights questions about the status of the specialised knowledge that underlies the design process and that may shape the final tasks in distinctive ways; if key facets of the knowledge that S designers draw on are indeed 'tacit' and not readily available for conscious reflection, how far is it possible to characterise what constitutes expert knowledge in this domain, beyond the types of informed speculation discussed at the beginning of this chapter?

Section 3: Constraints, applications and future directions

3.1 Constraints and limitations of the current work

Taken together, Johnson's and Samuda's studies provide examples of the kinds of empirically-grounded insights that can be derived from adopting an expertise perspective on the study of pedagogic task design; they also give a more in-depth picture of the process and the product of task design, and a richer account of the task-as-workplan than has been customary in both the researcher- and practitioner-oriented task literatures. However, this is a very small body of work that frustratingly appears to raise more questions than it answers, and to this extent, must be considered highly exploratory (and indeed it is worth remembering that Johnson's findings are in fact framed as hypotheses).

A major limitation to the work reported here is that the database it draws on, although rich in itself, is very narrow in its scope. In

particular, the use of a single design brief with a limited number of designers raises questions of generalisability. We cannot be sure, for example, how far the findings from both studies are artefacts of the particular design brief used. Although many of Johnson's findings are consistent with existing conceptualisations of expert performance, we do not know the extent to which these reflect familiar and practised routines or the extent to which they reflect the kind of expertise that Bereiter & Scardamalia characterise as working at the edge of one's competence, constantly re-engaging with familiar domain problems at greater levels of complexity. To adequately capture this distinction it would be necessary to broaden the focus beyond one single design event, and include a wider range of designers (including true 'novices'), working on the design brief studied here, as well as a range of design briefs targeting different types of task. Likewise, we do not know whether the task differences reported by Samuda were shaped by the design brief, and whether those differences are a reliable reflection of difference in designer expertise; a broader database would establish a firmer basis for generalising across task type and designer background, and a longitudinal element (as adopted in Tsui's study of teacher expertise, for example) might also provide a means of observing whether/how design expertise develops over time.

It could be argued that comparison studies of the type discussed here run the risk of *a priori* assumptions that the tasks produced by S designers will be inherently 'better' or more pedagogically effective than NS/T tasks. One way of addressing this problem of course is by having teachers and designers with varying levels of professional experience evaluate the tasks produced. Teacher evaluations of the tasks undertaken thus far (some of which are reported in Johnson, 2003) have been broadly consistent in ranking the same S tasks as the most 'expert' and the same NS/T tasks as the least, with an interesting middle range suggesting areas where degrees of expertness could be explored. But to date, the evaluation dimension of this work has been limited, and future work would certainly benefit from an expanded evaluation component, particularly if it also included the views of task users – teachers involved in implementing the tasks in classrooms and learners involved in carrying them out. The issue of whether S-designed tasks are likely to be more pedagogically effective is trickier to disentangle; one way to start addressing it would be through studies of learner performance on tasks designed by S and NS/T designers; here it might be possible to compare the language and the outcomes that the tasks actually give rise to with designers' expectations during and/or after the

design process. Another area for further research is the issue of domain knowledge and designer cognition, raised by part of Samuda's study. Work here could focus on what task design knowledge comprises, how is it organised and represented, and ways in which this reflects differences between specialist and non-specialist designers. A number of the direct and indirect techniques commonly used for eliciting and probing domain knowledge in the general expertise literature could be readily applied here, including structured and semi-structured interviews, hierarchical card sorting and retrospective reports – see Olson and Biolsi (1991); Chi *et al*. (1988), for examples of how these and other techniques can be drawn on to uncover relationships among concepts, and Sternberg *et al*. (2000) for techniques for bringing tacit knowledge to awareness. Outside the general expertise literature, approaches to the study of teacher thinking (Woods, 1996; Borg, 1998, 2003) and the use of Personal Construct theory, particularly as applied to language teacher education (for example, Roberts, 1998), also offer valuable insights for the study of designer cognition.

3.2 Applying findings from task design expertise research

To conclude, let us turn now to ways of applying what we know so far to some of the pedagogic problems raised at the beginning of the chapter. There we suggested that understanding what expert designers 'do' could contribute to the training of novice and non-specialist designers; we also suggested that raising awareness of elements of specialist task design could be usefully exploited in preparing teachers to work with tasks. However, if, as parts of Johnson's study suggest, specialist designers don't always do what they say they do, and if, as parts of Samuda's study suggests, they don't necessarily articulate some of the most distinctive things that they do, identifying what might be usefully passed on to non-specialists is clearly not straightforward, particularly as noted earlier, findings relating to the 'trainability' of expertise in other domains have been mixed. However there is evidence to believe that the problem, though difficult, is not insurmountable if approached in the appropriate way. Bereiter & Scardamalia (*ibid*.) argue that expertise can be successfully 'grown' when the focus is on developing expert-like behaviour rather than transmitting categories of knowledge. 'Expert-like behaviour' brings to mind Bruner's famous formulation that 'the schoolboy learning physics *is* a physicist, and it is easier for him to learn physics behaving like a physicist than doing something else' (Bruner, 1960/1977, p. 14), but raises the question of how non-specialist designers can be enabled to 'behave' like specialist designers. Following Bereiter and Scardamalia, we would expect this to

involve creating multiple opportunities for non-specialist designers to engage and re-engage with core design problems at progressively greater levels of complexity – a design challenge in itself, of course! However, Johnson's findings relating to design procedures provide an empirical basis for the development of such an approach, and a preliminary attempt to apply some of those findings in the form of a task-driven design guide can be found in Samuda *et al*. (2000). To compound the design challenge further, findings from Samuda's study suggest that any such approach also needs to incorporate compatible ways of expanding and developing the repertoires of non-specialist/novice designers, particularly in those areas not highlighted elsewhere in the professional literature. A number of the design features identified in Samuda's study, particularly the implementation-oriented features discussed above, offer a useful starting point here, although much would depend on how they are brought into focus as designers-in-training progressively re-engage with core design problems.

3.3 Balancing the study of task design with the study of task performance

The study of pedagogic task design expertise is still in its infancy, and there is a rich research agenda waiting to be tapped. As we have seen in this chapter, the work undertaken thus far has engaged with issues of task design at a greater level of detail than is customary in the task research literature, and this level of detail has enabled rich accounts of how design expertise may be reflected in the practices of specialist and non-specialist designers, and how it may be reflected in the tasks that they produce. By bringing into focus important questions about the nature of task design expertise, the specialised knowledge that underlies the design process and taken-for-granted assumptions about what constitutes a task design feature, the studies discussed here provide a framework for further study. The work undertaken thus far can usefully complement the literature on materials development procedures (for example, Tomlinson, 2003) by providing empirical accounts of what materials writers do, and it can also usefully complement the task research literature by providing extended accounts of design elements that could be explored in future studies of performance.

However, an important final note: the focus on issues of design and task-as-workplan in this chapter is not intended to downplay the importance of issues of task performance and task-as-process. Since the task literature to date has concentrated primarily on developing empirical accounts of performance, we hope the work reported here will begin to redress the balance by taking some steps towards developing empirical accounts of

design. The use of pedagogic tasks in second language learning cannot be understood solely in terms of design, nor solely in terms of performance, and a major impetus for future work must be to seek ways of complementing studies of task performance with studies of task design, and vice versa. Adopting an expertise perspective is one way of doing this.

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