BEYOND THE CURRICULUM: LEARNING TO TEACH PRIMARY LITERACY

By

Samantha Carole Twiselton

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LIST OF ABBREVIATIONS

BA	Bachelor of Arts
BSc	Bachelor of Science
CVC	Consonant Vowel Consonant
DfE	Department for Education
DfEE	Department for Education and Employment
HE	Higher Education
ITE	Initial Teacher Education
ITT	Initial Teacher Training
LEA	Local Education Authority
NLS	National Literacy Strategy (DfEE, 1998)
NNS	National Numeracy Strategy
NQT	Newly Qualified Teacher Status
OFSTED	Office for Standards in Education
OISE/UT	Ontario Institute for Studies in Education/ University of Toronto
PCK	Pedagogical Content Knowledge
QTS	Qualified Teacher Status
TTA	Teacher Training Agency
ZPD	Zone of Proximal Development

CHAPTER ONE

INTRODUCTION

There are two connected fields of inquiry that are explored in this study. Both are fundamentally important. The first encompasses the development of literacy in young children and involves consideration of the skills, concepts, teaching and learning experiences that lie at the heart of this process. This area is not foregrounded in the investigation in the present study, but provides a crucial context for the second area of inquiry, which is the main focus. This concerns the development of the knowledge, understanding and sense of identity demonstrated by student teachers if they are to support this process effectively.

Helping children to become literate is one of the most important and daunting responsibilities any primary teacher will ever undertake. Literacy is a vital aspect of language which is the gateway through which the rest of the curriculum is accessed. Much more than this, though, it is the means through which children come to know both themselves and the world. In the words of the Cox Report (DES, 1989):

> It functions as a tool of thought; as a means of social organisation; as the repository and means of transmission of knowledge; as the raw material of literature; and as the creator and sustainer - or destroyer - of human relationships. It changes inevitably over time and, as change is not uniform, from place to place. Because language is a fundamental part of being human, it is an important aspect

of a person's sense of self; because it is a fundamental feature of any community, it is an important aspect of a person's sense of social identity.

(1989, para. 6.18)

Literacy is a major part of language viewed in this way - without the ability to read and write many of the functions thus summarised could not be accessed at all.

Acquiring the skills and concepts necessary to becoming literate is a tremendously complex process, as I explore in Chapter Two. Acquiring the understanding and skill needed by the teacher to support this process is equally complicated. The nature of this understanding and how it is acquired and applied provides the focus of investigation throughout the study. It is a complicated area, not just because of the breadth and depth of knowledge of literacy, children and learning that is required, though as this study demonstrates this is considerable. Becoming an effective literacy teacher is also made complex by the way the process appears to be so bound up with notions of what it is to be a teacher at all.

Taking Harré's (1983) definition of identity as an organising principle for action, where identity is seen as informed by an understanding of the context and its demands, I have used this to consider the relationship between teacher behaviour and the understanding that underpins it. I have based my approach on the belief that as teachers act and think in the classroom, the knowledge they draw on is channelled through cognitive schemas (Rumelhart and Norman, 1980, D'Anrade, 1995, Cole, 1996). I explore these issues in

more depth in Chapters Five and Nine. Cognitive schemas involve selection mechanisms that structure the selection, retention and use of information. They are partly formed from what teachers (or student teachers) consider their role in the classroom to be and how they view the relationship between what occurs in the classroom and the wider contexts beyond it. The selection mechanisms that student teachers draw on and develop as they operate in the classroom will be shaped by how they view what they are trying to achieve and how they consider their teaching roles relate to this. These mechanisms and the thinking and processes through which they are shaped and developed have been at the centre of my investigations.

I have become interested in this process, both through my own experiences as a teacher of children and through my encounters with student teachers as I attempt to help them to learn to teach literacy. As I have spent time with student teachers I have noticed that they often have very differing perceptions about what is entailed in effective literacy teaching and what they need to know in order to achieve this. Strong pre-existing notions about teachers, classrooms and schools often appear to influence how they perceive the role of the teacher, and indeed the role of schooling. Many student teachers are also driven by a need for ideas – tasks that will make them feel confident, purposeful and authoritative in the classroom. This is a particularly understandable need in contexts where student teachers feel they constantly need to 'perform' (Ball, 1994, P. 12) and prove themselves to a range of audiences – including people who are judging whether or not they have met a required 'standard'. It is a need with which it easy to empathise. As a teacher of both children and student teachers I, too, have felt that urge to plunder resource books to arm

myself with fresh ideas and different approaches. Yet I have also been aware that the times when I or others have been most effective in meeting the literacy needs of children the defining factor has not been the lesson idea, although this may have provided an important vehicle for it. What has made the teaching effective has been the way in which the teacher responsively scaffolds learners; i.e. supports them in drawing on concepts and skills that are relevant to the learning that underpins the task. In doing this teachers draw on a range of types of teacher knowledge (Shulman 1987) such as an understanding of the subject, of children and of the classroom. I have also observed that this appears to be an essentially dynamic process, involving what Tochon and Munby, (1993) identify as a 'synchronic time epistemology', in which knowledge is combined and connected by teachers who seize the moment to connect the child with the subject. Wood (1988) describes this type of teaching as making contingent interventions. Successful contingent interventions depend on the teacher's ability to identify and respond appropriately to an individual learner's needs. The interventions will be constantly tuned to the needs of individuals, defined by their level of performance, and will involve pacing the amount of help children are given on the basis of their moment to moment understanding.

An awareness of the importance of such teaching, and the breadth and depth of understanding that underpins it, has led me to pose questions about the nature of this knowledge, how it is developed and what part teacher identity has to play in it. As such the study is essentially an attempt to illuminate practice and enlighten it by providing information which questions assumptions or offers a fresh way of seeing familiar events (Hammersley, 1997). A central aim has been to identify the key forms and sources of

contingent interventions, assistive interactions, or other methods of scaffolding, demonstrated and articulated by student teachers at various points in their training. These have been examined in relation to the developing identity of the student teachers as literacy teachers and the key factors that contribute to their development; crucially including the focus of the mentors who support their literacy learning in school. It has been a two-way process in which patterns thrown up by the observations have been probed in the interviews and patterns thrown up by the interviews have been used to interrogate the observational data. It has also been a process that has taken place over a period of considerable change, dictated by national developments in the form of the National Literacy Strategy (DfEE, 1998) and the Initial Teacher Training National Curriculum (DfEE, 1998). This has presented both opportunities and challenges, which will be discussed in several places.

The aim of identifying the nature of the teacher knowledge involved in effective literacy teaching and examining the processes through which it is developed has been driven by a personal and professional desire to find more effective ways of operating within Initial Teacher Education (ITE) contexts. The skills required for effective contingent teaching within what Tochon and Munby (1993) describe as a synchronic time epistemology are very complex and difficult to develop in Higher Education settings. This is because University institutions are distanced from the contextual characteristics (i.e. knowledge of the pupil as learner and the classroom as a specific learning environment) that help to define such teaching. However, many of the most common methods of support given in the school context (e.g. lesson observations, scrutiny of plans, records etc.) fail to fully

capture the more intensive, contingent teaching skills that are at the heart of effective support for learning.

The need to develop more effective ways of supporting student teachers' learning has been both refined and intensified by recent curriculum developments. The implementation of the National Literacy Strategy (NLS) (DfEE, 1998) and the Initial Teacher Training National Curriculum (DfEE, 1998) has provided a welcome emphasis on subject knowledge and a fresh impetus for re-examining the content of the literacy curriculum for both children and student teachers. However, it could also be argued that the highly detailed and prescriptive nature of these curricula has also resulted in an even more urgent need to consider the role of the curriculum in relation to learning. Consideration needs to be given to how the understandings needed to transform what is prescribed by the curriculum into a transferable 'generality of knowing' (Greeno, 1997) can be effectively developed.

These curriculum developments are one example among many of how the context for the study has changed considerably over its duration. The study was begun in 1996 and finished in 2001. During this period there were significant changes in the national climate that had clear impacts on the local settings for student teacher learning. The emphasis on detailed and prescriptive curricula was accompanied by increased accountability, comprehensive systems of target setting and a systematic regime of inspection for both schools and Initial Teacher Training Institutions.

My aim in this study can be summarised quite simply. I wanted to explore the knowledge, understanding and sense of identity held by student teachers as they learn to teach literacy in primary classrooms. This is a simple way of describing an exploration that has proved to be a very complex indeed, as I believe will be demonstrated in the following chapters. I hope that in this study I have made some tentative steps along this path of inquiry. I know for certain that the process for myself has been revelatory. It has provided a catalyst for self-reflection and analysis that has changed the way I think about both my own thoughts, beliefs and actions and how I view the practice of others.

CHAPTER TWO

KNOWLEDGE AND LITERACY

The Concepts and Skills necessary to the Emergence of Literacy in Young Children

Introduction

In contemplating what constitutes effective teaching in primary literacy, student teachers, (and their experienced colleagues) find themselves caught in the crossfire of polarised views. Learning to read and write is an extremely complex process. This is the one statement with which all contributors to the debate must agree. Beyond this theories have been as varied and far ranging as the experiences and abilities of the children they relate to. This study will attempt to identify the relationship between the theoretical frameworks offered and the practical teaching strategies enacted in the classroom at both student teacher and expert level. This will involve attempting to go beyond broad generalising descriptions of teaching approaches to micro-analyse the moment by moment interactions and interventions between teachers and pupils.

The study was conducted over a phase of five years, starting in the academic year1996/7 and finishing in the academic year 2000/1. This coincided with a period that covered before, during and after the implementation of the National Literacy Strategy (DfEE, 1998) in schools. This opened up the possibility of examining change over this noteworthy period of time – a theme that will be developed throughout this thesis. In this chapter, where I focus on literacy skills and concepts, I will attempt to examine the potential contribution and impact of the National Literacy Strategy on each area of literacy.

The chapter will present an overview of the contemporary issues informing the debate about literacy teaching. I will do this by examining what has been said about some of the main areas of knowledge, understanding and skill required by the pupil to make progress in the early stages of literacy. The chapter has been structured by those categories identified in the reading strategies sub-division of the Knowledge, Skills and Understanding section of the Key Stage One Programme of Study for Reading in the National Curriculum, (DfE, 1995) with the addition of further categories that describe some pre-requisite knowledge. While focusing on reading is a limited coverage, and does not include many concepts, skills and indeed whole areas of literacy; a conscious decision has been taken to focus in depth on one area of literacy. This is because the study itself has the potential to draw on student teacher literacy teaching that draws on *any* of the National Curriculum English Curriculum areas from age 5 –11. To extend the study beyond a broad focus on reading would result in an area that is too wide to cover in sufficient depth. Instead I have taken the decision to attempt deeper discussion of a smaller area.

The aim was to use reading as a platform from which to introduce and illustrate issues that also have a broader application across the literacy curriculum. As issues have arisen with reference to the headings employed, I have used the opportunity to broaden the discussion to include aspects of the wider literacy curriculum. Although I have taken the headings under which I have organised this chapter from the Reading Programme of Study, I have therefore tried to avoid a narrow exclusive focus on reading. Where possible and appropriate I have particularly included discussion of the development of the child as a writer. Reading and writing draw on many of the same concepts, albeit not always at the same stage and in the same way.

The National Curriculum (DfE, 1995) has been chosen as an organising structure in preference to the National Literacy Strategy (DfEE, 1998). This is partly because the former underpins the latter (and is the statutory document) and partly because some of the student teachers studied were observed before the National Literacy Strategy had been implemented. However, the relevant aspects and components of the National Literacy Strategy have been discussed alongside these headings along with some more general discussion of the nature and structure of the strategy at the end of the chapter.

Preliminary Discussion on Some Historical Tensions

Tensions between what have been termed 'bottom up' and 'top down' approaches (e.g. Smith, 1971, Goodman, 1968) have historically held a central position in the debate about teaching reading. Stanovich and Stanovich have described these arguments as the reading wars and claim that the whole language versus phonics-emphasis controversy of the last decade has 'generated acrimony, sapped the field's energies, and most important of all, confused and demoralised educators' (1999, P.12). Before proceeding it may be useful to introduce some of the central themes of this debate. Although their main significance is largely historical some of the arguments continue to have influence and as such provide a background to issues to be raised later on in the thesis. Briefly, some models (commonly associated with the term 'bottom up') have assumed that the process of learning to read starts with recognition of letters, then clusters of letters, then words and so on progressively until finally a whole text can be processed. Taken at its most extreme, the assumption can be that concepts and skills are acquired in a step-by-step process in a linear, hierarchical fashion, which

critics have stated, (e.g. Smith, 1971, Goodman, 1976) can lead to an over-emphasis on decoding at the expense of other skills and concepts.

A major problem with an extreme 'bottom up' position lies with the model of knowledge and learning it appears to assume. As will be discussed much more fully in Chapter Three, it does not fit with the socio-cultural approach to learning that will be one of the central themes in this study. There is a large and influential corpus of current thinking, which does not believe that knowledge can be described as a series of 'chunks' that are acquired one after another (e.g. Bruner, 1957). Concepts and skills are seen as being developed by the impact of new experiences, within social contexts, on existing frameworks of understanding. As learners undergo these experiences, their understanding is altered. The learner is not considered as an 'empty vessel' to be gradually filled by the teachers, but as the holder of existing complex conceptual frameworks. Concepts and skills will thus be developed in combined and interconnected ways – a view that underpins most current approaches to literacy, notably the model adopted by the National Literacy Strategy (DfEE, 1998).

A closely related difficulty associated with the 'bottom-up' model is the lack of explanation it provides for the role of context and meaning. So, for example, why can words often be read in one context but not another? How is it possible sometimes for fluent readers to process texts without attending to every word, let alone every letter? Equally, why can some children read every word but still not seem able to understand the text as a whole? These questions will be examined more fully later in this chapter in discussions of *word recognition, grammatical knowledge* and *contextual understanding*.

In contrast 'top-down' models have traditionally emphasised what is often known as whole language – most strongly associated with the work of Goodman (1967, 1968, 1976,1986) and Smith (1971, 1975, and 1979). The 'top-down' models emphasise meaning over decoding and claim that readers use their contextual understanding to hypothesise about meaning and only 'sample' words and letters in order to confirm or deny their guesses. As a fully-fledged articulation of the development of literacy, this approach is generally considered lacking in many respects.

One of the most common criticisms of the 'top-down' approach lies with the lack of adequate accounting for how readers learn to decode text. The more extreme versions, sometimes associated with apprenticeship and whole language experience, do not by themselves give very much information on how the very difficult and technical skills required in reading and writing are acquired. It is within this gritty area that difficulties arise if whole language (understood in this way) is accepted as a fully descriptive account of how children learn to read. Stanovich and Stanovich (1999) state

> ...but [whole language advocates should] jettison the unwarranted adherence to a processing model of reading that is outdated and not congruent with the latest research evidence.
> (P. 29)

As a reference point in the discussion of the development of literacy, the whole language approach does have relevance. This is more because of the philosophy

underpinning it than because of its ability to describe in detail the way children become literate. The idea of apprenticeship, in which children are involved in meaningful language experiences by working alongside more expert language users, 'to be active partners in the task with the adult leading not driving' (Waterland, 1985) is very useful. It informs much of what is generally considered to be good practice and fits with the socio-cultural, contextualised model of knowledge and learning that has briefly been alluded to. Adams (1991) claims that the whole language movement:

> … should be a core component of a long overdue and highly constructive revolution. It should be about restoring the confidence and authority of teachers. It should be an affirmation that education can only be as effective as it is sensitive to the strengths, interests and needs of its students.
> (P.41)

Stanovich and Stanovich (1999) echo this sentiment.

> The way now seems clear for the whole language advocates to reconstitute their position in a scientifically respectable way. They could retain most of their broad socio-educational goal (teacher empowerment, equal opportunity for all learners, engaged learning etc)
> (P.29)

The problem is that neither exclusively top-down nor bottom-up models appear to give a full account of the understandings and processes involved in becoming literate. Yet the conflict between these two apparently ideologically opposed stances has dominated debates about literacy teaching in recent years. This tension continues to

be a theme that runs throughout the reading debates and will be reflected in discussion of most of the categories. It could be argued that the model of reading that underpins the National Literacy Strategy (DfEE, 1998) has attempted to integrate the central elements of both top down and bottom up models. This argument will be explored further in the sections below. However, as I shall maintain, the debates are still very active in relation to the proper place and function of phonics in the National Literacy Strategy.

Knowledge, Skills and Understanding

The Nature of Print

One of the key elements of the whole language approach is the emphasis it gives to the importance of learning to read in authentic contexts, and the claims it makes that language is learned from whole to part. Central to this is the belief that children develop a sense of print before being able to analyse it. Ken Goodman reports that when shown familiar environmental print, such as cereal boxes, soft drink logos and STOP signs, 60 percent of three year olds and eighty percent of five year olds could 'read' it (Goodman, 1986).

This observation is validated by the experience of most parents. It is clear that before any concepts associated with the fine-grained decoding of text can hold any significance, children do need to have a more basic awareness of print. Adams (1990) classifies these understandings into the following statements about children and print:

- print is categorically different from other kinds of visual patterns in their environment

- print is print across any variety of physical media

- print seems to be all over the place

- different samples of print are used by adults in different ways

- there are different categories of printed material, each with their own characteristic appearances and uses

- print symbolises language

- print holds information

- print can be produced by anyone

(P.334)

Perera (1984) also includes:

- a piece of writing is relatively durable; it can be read and reread; it can be carried about and it can be reproduced.

- the most basic uses of writing are concerned with the recording of facts, ideas and information which allows them to be explored at leisure.

(P.23)

These concepts about print are fundamental to both the skills development of young children and to the affective nature of the rewards and functions of becoming literate. As Adams (1990) indicates:

> Knowledge of letters is of little value unless the child knows and is interested in their use. Correctly perceived and interpreted, print conveys information … they should have a solid sense of its various functions.

(P.208)

A large number of studies (e.g. Durkin, 1966, Baghban, 1984, Wells, 1987, Bus *et al*, 1995) have shown that children as young as a few weeks old are aware of and interested in the print around them. The work of Nigel Hall (1987) is among the most prominent in this area, demonstrating that children are born into a print-rich environment and learn rapidly to become aware of it. It is not just the existence of print that is significant but that its primary purposes are to carry meaning and be useful. These purposes are picked up explicitly by the 'Understanding of print' sections of the National Curriculum (DfE, 1995), the National Literacy Strategy (DfEE, 1998) and The Curriculum Guidance for the Foundation Stage (DfEE, 2000). The early emphasis on this area also makes concession to the highly variable experience and skills with which children begin school. Some children will have had many opportunities to develop these concepts, others will have had more limited experiences. It is part of the function of the foundation curriculum to secure and consolidate this early basis. The importance of reading to pre-school children has been emphasised by the Bullock Report (DES, 1975, P.97) and has been supported by many other studies (e.g. Wells, 1987; Book Trust 1998). One of the factors involved is the exposure to the purposes and meanings of print such experiences facilitate.

The importance of the print awareness developed by context and environment is fairly undisputed and seems to fit well with Goodman's beliefs about learning 'from whole to part'. However, the extent to which this level of print awareness actually helps children to learn to read in the sense of *decoding* text is another matter. Harste, Burke and Woodward, (1982) argue that with environmental print it is more the environment

itself i.e. colour, stylisation, position etc. that provide the cues, than any attention to the inherent features of the print. Children attend to the visual characteristics (colour, size etc.) of environmental print and make associations with these, rather than individual letters or words. This challenges the assertion that children 'read' through exposure to environmental print alone. Adams (1990) suggests that if a child processes the print as a picture, responding to aspects of its length, shape and colour etc. then this cannot really be called reading, as the print needs to be perceived as a series of individually identifiable letters.

Ehri (1999) has suggested that identification of environmental print in the way described by Goodman cannot really be defined as 'reading' at all. She distinguishes four phases in the development of sight word reading: pre-alphabetic, partial alphabetic, full alphabetic and consolidated alphabetic. She argues that it is only at the pre-alphabetic stage that beginners rely on visual attributes unconnected to individual letters. As early as the next partial alphabetic stage, individual letters begin to play an important role, particularly those at the beginning and end of words.

The pre-alphabetic sight-readers are at the stage identified, and referred to earlier by Goodman, where environmental print may be recognised through its contextual features. Gough, Juel and Griffith (1992) have shown that pre-readers select single salient cues to remember words, such as a thumb print which enabled children to read a word when it was present, who were unable to do so when it was not.

Although children at this stage have not truly begun to process text, they have developed an understanding about its nature that will be an important pre-requisite to

being able to do this later. An understanding of the nature and function of print is also an obvious precondition to the ability to produce it. Young children's attempts at writing can give us valuable information about their conceptions and misconceptions about the nature of print. In order to produce something that they themselves might call 'writing' children need first to become aware of writing as an entity that is separate from drawing and other marks. They do this by becoming sensitive to the features of written language, and the principles and concepts they develop can often be identified in their own early attempts at writing. Children are capable of making signs on paper before they know the technicalities of *how* signs represent things. An examination of early attempts at writing helps to determine their growing print awareness.

Emilia Ferreiro and Ana Teberosky (1983) have conducted some of the most interesting research in this area. In their work they identified a continuum of development that they categorised into five stages. In the earlier stages children often hypothesise relations between language and writing that are quite different from those applying to conventional writing. These include notions such as:

- Written words for similar things *look* similar even though the spoken words may not sound the same.
- When characters refer to more than one object, more characters should be used to represent them.

A particularly interesting feature of Ferreiro and Teberosky's developmental continuum is the hypothesis that in the earlier stages children look for concrete relations between graphic characters *without reference to sound*. This point will be discussed further as part of the examination of *phonological awareness*.

Pre-phonemic writing may take a variety of forms, but in order for it to be perceived as something different from other forms of mark-making, children need to have a certain level of print awareness. Lavine (1977) conducted a study which aimed to find out which sorts of graphic forms young children of different ages call writing and which they don't. Even the youngest (three-year-old) children considered the following features to be distinctive:

- *Non-pictoriality*

- *Linearity* - the figures must be displayed in a straight horizontal line.

- *Variety*

- *Multiplicity* - writing consists of more than one figure.

The older children also included:

- *Roman-like*

- *Actual recognisable letters*

However one views its significance in the technical skills of reading and writing, a clear understanding of the nature of print is obviously important. Developing this understanding of print through awareness of how it is used in the world is a pre-requisite to actually being able to decode words on the page and use them to generate meaning in writing. The question of how this awareness should be developed in children is relatively non-controversial. Most commentators agree on the importance of pre-school contextual literacy experience and would also perceive the need to build on this in school, perhaps making it more explicit and, if necessary, compensate the experience of those children who have a deficit in this area. Both the Curriculum Guidance for the Foundation Stage (DfEE, 2000) and the National Literacy Strategy

(DfEE, 1998) recommend that children be provided with a range of opportunities to experiment with writing for a variety of audiences and purposes including play and environmental print.

Directionality

Before any kind of decoding or encoding system can be applied, the user has to know where to start and in which direction to proceed. The left to right, top to bottom orientation of the English Language is not something that is known automatically. In fact as Clay (1991) points out

> The child's everyday experience has actually trained him in different habits from those he needs in reading. An orange, a dog or a favourite toy must be recognised from any viewing angle.... when he is faced with printed language, flexibility is inappropriate. Now he must recognise some directional constraints. Speech is sequenced in time and this is represented by print, which has linear sequence, and the order in English is always left to right. (P.114)

In the application of this understanding through the *production of print* i.e. writing, these differences are pronounced. Perera (1984) describes the time sequence of speech as uni-dimensional and the spatial arrangement of writing as two-dimensional, involving both horizontal and vertical movements. One of the hardest things for young children to grasp in their early writing is the fact that the direction in which the written letters face is so important. Temple, Nathan, Burris and Temple (1988) point out

Psychologists of perception have taught us to marvel that a child can look at a chair from any side and know that it is still a chair.... When the child begins to write, the rules change. Now the visual differences brought on by shifts in perspective change the very identity of the object!

(P.43)

Again, the importance of knowledge of directionality is indisputable, where conflict might arise would be in how necessary it is to explicitly teach it. Clay claims that although it is true that many children learn directional behaviour easily with little or no instruction, it is still *learned* behaviour and as such should be explained within an understanding of reading and writing acquisition. In fact, there will always be some children who do not fit the pattern of acquiring this skill easily. Many teachers have struggled to help individuals (often left-handers) with this. Methods vary from handwriting patterns, pencil trails and tactile games to pointing at or covering up words or letters so that they will be discriminated in sequence.

Concepts about Letters, Words, Sentences and Texts

In speaking and listening, our attention is focused on the task of comprehending; to focus on words, syllables or phonemes would be counter-productive. For the purposes of reading, however, these sub-units have to be recognised. Words seem an obvious unit of speech; however, as Adams (1990) suggests, children are not naturally prepared to conceive of spoken language as a string of individual words or to treat words as individual units of meaning. What they listen for is the *full meaning* of an utterance, and that comes through the combination of the individual words. In the

initial stages of literacy the concepts of letters and words tend to become confused. Clay describes this through a test in which the child had to slide two masking cards across a line of print to show a tester "just one word" and "just one letter" and "just the first letter of a word". Only 40 to 53 percent of six-year-olds could pass these items after one year of instruction. (Clay, 1966, 1985)

An understanding of the concept of a word is clearly a pre-requisite to being able to explicitly decode it. It is also a clear pre-requisite to being able to write it. Charles Temple (1988) identifies the development of a stable concept of a word as being a key element in moving early phonemic writers on. For children to be able to write a word it must have some reality to them as a unit so that they can hold it in their minds as they operate on it. This becomes increasingly important as phonological awareness develops further and they are required to switch back and forth between the sound of the word, its phonemes and their knowledge of letters and letter strings.

More basic than this, it must be possible to recognise and discriminate the individual letters within the word. Adams (1990) claims that solid familiarity with the visual shapes of individual letters is an absolute pre-requisite of learning to read and states

> Both theory and data suggest that instruction on neither the sounds of letters nor the recognition of whole words should be earnestly undertaken until the child has become confident and quick at recognising individual letters.
> (P.413)

In considering the concepts of letters and words it seems an appropriate point at which to introduce discussion of the organising model that is presented by the National Literacy Strategy framework (DfEE, 1998). It presents a consistent sub-division of 'word level', 'sentence level' and 'text level' understanding. These distinctions have been discussed as a 'convenient way of referring to the visual features of what we read and write'. (Beard, 1999). Although some of the understandings clustered under these sub-divisions will be considered later in this chapter, it may be useful at this stage to reflect on the theoretical underpinning for this framework. David Crystal (1995) makes a distinction between 'text' (a coherent, self-contained unit of discourse), 'grammar' (the system of rules governing the construction of sentences) and 'lexicon' (the vocabulary of a language). Katherine Perera (1979) makes distinctions between discourse (text), sentence and word levels. The Kingman Report (1988) adopts a similar three-level model of word forms, phrase/sentence structure and discourse structure. While no organising structure is likely to be fully expounding (there are 'grey areas' and many examples of overlap), the strength of this framework is that it *brings together* these distinct categories of understanding at every stage. The structure is reflected in a number of ways. It is seen in the distribution of the word, sentence and text level objectives as developmental and 'spiral' areas of understanding to be covered every term right through from reception age to the end of year six. It is also at the heart of the teaching approach (the Literacy Hour) that accompanies the framework. The model of reading and writing that underpins both of these is referred to as 'The Searchlights Model'. Both this and the structure of teaching will be discussed more fully below.

Phonic Knowledge

The question of phonological awareness epitomises the crux of the tension between polarised teaching approaches. Phonic teaching has been variously described as one of the crucial factors in ensuring high standards (DES 1996), and an 'unnatural method that may even be harmful' (Smith, 1973, P.54)

Knowledge of regularities in letter-sound correspondence, or the way in which sounds are represented in clusters of letters seems such an obvious pre-requisite to literacy that to many these seem *the major elements* in reading. Teach children the code and they will be able to read. Unfortunately, life is rarely so straightforward. The alphabetic system that provides the code, in which a small re-usable set of letters can produce an infinite number of words, can also be a source of terrible confusion for beginning readers and indeed beginning teachers. There are many irregularities in grapheme-phoneme correspondence in the English language, and there is often no one-to-one correspondence between letters and sounds.

Many beginning student teachers relate experiences of hearing children read and feeling they have compounded or even caused problems for children when they have doggedly asked them to sound out every letter of an unknown word. The outcome of this approach can often be a focus of attention that is so far removed from the rest of the text that the pursuit of meaning becomes pointless. Worse still, the approach itself does not bear fruit in yielding the word, because it is one of the many that cannot be sounded out in this way. In fact, as we shall see, the problem here does not lie so much with the phonic method as with a limited understanding of what is involved in phonological awareness, and quite possibly a misapprehension of the stage of awareness appropriate for that particular child. All the same, this type of experience is

common and has been the source of demoralisation and confusion for both student teacher and child.

The confusion that this sort of approach can cause, based on an over-simplified and misconceived understanding of the role of phonological awareness, is probably one of the main reasons why there was a historical shift of emphasis away from the teaching of phonics. Frank Smith (1973, 1988) argues that, since adults can derive the meanings of words directly, without recourse to phonological decoding, there is no reason why children should be taught this 'unnatural' method. (The possible flaws of such a position will be examined in the discussion of sight vocabulary later in this chapter). Smith (1973, 1988) claims that learning to read must be a 'Whole language Experience', in which children are taught to attend to the text in its entirety rather than fixating on individual letters and sounds.

This focus on meaning is effective as an inspiration for making the reading task as complete and meaningful as possible (and few would argue against the value of doing this). However, it skirts over the need for the reader to sometimes combine an understanding of the text as a whole with more technical decoding strategies in order to make progress *within* the text. It can only be possible to attend to the text in its entirety if enough of a certain number of words have been understood already. Particularly when a child is reading alone, it is difficult to see how this could happen without the ability to apply some kind of more technical decoding strategies.

Few current theories would ignore the importance of focusing on meaning and the relationship between meaning and the grammatical awareness and contextual

understanding we bring to bear as readers (this will be discussed in more detail later in this chapter when we look at *grammatical awareness* and *contextual understanding*). The weakness of focusing almost exclusively on meaning, however, is in the failure to acknowledge that the word level knowledge we also need is not automatically acquired through whole language experience. Probably the most disputed of Goodman's claims is that reading acquisition can be characterised as a 'natural' task (Goodman, 1986).

It may be true that there are some children who appear to develop these technical skills relatively effortlessly, with little explicit teaching. Ehri (1999) has shown that even in the very early stages of literacy, often before formal schooling has begun, readers begin to pay attention to letters in order to remember words (see below). Those readers who do this without formal tuition have never the less been exposed to experiences which develop phonic awareness in almost as direct a way. Bradley and Bryant (1983) have shown that the ability to discriminate rhyme in four-year-olds was a good predictor of later reading achievement. Stainthorp and Hughes (2000) have shown that early young readers (children who learn to read exceptionally early, before formal education has begun) have a particularly pronounced sensitivity to sound patterns.

There are many pre-school experiences involving sound patterns (songs, nursery rhymes, poems and games) that would clearly contribute to these abilities but would not be automatically identified as teaching and learning experiences in the formal sense. The knowledge has not miraculously 'come out of thin air'. Although studies like that of Stainthorp and Hughes (2000) do suggest that some children are born with

natural propensities (often regardless of IQ levels) that are less prominent in others, these propensities bear fruit through the pre-school experiences of these children. Children who have well-developed skills of this nature are then able to combine this with an understanding of the text in its entirety to begin to decode. It is also worth noting that a number of studies (e.g. Morais, Cary, Algeria & Bertelson, 1979, Mann, 1986, Yopp, 1992) have shown that phonological awareness is a consequence of being able to read as well as a pre-requisite. Such studies show that learning to read with an alphabetic script increases phonic knowledge.

There are, however, many children who do not acquire phonological awareness and phonic skill so effortlessly – for whom learning to read is a slow and painful process, requiring systematic and focused input from the teacher. The approaches of whole language and apprenticeship still have relevance but they cannot be used to ignore the need to develop technical knowledge.

So what is the role that phonological awareness does have to play, in either early or skilled reading? Those who have argued against a phonic teaching approach and state that teachers would do better to 'stop interfering with learners in the name of helping them' (Goodman, 1972, P. 56) appeal to a sense of unnaturalness that results from misguided and inappropriate sounding out as mentioned earlier. Yet we cannot exclude the centrality of letters and sound systems in reading just because they are not straightforward or easy. In so far as phonological awareness is given a role by Goodman, it is left to be 'absorbed' through a whole language experience and a discovery of alphabetic principles in their writing (Goodman, 1986). Further details about how this 'discovery' will be facilitated are somewhat lacking.

Studies of both early reading and early writing development, such as Adams, (1990), Clay (1993), Ehri, (1999), Ferreiro and Teberosky, (1983) and Goswami, (1995) all show that a knowledge of the relation between sounds and letters *is* a vital part of the process. Children show this knowledge in increasingly more complex ways as they make progress with both reading and writing. It is obvious that the acquisition of this knowledge cannot simply be ignored. A number of studies have produced data that suggests a causal link between phonological awareness and reading ability (e.g. Bradley and Bryant 1978, Hatcher, Hulme and Ellis, 1994). Many OFSTED reports (e.g. 1996, 1998) have found a clear link between higher standards and systematic phonics teaching. How then can phonological awareness be developed without confusion?

Wray (1994) makes an extremely useful contribution to this debate in pointing out that as children begin to learn to read they do adopt a phonological approach, but that they do this in a way that makes sense to them. This is explained by combining the 'meaning making' philosophical stance associated with whole language with a more sophisticated understanding of phonological awareness and how it develops. Wray argues that sensitivity to sound patterns is a crucial factor in reading acquisition and this does not have to be divorced from meaningful language experiences. Our understanding of the nature of these sound patterns is key. It can be argued that phonological awareness has been an area of knowledge the development of which has been too easily overlooked because of a confusion and mystification of what is involved. The fumbled letter by letter sounding out of student teachers is so inappropriate because it is based on a misunderstanding of the way in which

phonological awareness can help novice readers. Young children are not ready to break down words letter by letter in this way, but need to be able to identify simpler units of speech and their corresponding letter patterns.

It may be in the initial concentration on phonemes that some of the problems lie. The concept of a phoneme is itself very difficult for young children. Within the broad area of phonological awareness, sub-divisions of conceptual understanding can be identified: Before they can apply a phonemic de-coding strategy to a word, young children must be become aware of the phonemic segments into which words can be divided. This is not so straightforward as it sounds because phonemes, when spoken, as opposed to syllables, when written, do not have acoustic boundaries separating them. As Oakhill (1993) states, "the concept of a phoneme is consequently a very abstract one". The articulation of a letter will depend on, for example, the following vowel, so it is very difficult to separate the sounds by adding or taking away letters and blends of letters.

This is perhaps what leads some to criticise phonic sounding out as confusing and irrelevant. It certainly gives credence to the notion that learning to read in this way is unnatural and divorced from young children's existing understanding of language. *Phonological awareness* is possibly a more useful term than *phonics* because the former explicitly includes an awareness of both irregularities and patterns, whereas the latter term has often been used to describe simply the *sounding out* already described. Awareness of the relationship between print symbols and sound patterns would seem to be a central part of learning to read - it is the first area of knowledge

outlined in the National Curriculum (DfE, 1995, DfEE, 2000) and is given great prominence in the National Literacy Strategy (DfEE, 1998) (see discussion below).

As Goswami and Bryant (1990) point out, there are speech units other than phonemes, and these may be more accessible to beginning readers. The initial sound (i.e. the initial consonant or the initial cluster with a consonant in it), and the end of the word are more comprehensible to young children. These have become known as the *onsets* and *rimes* and provide a much-simplified code for beginner readers. For example, if a child can be helped to read 'cat', with the application of an understanding of onset and rime, by analogy s/he should also be able to read 'sat'. Thus, it is argued, in the initial stages of reading at least, it is more useful to approach phonological awareness through the sub-categories of onset and rime.

A fostering of a basic understanding of these fairly simple concepts is then seen as part of the foundation onto which a later awareness of more complex units and patterns of letters is built. Phonological awareness, which explicitly includes an understanding of irregularities as well as patterns, is extended over time. According to Goswami (1999) the developmental sequence begins with an ability to identify syllables within spoken words. It then moves on to a discrimination of onsets and rimes until finally arriving at the phonemic level where the smallest units of sound (usually corresponding to single letters but also made by digraphs - pairs of letters with a single sound) can be identified.

Learning by analogy (Goswami, 1999), as with the example above, can play a very useful role within this developmental sequence. Because an awareness of onset and

rime develops before a phonemic awareness, analogies based on rhyme and alliteration become accessible before those based on single phonemes. This has a number of advantages for the beginning reader. If words are gathered together through rhyming patterns then spelling irregularities caused by changes in vowel pronunciation are usually eliminated. Learning about correspondence in spelling sequences for groups of words that rhyme thus exploits a phonological distinction that comes naturally and enjoyably to young children and in so doing enables the decoding of many new words by rime analogies. So, at a very early stage an ability to recognise phonological patterns is begun. Taking this approach also has advantages in countering the claim that an emphasis on phonic knowledge leads to reading becoming an unnatural and tedious activity. Wray (1994) points out that rhymes are a very significant part of young children's lives. In the normal course of pre-school experience they are taught them and enjoy making up their own. Building on the sensitivity to sound patterns that these enjoyable experiences produce by extending and exaggerating similar types of experiences need not be a tedious struggle that is isolated from meaningful language events.

The ability to recognise phonological patterns means that, as claimed by Adams (1990), eventually skilled readers are able to read at high speed by processing individual letters, not in isolation from each other, but as part of a wide range of familiar, known spelling patterns. This still makes even unfamiliar words accessible through the patterns within them that *are* familiar.

Growing phonological awareness is seen clearly as young children move through stages of writing development. The stages, referred to earlier, that are identified by

Ferreiro and Teberosky (1983) show a central role for the development of phonemic understanding. In the initial stages the children studied used known letters (usually from their first name) in a variety of ways which showed no correspondence to sound. At a later stage, the relation between graphics and language becomes based on sound, specifically syllables. At this stage there is no correspondence between the actual sound and the symbol used for it - it is used merely as a syllable counter. Thus 'chicken' is written ¬ / and fence-post is ~ ^. This analysis has a clear relationship with Goswami's contention that young children need to learn to attend to discrete units of sound, in the form of the onsets and rimes of syllables, before they can start to relate sounds to letters.

Later still, children start to show an awareness of some letter sounds and to use them consistently (although initially they may actually be using a letter that does not relate to the sound). Typically they will focus on the initial sound (or onset) and may often use this letter to represent the whole word. At a later stage still, children's writing starts to show an awareness of syllables and they will use their knowledge of letter sounds to represent them. Eventually they become aware of spelling patterns; blends, digraphs and letter strings, and are able to use this knowledge to move beyond one to one sound to letter correspondence (see section on graphic knowledge). Clearly this developmental continuum represents an increasing reliance on a growing phonological awareness.

This development in writing is closely paralleled by Ehri's (1995) stages of sight word development mentioned earlier. After the pre-alphabetic stage, in which the child attends to the visual characteristics of the word (which may include the famous

thumbprint) the next phase is the partial alphabetic stage. In this the reader attends to some of the letters and their associated sounds, often the initial and end letters and sounds. In order to do this they need to know the relevant letters and sounds and to be able to discriminate between the initial and end sounds (onsets and rimes). The next stage is the full alphabetic stage in which readers remember words by making complete connections between letters in their written form and phonemes detected in their pronunciation. To achieve this stage the reader must know how most graphemes symbolise phonemes in the conventional spelling system. This achievement also means that they can decode words never read before. The final stage is the consolidated alphabetic stage, which will be discussed under graphic knowledge.

This developmental description portrays a similar growth of phonological awareness to Ferreiro and Teberosky's writing stages. In order to make progress as both a reader and a writer a child must fairly early on begin to make connections between letters and sounds.

Current thinking is predominantly agreed that phonological awareness and phonic knowledge play a central role in learning to read and that explicit teaching in these areas is important. The National Literacy Strategy (DfEE, 1998) gives this area a central role and teachers following this approach are provided with a comprehensive framework of objectives (through the framework itself and the later booklet 'Progression in Phonics' [DfEE, 1999]) and a structure which should ensure these are covered regularly and systematically. However, within this broad area of agreement there is still conflict.

As I have tried to point out in the discussion so far, an emphasis on phonological awareness and phonic knowledge does not need to contradict the philosophical aims associated with a whole language approach. There is a danger, however that the National Literacy Strategy model of phonic knowledge falls into the trap of treating knowledge as isolated chunks of information. If, as I argue in Chapter Three, learning is conceived as the social construction of frameworks of understanding rather than the accumulation of discrete chunks of knowledge, in language learning there is a need to avoid breaking the language down into isolated parts. This is particularly clear if this happens to the exclusion of understanding the text (or language experience) as a whole. As we have seen, a proper understanding of the nature and development of phonological awareness allows for teachers to provide learning experiences that develop necessary complex phonic skills while still being meaningful to children as part of a broader framework of language. Wray (1998) points out:

> There are references in the framework of teaching objectives and in the Strategy materials to the key concepts of modern research and theorising in the teaching and learning of phonics – onset, rime and analogy. Yet the major emphasis in the teaching of initial phonics seems to be a phoneme based approach…. The view apparently taken in the Strategy is that children learn phonics incrementally, accumulating over time facts about letters and clusters. (P.60)

The danger is that an over-emphasised phoneme-based approach, too early in reading acquisition, can lead to the de-contextualised and misconceived teaching approaches that led many too far away from phonics in the past. As Wray (1998) indicates (and

uses the work of Adams, 1990 to support his claim) understanding of phonic knowledge will not proceed hierarchically but in parallel and within the context of real reading and real writing involving reflection on meaning, function and form. There is a risk that the objectives in the National Literacy Strategy framework lead away from this approach.

There have also been related disagreements, which have centred on the role of 'blending' phonemes in teaching children to read. Recently a range of 'synthetic' approaches to phonics teaching have attracted considerable publicity (e.g. McGuiness, 1998, Miskin, 1998). To an extent these approaches have been positioned as leading to a different (often portrayed as contrasting) set of teaching implications to those derived from the focus on different levels of sound units within and between words (sometimes called analytic phonics) as discussed above.

Synthetic phonics starts by teaching children one to one matching between phonemes and graphemes. Children are taught to tackle new words by sounding each phoneme in turn and 'blending' or synthesising the result. Although there is some variation between different versions all show a dominant concern with one to one grapheme/phoneme relations, with texts being processed grapheme by grapheme. McGuiness (1998) asserts that this is how good readers operate. McGuiness and others (e.g. Watson and Johnston, 1998) have argued for an intensive and early approach which avoids stressing the importance of rhyme and onset-rime patterns but instead focuses on letters and sound more individually. The DfEE publication Progression in Phonics (DfEE, 1999) particularly emphasises elements of this approach. A recent OFSTED report (OFSTED, 2001) in picking out good practice in

the teaching of phonics also emphasises the need to focus on letters and sounds, including in a list of features of good phonic teaching in the Reception year:

- ♦ rapid early coverage of letter/sound correspondences at the rate of several a week
- ♦ a focus on phonic skills, that is, hearing, identifying, segmenting and blending sounds, as well as on phonic knowledge, that is, letter-sound correspondences

(P.5)

Yet, as I have argued above there is considerable evidence that rime patterns within and between words are a key feature of the English spelling system and recognising and manipulating them in increasingly complex ways is helpful for developing readers. Goswami (1999) has cited fifteen separate studies from three different countries, which suggest that phonological awareness and rhyming ability are causal factors in learning to read. Such a focus on sound and letter patterns also has great potential to keep intact the all-important relationship between letters, words, texts and meaning. These connections are accomplished through the use of enjoyable texts that naturally exaggerate sound patterns.

The debate is in danger of falling into the 'all or nothing' trap exemplified by the extremes of polarised views between whole language versus phonics. As Harrison (1999) has argued there is a need for:

An approach to teaching which emphasises 'balanced phonics' – balanced because it does not engage in premature closure in relation to other approaches to teaching phonics.

(P.61)

Harrison calls for an approach that combines an understanding of how phonological awareness is acquired with that of how children acquire letter knowledge. He claims that in turn these need to be taught within a programme that forges coherent links between phonic/graphic relationships and the fundamental purposes of reading for meaning and how this relates to reading, writing and spelling. Henrietta Dombey (1999) echoes this view. She claims that a balanced approach to reading will recognise and encourage a close relationship between grapho-phonic learning, whole word learning and the experience of texts. Dombey warns against what appears to be attractive about the synthetic approach – the orderly way it appears to take children from the simple to the complicated. She argues that an overemphasis on this approach neglects the patterning of many English spellings and the knowledge children bring to school and the need to combine different kinds of knowledge in making sense of text.

It is clear that reading involves combining different types of knowledge in different ways. Phonic knowledge includes a range of concepts and a range of forms of application. There is a danger that phonic knowledge is treated as if it were a series of hierarchically accumulated 'chunks' of knowledge. Although I can agree that for practical purposes the framework of objectives in the National Literacy Strategy needs to present a systematic coverage, it still seems we need to guard against

unthinkingly treating knowledge in this simplistic way. I pursue this discussion in Chapter Three.

It follows from Dombey's claims about the importance of acknowledging the complex ways in which children become aware of patterns that an effective teaching approach will follow Wray, Harrison and Dombey's recommendations and seek a balanced and broad approach. Beard (1999) argues that the National Literacy Strategy draws on a wide range of research evidence bases and takes into account both the work on phonological development and the need to segment sounds associated with analytic phonics and the importance of helping children to blend them together into meaningful units as is emphasised by the synthetic approach. Once again, though, the dangers of presenting an over-simplified hierarchical account should be acknowledged and it could be argued that Beard's review overlooks this need.

Graphic Knowledge

Discussion of graphic knowledge logically follows from the consideration of *phonic knowledge* in the National Curriculum and indeed some of the issues already raised involve both types of knowledge as they are often inextricably linked. Graphic knowledge could be described as an extension or consolidation of phonological awareness. The ability to use graphic knowledge combines knowledge of phonological relationships and patterns with the ability to discriminate separate sections of words and recognise them in different contexts. The ability to recognise letter strings in a range of words means that patterns of letter combinations can be perceived. The growth of this type of perceptual ability is one of the major factors

enabling young children as both readers and writers to be able to move beyond the initial stages.

A developing grasp of graphic knowledge means that children are no longer hampered by using letter sounds as if they themselves were 'pieces' that can be used to construct words. A growing bank of words that can be recognised on sight, alongside a developing ability to read and write by analogy (Goswami, 1995) can begin to provide the source of pattern identification. Through this process the complexity of the English spelling system is gradually revealed but in a way that allows links to be made between known and unfamiliar words. This is an enormous help both in reading and writing.

In writing, when this begins to happen it is known as the *transitional* stage of spelling (Gentry, 1982). Gentry's stages of spelling development reflect some of the same stages as those produced by Ferreiro and Teberosky (1983) but take the process further, through to conventional spelling. *Pre-phonetic, semi-phonetic and phonetic* stages in Gentry's analysis roughly correspond to the stages outlined by Ferreiro and Teberosky. Following on from phonetic (in which the writer focuses mainly on letter/sound relationships in order to spell) are *transitional and conventional.* At the transitional stage the child is beginning to apply knowledge of letter strings and spelling patterns to units smaller than words. Here the child moves from a concentration on sound to a concentration on visual appearance. Margaret Peters (1993) similarly considers a visual awareness of spelling patterns to be a key factor in becoming a conventional speller.

In reading the move from phonetic to transitional to conventional spelling is mirrored by Ehri's (1999) stages of sight word recognition. At the *alphabetic stage* of word recognition readers are able to read sight words by forming complete connections between letters seen in their written forms and phonemes detected in their pronunciation. When irregularly spelled words are encountered similar connections are made for those letters which *can* be connected to sounds, while those that cannot are probably flagged as 'silent'.

According to Ehri, readers move on from the alphabetic to the *consolidated alphabetic phase* through being able to identify patterns across the increasing bank of sight words that have been retained. These patterns arise in groups of letters *within words,* the words themselves cease to be quite so important, (indeed they may actually be unfamiliar to the reader); it is the sub-section of the word which holds the pattern. *Consolidation* allows readers to operate with multi-letter units that may be morphemes, syllables or sub-syllabic units such as onsets and rimes. These letter patterns become parts of readers' generalised knowledge of the spelling system and greatly increase the scope for his/her sight recognition and ability to apply phonic knowledge.

Frith (1985) describes a similar process in three phases that closely mirror Ehri's stages of sight word recognition. In the first stage – the *logographic* phase - children pay attention to the letters words are composed of but this attention is not yet associated with the mapping of visual symbol onto speech sound. In the second stage – the *alphabetic* phase - children learn about the relation of smaller units of spoken sound to smaller units of written language. According to Frith, by looking at words

closely and more systematically children learn to relate increasingly complex letter structures with sounds. As they become more proficient this becomes more automatic so that new words are 'recognised' immediately. By this stage they are ready to enter the third and final stage – the *orthographic* phase - in which the major spelling patterns of the language are internalised.

A central element of Frith's model is the belief that children have their own logic – their own ways of bringing order and predictability to the phenomena they encounter and that they do this differently at each phase, as new relationships become clear. Dombey (1999) claims that teachers need to help children to see these increasingly complex relationships in ways that fit with the stage of development they have reached and acknowledges the strategies, logic and experience they bring with them. This means that in developing graphic knowledge teachers need to introduce children to the logic of our spelling system in stages and to invite them to play an active part in this – encouraging them to draw inferences, see patterns and make connections for themselves. Dombey argues that an emphasis on synthetic phonics ignores both the need for children to be active in making these connections and the complexity of the spelling system that makes an understanding of complex spelling relationships so important. There is a danger that the model of graphic knowledge underpinning the early stages of word level work in the National Literacy Strategy (and strongly reinforced by Progression in Phonics) may fall into the same trap. This is for the same reason given in the discussion of *phonic knowledge* in this chapter, i.e. an undue emphasis on letter/sound correspondence.

Word Recognition

The ability to look at a word and recognise its meaning without expending any effort decoding the word seems to play a major part in mature readers' ability to read print so rapidly and fluently yet with full comprehension. It seems that such readers recognise a large number of words by sight alone, without having to tediously decode every letter. The advantages of building up a bank of words that beginning readers can recognise in this way seem obvious and this is one of the areas identified in the National Curriculum and extended in the National Literacy Strategy.

Historically, the systematic building up of a sight vocabulary has been a major strand in the teaching approach traditionally known as Look and Say. This is associated both with the extensive use of flashcards and older reading schemes which have a tightly controlled vocabulary (although it does not have to be taught in this way). In recent years both have been criticised; over-reliance on flash cards because of the way they isolate words from their context and therefore deprives readers of other vital cues. Reading schemes of this type have been similarly criticised, with the additional problems presented by their stilted text which not only make them uninviting to some readers but also mean that they are less likely to help them to develop the strategies required to read more conventional text.

However, this once again dismisses a whole area of knowledge on the basis of one example of a teaching method. Effective use of environmental print and repetitive, patterned texts are clear examples of methods that aim to contextualise the words that are being learned. In this the assumption can be that, initially, children build up a sight-vocabulary through attention to the features of words that become familiar

through frequent exposure in context. They then progress to recognition of the same words in unfamiliar contexts. (Goodman, 1986)

The belief is that it is the shape and length of the word as a whole, rather than its component letters that gives the cue to its meaning. However, it has been shown that skilled readers attend to the letters, rather than the shape of the word in order to recognise it from memory. In fact Adams (1990) found that adult readers were able to recognise real words much more quickly and accurately than made up ones even when they were extremely distorted in both size and shape. Regardless of the typography or the type of item presented, perception seemed to be based on the recognition of its component letters.

While strengthening the case for the importance of attending to letters and letter combinations in word recognition and the development of a wide sight vocabulary this also reinforces the importance of the link between reading and meaning. Readers' quicker recognition of real words implies that a search for meaning is the primary driving factor. Once again, the importance of combining a broader understanding of language frameworks with the individual skill or concept is highlighted.

According to Ehri (1999), the more fluent the reader, the more attention to letters and letter patterns is involved in being able to trigger words from a sight vocabulary. Thus alphabetic and consolidated alphabetic readers draw on their phonic knowledge more and more extensively. So although sight word development can be seen to be a very important element in learning to read, it seems to be linked to, indeed an extension of, phonological awareness rather than something which is an entirely separate area of

knowledge. Unless a child already has growing phonological awareness s/he is unlikely to be able to develop a sight vocabulary.

The development of a sufficient sight vocabulary is also an extremely important factor in moving children on in their development as spellers. The highly crucial transitional stage, which has been described above, depends on a growing ability to apply knowledge of spelling patterns and letter strings to units smaller than words. At this stage readers are beginning to develop a strategy which is not dependent on phonologically regular words for success. The focus shifts from a sound/letter relationship to a sight/letter relationship. At this stage it becomes essential that a child begins to visualise how words should look if they are in accordance with usual spelling patterns. They can only do this by accessing a sufficient bank of sight words and noticing the patterns that occur within them. As Margaret Peters (1993) says:

> By the time the child has reached the transitional stage, visual intervention is essential. Children must be taught, if they have not already learned it, the 'Look, Cover, Write, Check' routine.
>
> (P.185)

This routine is a systematic way of adding words to a sight vocabulary.

Even before the transitional stage of spelling, in order to reach it at all, sight vocabulary will have an important role to play. In order to reach a stage where the need for spelling in ways that are not phonically straight-forward is recognised, a child will need to know enough about the written form of the language to become

aware that there are many words that are not regular in this way. This will happen through a growing sight vocabulary, which is remembered partly by a growing phonological awareness. Temple (1985) states that at a fairly early stage in their development, i.e. when they are still relying on letter names in their usual spelling, children need to have stores of correctly spelled words in memory. When children write freely, the correctly spelled words will not replace all or even most of the invented ones; the two types, rather, will stand side by side. Gradually, however, children notice the disparity between their inventions and correct spellings. It is this noticing which is so important for making progress to the transitional, and eventually the conventional, stages of spelling.

It is clear that word recognition and the development of a wide sight vocabulary is closely related to the development of phonic and graphic knowledge. The bank of automatically recognised words serves as a pool of words from which the increasingly complex graph-phonic relationships that underpin progress are derived. So, for example, Dombey argues that in order to make progress from Frith's logographic phase of graphic recognition to the next, alphabetic phase, children's sight vocabulary needs to include regular CVC words for later analysis.

The National Literacy Strategy appears to be informed by this analysis and provides lists of high and medium frequency words to be taught in Reception to Year Two and Years Four and Five. These lists are drawn from a number of sources (e.g. Carroll, Davies, and Richman, 1971; Reid,1989; Huxford, 1994) and represent a substantial proportion of the words that children are likely to need for word recognition and independent spelling ability. However, it could be argued that this important area of

word level work is not emphasised and that the phoneme-based approach discussed earlier dominates the early stages.

Grammatical Knowledge

This is an extremely important area for a beginning reader and writer, and has a close relationship with the role of *contextual understanding* (see below). Readers draw on grammatical knowledge both in order to help them predict unfamiliar words and to work out the meaning of words that could be interpreted in different ways in different contexts. To give an example of the latter use, take the word 'washing'. This could potentially have several meanings and belong to several word classes. It could be a noun – 'I put the *washing* in the basket'. It could be a verb – 'I'm *washing* my hair'. It could be an adjective – 'Put it in the *washing* machine' etc. In working out the proper function and therefore meaning of the word in each case we draw up our grammatical knowledge in combination with our contextual understanding and we do this by using the text around the word in question.

The other important use – the prediction of unfamiliar words - works in a similar way. We look at the words around the one we don't know and use our grammatical knowledge to predict what would make sense. So, as non-medical person I may be unsure of the meaning of the word 'rhinitis'. However, reading the word in the sentence 'The reaction in allergic rhinitis occurs in the eyes, nose and throat' I can work out some kind of sense. My grammatical knowledge helps me to work out the type of word it must be (a noun) and this combines with the contextual understanding I do have about medicine to help me work out the noun must relate to a medical condition.

This sounds very much like the 'psycholinguistic guessing game' that has been so strongly associated with Goodman (1967, 1982) and has been previously discussed and, to some extent, discredited. In this Goodman argued that children use their knowledge of spoken language and its constraints to help them decipher written text. When they meet a word that defeats them they use their understanding of the meaning of the rest of the sentence to help them work it out. The idea is that the reader scans the text and focuses on some of the graphic information and combines this with syntactic, semantic and phonological input from his own mind to make guesses or predictions about the nature of the text. The reader then 'samples' more of the text to confirm or reject the guesses. If predictions are confirmed the reading proceeds, if not the cycle is repeated.

Useful though some aspects of this model may be, as I have already discussed, a wide range of recent research shows that word processing plays a much more prominent role in skilled reading than Goodman's account gives credit for. However, the link between reading and 'making sense' *does* need further exploration. As I have tried to demonstrate with the example above, sense making does play a prominent role in processing text. The problem with Goodman's paradigm lies partly in the *type* of grammatical knowledge it draws on. According to Goodman, it seems that the fundamental force behind learning to read is the pupil's knowledge of *spoken language*. Perhaps the most dangerous implication of this is the belief that written language is a natural extension of spoken language and that learning to read is a natural outgrowth of learning to speak. As we have seen already, this notion is now widely discredited. Where does that leave the role of grammatical knowledge? One of

the reasons the psycho-linguistic guessing game was such a popular model is that it does fit with what we know we do ourselves as skilled readers when we encounter unfamiliar words. We read around the word and make an educated guess as to what would make sense.

Jessie Reid's (1993) contribution to this debate is very helpful in explaining the role that our syntactic awareness will play:

> We know that, by the age of around five, children have acquired not just a stock of word meanings but the basic grammar of their native language … they are not called on, when they start to learn to read, to do all this learning over again. Instead, the beginnings of literacy must be seen as joining on to – linking up with – the learning that has preceded them.
> (P.30)

This is not the same as claiming that written language is as natural as spoken language in its acquisition. Reid asserts that spoken language forms *a basis* that helps with the acquisition of literacy but that the process of becoming literate is actually very different from learning to talk. As Donaldson (1993) points out, spoken language arises spontaneously out of enterprises of shared interest, involving the expression of needs, thoughts and emotions, with a wealth of contextual cues (facial expressions, pointing, physical context etc.) to help with understanding. However we do not use written symbols in a similar spontaneous, 'face-to-face' contextualised way. In speaking we use the context provided by these elements in a way that is not possible with the written form. Consequently we need to conceive of the meaning making that

accompanies written language as different from that which accompanies spoken language. This does not however, mean that there is no relationship between the two modes and that this relationship is not brought to bear in the process of reading. As Reid (1993) points out, bridges need to be consciously built between the two.

The knowledge children already have from spoken language must be given the best chance to transfer. It must take an active role in helping them to make sense of this new form of language. In part the knowledge involves the conceptual understanding that language can take a different form and that these various visual forms have various important purposes and forms. As I noted in the earlier discussion of the nature of print, this is a key foundation. In addition to these conceptual connections children also need to be able to make the linguistic link. Here their knowledge developed initially in spoken language plays a key role. The child's implicit knowledge of syntax and sense making can be allowed to function as they try to 'crack the code' of the text. Clay (1969) has shown that that such transfer is possible – often demonstrated most clearly by the errors children make. Often these errors are an appropriate follow-on to the preceding syntax.

Perera (1993) claims that the type of text beginner readers use at this point in their development is crucial. She maintains that there is a case to be made for the kind of sentence patterns that children are likely to hear, and use in their own speech. Familiar language patterns will lead to more successful prediction, and therefore to a greater sense of achievement. It is important to reinforce here that written language is not just 'speech written down' – partly because of the very differences outlined above. In speech we have contextual cues that are not there in writing, so the written

form has to take much more account of this. The fact is that written language differs from speech in a multitude of ways. Perera has given an extensive account of the characteristic differences (Perera, 1983). She argues that texts for early readers need to be written in a way that takes account of natural speech patterns to allow the syntactic bridges to be built, but that children also need to be introduced to the characteristic structures and syntax of different forms of text. As Donaldson (1993) points out, there is a rich and complex 'language of books'. Particularly children who are not already familiar with stories need to be introduced to this and other genres. Texts must allow them to use grammatical knowledge from their own speech but also familiarise them with the language and structure of story and other genres so that they can begin to use grammatical knowledge in written forms as well as spoken language.

Donaldson's argument links with the significance that is given to the explicit teaching of grammar in the National Literacy Strategy. In recent educational history teachers have been uncertain as to how far to make the implicit knowledge of grammar developed initially through spoken language explicit. In particular there has been confusion about how much overt teaching of grammar should take place through the introduction and application of technical terminology. There is evidence that for some years the explicit use of grammatical terms was less evident, possibly due to a sense of dissatisfaction with the Latin model on which older approaches to grammar teaching were based (Keith, 1990). Research reviews (e.g. Wilkinson, 1971) had consistently failed to provide evidence that grammar teaching makes any difference to children's writing.

It could be argued that this lack of favour left a 'vacuum' for some years. For if, as I have argued above, children need to become familiar with the language and structure of different genres and if, as has also been argued, processing text in this way is not a 'natural process' then they will need to be explicitly helped to do this. As Beard (1999) points out:

> Contemporary approaches to grammar recognise the limitations of teaching which is concerned with the 'naming of parts'.... Instead, contemporary approaches tend to be concerned with how the use of different words and phrases in the various parts of sentences (subjects, verbs, objects and so on) add interest and reflect particular genre features.
>
> (P.49)

The strength of the approach promoted by the National Literacy Strategy is that it forges important links between reading and writing. It gives the technical vocabulary of grammar a status as a 'tool' – a means of being able to describe with precision how particular texts and text types are constructed in a particular way for a particular purpose and a particular audience. Children are then encouraged to transfer this understanding developed through reading into their own skill as a writer in that genre. The publication and promotion of 'Grammar for Writing' has further strengthened this approach. There is a wide evidence base to support the importance of these links. Recent curriculum development work in Australia has shown how reading-writing links can be productively forged in teaching non-fiction genres. The Australian work has been particularly inspired by that of Michael Halliday (1985), in which the term 'genre' has been used to connect the different forms which texts take with variations

in social purpose. Researchers such as Jim Martin (1989) have tried to find ways to help children to understand the language and structure of different forms by making them more explicit.

The model underpinning the approach to grammatical awareness taken by the National Literacy Strategy does have support from a range of studies. However, once again, the fact that this model was not necessarily explicit in the initial implementation (and that the evidence base [Beard, 1999] was presented afterwards) has left the way open for misinterpretation. Frater (2000) found that schools who were less successful in literacy achievements were teaching a fragmented curriculum where sentence level work was taught separately from text level work, undermining the need to develop concepts and skills about grammar in authentic contexts. Anderson, Digings and Urquhart (2000) conducted a small-scale survey to monitor teachers' views of the Literacy Hour in its first year. One of their findings was a general concern for the fragmentation of the English curriculum - an outcome running counter to the need for grammar to be taught within coherent contexts:

> Teachers commented that there was little opportunity to provide coherence to children's literacy learning or time to reflect on ideas and reinforce teaching points.
> (P.115)

Fisher, Lewis and Davis (2000) found similar trends in a study in which they found that there is a link between children's performance, the ways writing is assessed and the methods teachers use to interpret the writing component of the NLS. Where

teachers made full use of shared and guided session to model and scaffold children's writing development combining sentence level work with text level, children's writing showed good progress. Where teaching was fragmented, with little individual support for children, progress was hampered.

Beard (2000) in discussing the National Literacy Strategy two years into its implementation, notes that there are still issues to be addressed in the teaching of writing and attributes this to a lack of understanding of the potential of guided writing and specifically to the fact that:

> The work of Hillocks is not well known. The kinds of genre specific syntactic manipulation which he discusses are in marked contrast to the more established presentational and process approaches.
>
> (P.251)

The approach advocated by Hillocks (1986, 1995) involves using text level criteria alongside syntactical considerations - again a combining approach that does not appear to have been taken up by all teachers.

Contextual Understanding

Contextual understanding can be closely related to grammatical knowledge in that there is considerable overlap. Using contextual understanding requires the reading to take place within an authentic context, with the fullest possible knowledge of that context. This, like phonological awareness, is an area that is not only very broad ranging, but has also come to represent a polarised position. Knowledge and use of

context forms the lynchpin of the Whole Language Approach, and like phonics, has sometimes been talked about as the key to reading. Interestingly, in recent years there has been a recognition that although context is very important in helping beginning readers initially, in later stages of fluency it has less importance in terms of decoding. At these stages, although context counts for a great deal in terms of inference and deduction it is used in the interpretation rather than the identification of words (Oakhill, 1993).

Contextual knowledge includes a number of categories:

- knowledge of the conventions of the genre (e.g. story language, plot structure)

- knowledge about language patterns and presentational devices

- specific knowledge of the text (e.g. the story-line, or the type of recipe)

- knowledge about picture cues

- background knowledge related to the semantics of the text

All of these types of knowledge provide sources of information from which children can draw in order to make predictions or to check against. Indeed, such predictions form the basis of Ken Goodman's (1985) description of how fluent readers operate, in which it is assumed that they rely on a sparse sampling of words coupled with a heavy use of context. Perfetti (1995) and others argue strongly against this description of fluent reading. Although they would agree that skilled readers use context, make inferences and monitor their comprehension, they state that there is clear evidence to show that they do read most words and that phonology has an important role to play in this.

Eye movement research (e.g. Carver, 1990; Just and Carpenter 1987) seems to indicate that skilled readers do not in fact use contextual constraints to reduce the amount of information they sample from each page, but process each word fairly systematically, only reading ahead as far as the next word. According to Adams (1993):

the single immutable and non-optional fact about skilful reading is that it involves relatively complete processing of the individual letters of print.
(P. 204)

Her claim is not that the use of context to monitor the suitability of words is unimportant, but rather that it is not enough.

Stanovich and Stanovich (1999) claim that studies have failed to find that skilled readers are any more reliant on context than poorer readers and in fact that the role of background knowledge and contextual information actually lessens as word recognition capacity increases. In other words, the system of checks and balances in which context figures highly is not so necessary as word recognition and processing skills become more highly developed.

Oakhill (1993) claims that the whole language emphasis on contextual knowledge can be misdirected at the beginning stages of reading and that there may be too much information for readers to hold if they are to attend to too many features at once. She

claims that decoding must be emphasised first, so that comprehension skills can be developed later.

> Until children's word recognition skills are relatively fast and automatic, they may not be able to give sufficient attention to comprehension.
>
> (P.73)

It seems clear that children cannot be asked to read ahead or read back if they are not already able to decode to some extent.

None of these points should be seen as undermining the role that contextual understanding does play. One only has to observe the child who is unable to read a word on a flash card but recognises the same word in the context of a story, or witness the confusion that can be caused by an inappropriate picture accompanying some text. As with phonological awareness, the main debate is about the emphasis, or reliance, that can be placed on such knowledge and at what stage in the development of reading it is most important.

For children beginning to read the role of context can be seen as mainly a supportive one. This means that contextual understanding will help children to make progress with a text that would be inaccessible if they had to depend on word level understanding alone. The main aspect they need to work on explicitly in order to become more fluent and less dependent on contextual understanding and grammatical knowledge is their word level understanding. Contextual (text level) understanding helps to 'shore them up' in the interim. The background knowledge they bring to bear

on a text will be crucial to this. This is why the National Literacy Strategy places great emphasis on stories with familiar settings in the early stages. The area of contextual understanding related to text structure is also important. One of the reasons that the story genre is used so much in early reading is that stories have such a recognisable, predictable and motivating structure. As Perera (1993) points out:

> Typically, stories are written in the past tense and include characters, a setting, an action or event or situation that motivates what follows, and a satisfying conclusion. Such a structure encourages the reader to keep going because it holds out the promise that the effort of reading will be rewarded.
> (P.96)

So the motivating, predictable 'hooks' provided by a strong story structure, combined with a context that is familiar and meaningful to the young reader can provide the ideal context for beginning to read.

It is important to note that text structures in other genres are clearly quite different. In particular the reading and writing of information texts is likely to involve different understandings and strategies to those used dealing in narrative texts. Again, curriculum development work on genre theory in Australia has proved influential in this area (Martin, 1989; Cope and Kalantzis, 1993). In this approach the distinctive features of non-fiction and other genres are used firstly to raise awareness about their structures. This will include noticing the very different ways they are organised and the differing purposes and ways they should be read. For example, children need to be helped to understand the way non-chronological reports have headings, sub-headings,

indexes and contents etc. to help the reader identify relevant information quickly. This requires an understanding that texts of this nature are very different from narrative – they are not usually read from cover to cover, and they are often used to answer very particular needs.

This approach is also strongly influenced by a great deal of work in the United Kingdom, notably the EXEL project at Exeter University (Wray and Lewis, 1997). This project draws together a range of skills and strategies to form the EXIT model ('Extending Interactions With Text'), which maps several stages through from activating prior knowledge to interacting with texts to the eventual communication of information to others. The latter stages will often involve the use of 'writing frames' which provide prompts and connectives to help children 'shape' the text they are trying to produce. These approaches are strongly reflected in the National Literacy Strategy, which has a strand running through its termly objectives, which focuses on non-fiction and specifically covers these processes and areas.

All of these examples of teaching approaches help children to construct a mental model of what the text describes. This process is at the heart of contextual understanding. As I have already argued, at the beginning of learning to read this provides a support for the development of crucial word-level skills. As readers become fluent the emphasis in contextual understanding shifts. Jane Oakhill (1993) has extensively researched children's reading comprehension and has found that for children to understand texts fully they need to integrate the meanings of sentences and paragraphs with each other. To do so children need to go beyond the decoding of each of the words, or even the working out of the sense of each of the sentences, to being

able to build a mental image of what is being communicated by the text as a whole. This will also involve going beyond what is explicitly stated to being able to make inferences – to work out what is implied.

Oakhill claims that in order to read effectively children need to develop the ability to monitor their own comprehension, to understand the main idea in a text and to be able to gauge the relative importance of information in it. Oakhill reports that there is a significant proportion of children who are able to process text word by word and sentence by sentence but still fail to comprehend the text as a whole. There is evidence that such readers fail to make use of comprehension monitoring strategies – they have lost their grasp of the mental map of the text as a whole. Providing such a map is precisely the role of contextual understanding. As readers become more fluent in word-level decoding they need to develop contextual understanding in order to gain higher order understanding of the text.

The importance of teaching contextual understanding in tandem with word level understanding is reflected in the structure of the termly objectives of the National Literacy Strategy. Text level learning objectives appear alongside word level learning objectives through from reception to the end of year six. The differing emphases at different stages of development are also represented. In the early stages the text level (contextual understanding) emphases are on a basic understanding of text structures and characteristics, to be taught alongside a heavy emphasis on a great many word level objectives. In the later stages the text level objectives reflect the need to help children to construct Oakhill's mental model in more complex and sophisticated ways, with an emphasis on higher order reading skills.

Teaching Approaches: The National Literacy Strategy and Finding the Right Balance

The differing stances that have been taken in apparently conflicting theories in the reading wars have made it difficult for teachers, let alone inexperienced student teachers, to pin down practical implications for teaching. As Clay (1991) states:

> Sometimes theorists ask me to talk about research which is leading teaching. They seem to assume that theorists pose questions, find answers, and then recommend things to do in classrooms. This is not the case. Researchers rarely ask the questions which teachers want answered.
>
> (P.206)

Although most theories seek to promote a particular emphasis, often associated with some kind of general methodology, it has not always been easy to relate the arguments put forward to classroom practice. It could be argued that this is part of the rationale underlying the National Literacy Strategy. The Implementation of the National Literacy Strategy (DfEE, 1997) states:

> While this often shallow debate has raged, research and the understanding of 'best practice' have moved on. The chief strategic task is to ensure that primary teachers and schools are well-informed about best practice and have the knowledge and skills to act upon it'
>
> (P.14)

The argument is that we do now have a much clearer understanding of what effective literacy teaching looks like and that the practical implications from research and inspection evidence are evident. As Michael Barber (1998) maintained at the time of the implementation of the National Literacy Strategy:

> It would be negligent not to ensure that all teachers were informed of, and trained in, teaching approaches which have been demonstrated as effective by research'
>
> (P.36)

The four main principles underpinning the notions of 'best practice' as stated in the National Literacy Strategy are:

♦ ensuring a good match between curriculum, teaching and the learners' varied needs;

♦ good management of time, involving maximising learning time and pupils' levels of time on task in classrooms, and minimising of time on administration or control;

♦ high levels of teacher 'higher order' interaction with classes, high frequency of questioning (especially with challenge) and frequent provision of feedback;

♦ structured classrooms, with a limited range of activities being pursued at any one time and a limited range of lesson goals in any session.

Roger Beard, (1999) draws on these and principles taken from a wide range of other studies in presenting supporting evidence for the National Literacy Strategy. It may

be worth briefly noting that this review was commissioned after the National Literacy Strategy was implemented, which has led some to make accusations of post-hoc justification. Nonetheless, the evidence Beard cites does appear to present a solid base for many aspects of the National Literacy Strategy. However, I have already attempted to highlight some areas that are more contentious or where the evidence that is presented is less strong and I will attempt to do the same at this point in discussing the National Literacy Strategy model as a whole.
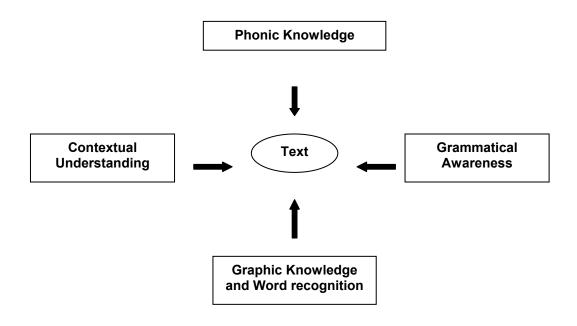
It may be useful to examine two main ways in which the above principles are put into practice in the National Literacy Strategy. Firstly I will look at the content and organisation of the objectives and secondly I will consider the structure and sequence of the teaching approach.

The Content and Organisation of the Objectives in the National Literacy Strategy

The highly detailed framework of objectives is supposed to provide schools with a means of shifting the emphasis in literacy teaching from the 'what' to the 'how'. The polarisation of the views expressed in the past has run a danger of presenting an 'all or nothing' model of literacy – typically all whole language or all phonics. It can appear that the explicit teaching of decoding skills and a belief that reading must take place within a whole language experience are mutually exclusive concepts. In fact, much of what is advocated by the proponents of whole language could be perfectly acceptable to those who also advocate more explicit teaching of specific areas of knowledge. The difference seems to be that they would say that such teaching is a necessary and focused component of the whole language experience.

It could be argued that the organisation of objectives presented by the National Literacy Strategy and the model of literacy that underpins it attempt to bring together what were once termed the top-down and bottom-up models of literacy in just the ways advocated. The organising structure makes use of the previously mentioned three level sub-divisions of word, sentence and text level understanding. Word level incorporates phonic knowledge, graphic knowledge and word recognition, while sentence level includes grammatical knowledge and punctuation, and text level comprises contextual understanding and the skills of comprehension and composition. Although these appear as separate columns of objectives, the model is based on the premise that contextual, grammatical, visual and phonological sources of information are *simultaneously interactive* − feeding into and from each other. This is captured diagrammatically by the 'Searchlights' representation. See Figure 2i below:

Figure 2.i The Searchlights Model in the National Literacy Strategy (1998)

This type of interactive and interdependent model is particularly associated with the work of Rumelhart and McClelland (1986) and Adams and Bruck, (1993). In these models attempts have been made to bring together bottom up and top down approaches into one interactive model. The term 'searchlights' was first used by John Stannard, (1997) and is based on an early childhood war-time memory of seeing the way searchlights picked out an enemy aircraft by throwing lights from several angles. It is a helpful representation of the way that the areas of knowledge that have been discussed are seen as interacting with each other. In order either to understand a text fully in reading or to create the fullest meaning in writing, a reader or writer will combine areas of knowledge. This involves throwing light on the text from a range of different angles. As has already been discussed, there is a wide range of evidence to show that readers combine areas of knowledge in a process that involves balances and checks for sense and whole text comprehension as well as explicit decoding word-level strategies. Although this model has been criticised for being 'part of an eclectic approach, which comprises mutually contradictory strategies' (Reading Reform, 2001), such a criticism seems to belong to the all or nothing school of thought, which is now largely discredited.

It could be argued that the Searchlights model, while clearly at the heart of the National Literacy Strategy, has not been adequately articulated in the training that accompanied its implementation. The emphasis in these materials was largely about *what* to do rather than *why*. As Stainthorp (2000) claims:

At the moment, the training for the NLS tends to be on the level of tips for teachers, even if they are fairly sophisticated tips … There is no presentation

of a theoretical model of the processes involved in reading and spelling that may have guided the development of the framework.

(P.305)

Stainthorp may have identified a missed opportunity. As I argue in Chapter Four, a firm grasp of the underlying model of the strategy (the *why*) is one of the key factors in being able to facilitate the *what*. Frater (2000) compared (from a survey of 32 primary schools) the practice of schools where achievements in literacy are high with those where they are less secure. He found that in the effective schools teachers drew upon the framework without being unduly distracted by the need to follow it too literally:

Taking note of its classified element, their teachers constantly made connections between text level work and word and sentence level study.

(P.109)

Paradoxically the schools who were struggling with literacy attainment were found to be hampered by an over-literal interpretation of the objectives in the framework as a chronological series of plans, which led to a fragmentation of the curriculum. Frater claims that these teachers were using the framework as if it were a plan, whereas it should form a *basis from which to plan*. To use the basis effectively, teachers need to have further understanding of the model underpinning it. To try and use it as a plan as it stands is to omit a vital step – the need to foreground the effective and meaningful use of language. The analysis and rehearsal of the component skills should *service* the rich language experiences teachers need to plan for their pupils. The former is only

going to be effective in as much as it contributes to the latter. If teachers are not helped to develop an understanding of the model that underpins the objectives they are likely to seek to cover them all conscientiously and systematically, but in a way that fragments rather than synthesises.
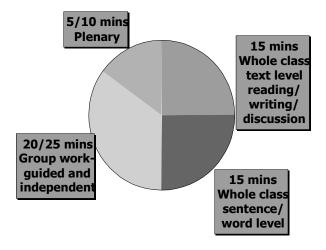
The need to avoid fragmentation links very clearly with the work on effective teachers of literacy by Medwell, Wray, Poulson, and Fox, (1998) more fully discussed in Chapter Four. They found that the effective teachers (in contrast to the control group) embedded their teaching of technical aspects of literacy in rich and meaningful contexts with a wider application. Ironically, as Frater's (2000) work shows, a model of literacy that is based on a view of language that is interactive and connectionist, if not fully understood can lead to an interpretation that is fragmented and atomised. It could be argued that this fragmentation is likely to happen if the technical subject knowledge underpinning effective literacy learning experiences is abstracted and isolated from the rich contexts required to give it its fullest meaning. This analysis appears to be supported by the Medwell, Wray, Poulson, and Fox, (1998) study. For example, they found that the teachers who were effective in the classroom struggled with subject knowledge when it was abstracted from the contexts in which it was applied. Although their teaching demonstrated that they had a grasp of key concepts and skills, when asked to identify or apply the same concepts and skills away from their teaching they floundered. The technical subject knowledge and terminology involved in the National Literacy Strategy may have been so initially overwhelming to some teachers it became the main focus of their attention, at the expense of the wider contexts and relationships to which it should relate.

The Structure and Sequence of Teaching in the National Literacy Strategy

The way in which objectives are organised into the sub-divisions of word, sentence and text level understanding relates also to the way the teaching is structured and sequenced. The National Literacy Strategy attempts to combine this underpinning model of literacy with a specified teaching structure that is designed to ensure each area is covered systematically, both as a separate focus and in combination. The 'Literacy Hour' advocates a specified amount of teaching time to be focused on different areas and also promotes teaching methods (shared and guided reading and writing) designed to bring them together.

See figure 2ii below:

Figure 2 ii The Structure and Sequence of the Literacy Hour (1998)

The overall structure in part draws on research into school effectiveness (Schereens, 1992) which identifies two characteristics of school effectiveness as being:

1. Structured teaching with a clear sequence and divided into manageable units;
2. Effective learning time where use of teacher time is maximised (often through the effective use of whole class teaching).

Other key ideas underpinning the structure of the National Literacy Strategy find support from the work of Mortimore (1988) on school improvement. These include: the need for structured lessons that still have scope for pupil independence, the importance of intellectually challenging teaching, limited focus within lessons, and maximum communication between teachers and pupils.

The structure of whole class teaching (involving a focus on more than one area of the 'searchlights') followed by a balance of guided and independent work and concluded by a plenary has the potential to be linked with the socio-constructivist cultural models of learning examined in Chapter Three. Certainly a crude notion of the expert scaffolding the learner through the Zone of Proximal Development (to be discussed in chapter three) on a decreasing scale of teaching intensity fits with the teaching sequence promoted by the National Literacy Strategy. It is important, however, to note that this notion of scaffolding is not made explicit in the initial training (although it could be argued that later training material has tried to do this). This model has similarities with many others. Palinscar and Brown's model of teaching (Palinscar and Brown, 1984) describes a teaching sequence that goes through several stages from demonstration to joint activity to supported activity to independent activity. This

sequence can be linked to the notions of shared to guided to independent work promoted by the National Literacy Strategy. There are other similar examples. Callaghan and Rothery (1988) outline three stages for writing – modelling, joint construction and independent construction. Medwell and Wray's study into the characteristics of effective literacy teachers (1998) found that the effective teachers tended to follow a similar structure. Typically this would include a high level of modelling and other teacher-intensive forms of exposition followed up by high level dialogue and a mixture of group and individual work with regular review built in.

Notions about the social and situated nature of learning also support the model. The development of shared understandings and the joint construction of knowledge in supported contexts should be facilitated by a teaching approach that builds in large and small group work as well as paired and individual work. The idea that real texts and their associated purposes and audiences (both to be read and to be written) provide the context for learning should also fit with what we know about the situated nature of learning. As I discuss in Chapter Three, children are much more likely to transfer their learning if they develop understandings within contexts that meaningfully connect concepts and ideas. This analysis also fits with Medwell *et al*. study (1998), where effective teachers were found to be much more likely to embed their teaching in a wider context and to make connections where possible.

Again, it may be worth noting that the relationship between the structure and sequence of the National Literacy Strategy and these models of learning has not necessarily been made as explicit as it could have been for teachers. Training has tended to present the 'what and how' without very much emphasis on the 'why'. This

can lead to a similar fragmentation in terms of time and sequence as I discussed earlier in relation to learning objectives. For example Frater (2000) found that schools that were making little progress in literacy had fallen into this trap.

> The integrated approach I have just described is the exact opposite of what prevails in those primary schools where writing has made the least progress; there, in effect, the practice of written composition has been given such time as remains after concepts and skills, handled discreetly, have been delivered.
> (P.110)

With such an initial emphasis being put on the literacy hour 'clock' (Figure 2ii) that prescribes the structure and sequence of the Literacy Hour, some teachers have been driven by the need to fit in the discreet elements at the expense of the overall quality and cohesion of the learning experience for pupils. This danger has, to some extent, been highlighted by the OISE/UT (2001) evaluation of the implementation of the National Literacy Strategy. While acknowledging its many strengths and successes, this claims:

> The challenge is to increase the number of teachers who are expert in using the strategies for making connections for each pupil that they teach. Such expertise entails modifying the teaching approach, based on knowledge of pupils' understanding of the material and how pupils learn.
> (P. xi)

In conducting this evaluation, its authors found a number of teachers, who did not fully understand the underlying principles of the strategies, focused on the easily accessible features such as lesson timing and sequencing. They claim that there is a danger that:

> if teachers are not knowledgeable about the subjects and the pedagogy that enhances and accelerates learning, they are likely to adapt the strategies in inappropriate and ineffective ways
>
> (P.60)

This is also supported by OFSTED's report on the teaching of English (1999-2000), which claims:

> The most effective teaching seen on inspections throughout the primary years is characterised by its combination of clear objectives from the Framework, often to develop specific literacy skills, and the ability of knowledgeable teachers to foster pupils' interest in the words and ideas in the texts chosen. More teaching needs to achieve this combination consistently.
>
> (P.2)

Once again, effective teaching of this nature needs an understanding of the underpinning model on which it is based.

In this chapter I have attempted to examine some of the main issues that have been raised in relation to current and recent debates about the teaching of literacy, both

within the organising framework that has been used, and where possible within the wider context of literacy teaching in general. The study will seek to identify with more precision how the areas of knowledge emphasised by different models relate to the nature of interactions in the classroom. In turn, these will be examined in relation to student teachers and their perceptions about their teaching and their roles as literacy teachers. The central area to be addressed is the relationship between the personal, school, local and national contexts and the developing knowledge and identity of student teachers as teachers of English.

CHAPTER THREE

A PEDAGOGICAL FRAMEWORK

For Supporting Children's Learning

Introduction

In the teaching of literacy the relationship between theory and practice is often the source of tension, with differing notions of the role of theoretical and practical activity competing in a fraught and highly political context. For student teachers, in particular, literacy teaching is a very difficult area, and their difficulties are often compounded by their own desperation for quick and easy ideas for practical activities that will make them feel confident and purposeful in the classroom. The need for solutions makes the role of Higher Education Institutions problematic because effective literacy teaching (or indeed any teaching) cannot be captured simply by an idea for an activity. What makes the activity effective as a learning experience is the way the teacher is able to guide and support the learner through a cycle of learning, drawing on a range of types of knowledge to do this. This chapter will attempt to construct a working pedagogical framework to describe ways of supporting the learning process of young children in the early stages of becoming literate. Chapter Four will do the same for the learning process of student teachers in becoming effective literacy teachers.

A useful starting point for examining the learning of young children is to look at three separately defined but inextricably linked areas: *Knowledge*: the nature of the knowledge, *Development*: how children develop and construct knowledge and *Instruction*: the role of third parties in helping them to do this.

Knowledge

Three highly influential figures in twentieth century educational thinking, Jean Piaget (e.g. 1967), Jerome Bruner (e.g.1966) and Lev Vygotsky (e.g.1962) share the view that learners are not passive receivers of information, but that they actively construct knowledge as a result of their encounters with the world. While they share with each other an emphasis on activity as a basis for learning and the development of thinking, as we shall see below, Bruner and Vygotsky view the path of development quite differently to Piaget. Both Bruner and Vygotsky ascribe much more influence to the role of culture through processes of communication, social interaction and instruction in determining how children develop.

Bruner's views of knowledge construction rest on the central proposition that domains of knowledge are made not found. Knowledge is not seen as an objective, external reality but as an inter-subjective construction, which happens between individuals and the cultures within which they operate. Bruner uses the term 'inside-out' to refer to theories of mind which emphasise information processing: the inscription, sorting, storing, collation and retrieval of finite unambiguous information about the world, and assigns them with limited applicability to the field of education. He assigns the term 'outside-in' to theories that give indications as to the external conditions needed to make it possible for the mind to operate effectively. He contrasts computational views of mind with cultural approaches to the nature of mind and aligns himself firmly with the latter. The former is 'inside-out', taking knowledge as a 'given', already settled in relation to some 'pre-existing, rule-bound code that maps onto states of the world' (Bruner, 1996).

The cultural approach takes its inspiration from the idea that mind could not exist as it is without culture. In this, reality is represented by a symbolism which is shared by members of a community which is developed through its generations. Here Bruner is aligning himself with those who have attempted to overcome the Cartesian dualism that has driven enlightenment notions of the separation of mind and body.

An understanding of the relationship between the physical world of the body and the mental world of the mind is fundamental to thinking about knowledge. In postulating a theory in which knowledge is viewed as a construction, Bruner appears to be in danger of falling into the Cartesian trap. If there is not an objective, causal relationship between the mind and external reality, it is difficult to see how a theory of education can have any universal value, for our minds would then be seen as isolated entities, with only a tentative, subjective relationship to anything else. Kripke (1980) makes a useful contribution to the debate when he makes a distinction between identifying objects with their a priori, contingent reference (that is dependant on its physical properties) and the necessary, analytical identity we ascribe it through mental association. McGinn (1982) develops this further when he describes our 'understanding' of an object, in which brain processes identify it within a structure built from previous experiences, as its mental properties. Thus, the physical, 'factual' world has two types of property; mental and physical. So our knowledge of the world cannot be described merely in terms of 'given' factual reality, but needs reference to the mental processes we bring to our understanding of it. McGinn conceives of the mind not as a 'passive mirror of the world' but as a 'force that shapes the way the world presents itself to us' (McGinn, 1982 P.127). The way we perceive the world

can be considered to be made up of a joint contribution from what is objectively present in the world and our own projection of it. It is an important philosophical task to determine where one stops and the other starts, but acknowledging the validity of both opens up the possibility of shared associations. Because these have their basis in both the physical world, it can be argued that their mental properties are experienced in a similar way between people who have had the same cultural experiences. This leads to the possibility of what Bruner describes as 'inter-subjectivity' - mental processes, which have sufficient commonality to describe something that is experienced in a regular, and therefore mutually predictable way.

In one sense Bruner's understanding of knowledge is super-organic and can be described as a version of Cartesian Dualism in that the relationship between the physical world and our knowledge of it is not fully explained. Bruner's answer to this is his emphasis on the notion of 'inter-subjectivity', which he claims prevents 'an inevitable slide into relativism.' He says that reality is represented in symbolism which shapes the minds of individuals as they make meaning from particular events, in particular settings on particular occasions. Culturalism cannot rule out subjectivity and its role in the construction of knowledge in the individual but is concerned with the way in which humans come to know each other's minds, which he refers to as a 'science of the subjective' or 'cultural psychology'. The cultural approach taken by Bruner concentrates on how individuals construct 'realities' and meanings that adapt them to the cultural system in which they are operating.

The relationship between the individual and the social context in which s/he operates is central to this way of thinking about knowledge. As long ago as 1921 the scientific

psychologist Wilhelm Wundt (1921) claimed that in addition to the elementary sensations which arise in the consciousness there are 'higher psychological functions' which extend beyond individual consciousness. These have a cultural reference, which cannot be explained in terms of the individual alone. He cites *language* as an example of this, claiming that:

> A language can never be created by an individual. True, individuals have invented Esperanto and other artificial languages. Unless, however, language had already existed, these inventions would have been impossible.
>
> (P.3)

Language is seen as a culturally constructed phenomenon that requires a social context that goes beyond individuals to a notion of shared activity and shared consciousness. The whole is bigger than the sum of its individual parts – without the reality of the shared nature of certain experiences, they could not exist at all. This is very like Bruner's notion of inter-subjectivity. The argument is that cognition and consciousness do not just involve phenomena that occur in the head but require reference to the broader social context in which the individual consciousness exists.

In more recent times contemporary neuroscientists (e.g. Edelman, 1987) have claimed that which parts of the brain are engaged in what way in experiencing a particular event depends critically on the cultural constitution of that event. How we conceive an event (independent of the physical, objective components of that event) will impact on how our brain functions respond to it. If, for example we have a culturally

derived aversion to a particular practice we will respond very differently than if it is something that is generally approved.

The undetermined nature of the relationship between individual consciousness and the physical world may still, with this view, seem in danger of sliding into the Cartesian problem of relativism. However, the cultural historical approach to cognition (as outlined by Cole and Engestrom, 1993) utilises the notion of 'distributed cognition' and avoids this trap. This can be seen as related to and strengthening Bruner's conception of inter-subjectivity. In this model great emphasis is placed on the central importance of mediation. In this a distinction is made between 'natural' (unmediated) functions which are also demonstrated by animals and 'cultural' (mediated) functions where interactions between subject and object are mediated by an auxiliary means. The instruments through which mediation occurs are called 'tools' and include a wide range of entities including people and language as well as material objects. These will be discussed more fully under the section on *instruction* later in this chapter. The important aspect of the model at this point is the notion that cognition or knowledge can be distributed among people. Knowledge construction can occur a through mediated process between people. This analysis supports the case for a model of learning that primarily involves sense-making by engagement with the world at the same time as being shaped by it in a way that is socially and culturally driven. This view of mind in the world means constructing knowledge involves a process of interpretation. In such a process meaning is ascribed to events and objects in a way in which the mind of the individual actively engages with both physical, external reality and the social and cultural context in which it is found. Through engagement with the world culturally-based schema are formed (D'Andrade, 1981) (see Chapter Five for

further discussion of this). So it can be argued that mind is socially formed, but it is an active outward-looking mind and not merely socially determined. The interpreting, engaged mind in the world acquires a 'generality of knowing' (Greeno, 1997 – see Chapter Four for further discussion) which is brought to bear as we enter new contexts for action.

Working with this view of engaged mind we can see that knowledge is constructed in a creative process; a concept emerges and takes shape in the course of complex operations aimed at the solution of a problem. Learning is not something which happens to individuals as passive receptors, but something in which they take an active part by the way in which they are helped to handle incoming information and put it to use. Bruner (1957) explained knowledge construction as involving the identification of patterns and regularities and the ability to relate ideas to each other in a way that helps give meaning to new experience.

Knowledge then is possibly more usefully considered in terms of patterns, frameworks and constructions involving relationships rather than as 'chunks' or totally separate objective entities. This is particularly important in the effective teaching of literacy. The concepts and skills discussed in Chapter Two are so dependent on each other that they cannot be truly regarded as separate entities that stand alone without reference to the broader framework to which they belong. As I claimed in Chapter Two, graphic knowledge is so closely related to phonic knowledge it is almost like 'the other side of the same coin'. Neither of these concepts can themselves be fully understood without reference to the broader framework of reading and writing to which they contribute. Knowledge construction involves the

identification of these patterns and regularities and the ability to relate ideas to each other in a way that helps give meaning to new experience. There is a connection here to the notion of structure and a fostering of the ability to relate what Bruner (1966) described as fundamental principles to newly encountered experiences. The 'fundamental ideas' of a subject are defined as those ideas that have the greatest breadth of applicability to new problems.

It follows from this analysis that learning involves the search for such pattern, regularity and predictability. The expert's knowledge allows her/him to perceive organisation and structure where the novice's perception is piecemeal and fragmented. This means that the expert can appreciate what is currently happening in a wider context, unlike the novice who is likely to be fully engaged in monitoring and making sense of immediate events. When an expert helps a novice s/he is providing conditions in which the novice can begin to perceive regularities and structure in his experience, which if left alone would have been overwhelmed by the uncertainty of what to attend to or what to do. Thus to be effective in their literacy teaching student teachers need to understand the broader picture of the conceptual framework within which they are helping children to operate. By helping the novice to structure his actions, the expert is helping her/him to perform things s/he could not do alone until such a time as the demands of the task become familiar enough to allow independence.

What is required from the 'expert' in terms of a knowledge base? Greeno (Greeno, 1997) has found a useful way of summarising the challenges presented by the participatory emphases of a socio-cultural view of learning to knowledge transfer. He

argues that transfer depends on the extent to which a 'generality of knowing' is an outcome of participation (see more extensive discussion of this in Chapter Four). The teacher needs to be able to structure the participation of the pupils so that they begin to perceive the organisation of the conceptual framework that will enable them to generalise learning from one situation to another.

Development

The point of radical disagreement between Piaget, on the one hand, and Vygotsky and Bruner on the other, lies in relation to the notion of the primacy of individual development. Piaget's (1955) theory of learning leads him to the claim that a child's ability to understand what is said to her/him depends upon her/his stage of intellectual development. The claim is that all children develop through the same sequence of stages before achieving mature, rational thought. Development, for Piaget, is not simply the continuous accumulation of knowledge learned step by step. Instead, it involves a number of intellectual 'comings of age' at specific junctures of a life cycle. Certain kinds of thinking are therefore biologically impossible at certain stages of development. A major implication of this theory is that effects and effectiveness of teaching are fundamentally constrained by the structure of the child's intelligence; teaching can only influence the course of intellectual development if the child is able to assimilate what is said and done. Assimilation, in turn, is constrained by the child's stage of development.

The importance of development certainly appears, on initial inspection, to be given some credence by research about how children become literate. We have already seen, in the previous chapter, that there are clearly identifiable stages children go through

in, for example, developing a sight vocabulary (Ehri, 1999), developing concepts about writing (Ferreiro and Teberosky, 1983), developing phonological awareness (Goswami, 1995) and learning how to spell conventionally (Gentry, 1988). However, a closer examination of the developing concepts which underpin these stages reveal they are not so much dependant on biological maturity as on social, interactive *experience* with the world and with more expert operators within it. So the rate of acquisition of a sight vocabulary is related to the level of phonological awareness which is directly related to the experiences with sounds, words and letters a child has been exposed to, both formally and informally.

These areas of literacy development point more obviously to the theories of learning developed by Vygotsky and Bruner. While there are stages of development which constrain how and at what rate a child will learn, development does not just take place as uncontrollable, scientific phenomenon like night following day. Children cannot understand many things that adults say, not because they are not 'biologically ready' but because they lack the experience that has provided the necessary intellectual structures to make sense of what they mean. Children understand those things that are common features of their social experience. Learning how to structure ideas that are unfamiliar are not natural achievements which occur with time, but forms of self-regulation which are dependant on relevant experiences. Take the child who has had a rich experience of patterns of sound, with an adult who understands (and therefore articulates in some form) how these will relate to a later ability to relate patterns of sound to graphic patterns. She will be able to reach the stage of internalising how letters relate to sounds with much greater ease than one who has not had these

experiences. The child will be able to self-regulate her/his understanding by drawing on previous experience to make sense of the new concepts that relate to it.

In literacy teaching it is important that teachers understand the usual stages through which children pass as they learn to be literate. They need to be aware of key indicators for these stages and to be able to link these to appropriate teaching emphases that would normally be associated with effective teaching at each stage. This is not, however, to achieve a neo-Piagetian 'stalling' while they await the next 'coming of age' but so that they can build up the conceptual frameworks and help pupils to see the necessary patterns and regularities so that the next stage can be achieved.

Instruction

If development depends on a child's practical grasp of the context in which s/he has to reason, according to Bruner (1966), an effective teacher will support development by deepening their power to abstract from their practical experience, at the stage they have reached. Abstract thinking should be extracted from material actions. Teaching that tries to teach only how to manipulate abstract procedures without first establishing the deep connections between such procedures and the activities involved in solving practical, concrete problems is bound to fail. Bruner sees social interaction and the role of language and instruction as central to the formation of mind. Interactions between the young learner and her/his teacher in which both co-operate in the development of mutual understanding are pivotal to development and learning. Bruner argues that instruction is a necessary requirement if a child's spontaneous activities are to be transformed into rational, symbolic thought processes.

For Bruner, the processes that underlie intelligent and adaptive thinking are not invented by the child but communicated from the more proficient to the less experienced in both direct and subtler ways. In an early paper, 'Going beyond the information given' (Bruner, 1957), he explores the nature of creative thinking and originality in terms of our ability not only to acquire information but to 'go beyond it' by constructing rules and relationships. Learning involves the search for such pattern, regularity and predictability. Instruction serves to assist children in the formation and discovery of such patterns and rules. By helping the novice to structure his actions, the expert is helping her/him to perform things s/he could not do alone until such a time as the demands of the task become familiar enough to allow independence. Complex tasks can be broken down into manageable smaller problems so that the novice can detect patterns and regularities that could not be discovered alone.

The illustration taken from the early stages of phonological awareness is an example of how a more expert adult can scaffold the practical experiences of the learner. In supporting a young child's ability to begin to discriminate sound patterns as a precursor to linking them with letters and graphic patterns, the adult will deliberately find ways of exaggerating the natural patterns of language through the use of songs and rhymes. By concentrating on the initial and final sounds of words, as described in Chapter Two, (Goswami, 1995), the task is broken down sufficiently so that the child can begin to see patterns and eventually make links which would otherwise have been very difficult.

Bruner coined the pedagogical proverb 'Any subject can be taught to any child at any age in some form that is honest.' (Bruner, 1996). This assertion relates to the notion of structure and a fostering of the ability to relate fundamental principles to newly encountered experiences (Bruner, 1966). He claims that the ultimate aim of teaching a subject is to help children understand the basic principles that help define it, give it identity and allow other things to be related to it meaningfully. The 'fundamental ideas' of a subject are defined as those ideas that have the greatest breadth of applicability to new problems. An effective teacher will have an excellent grasp of these fundamental concepts and will be able to break down tasks in ways that will make them achievable while still remaining consistent with the core ideas that underpin them. This means that core ideas are developed in nucleus as early as possible and are returned to with ever increasing complexity and sophistication in a 'spiral curriculum' as children's experience and understanding makes them ready for it.

The example of developing phonological awareness can again be used to illustrate how this works. It could be argued that a fundamental concept involved in using language effectively is an understanding of how patterns of language relate to form. It can be argued that an understanding of how audience, context and purpose impact on form is a structuring principle, which underpins all areas of language and literacy. This applies equally to being able to analyse how two very similar story lines (for example 'Pride and Prejudice' and a 'Mills and Boon' novel) can create a very different literary experience and to being able to identify the patterns of words which create a particular effect in a rhyme. In the early stages of phonological awareness very strong sound and letter patterns are used within a range of particular forms to develop two skills (the discrimination of sounds and the ability to link them to letters).

A teacher who views this process within the framework of a broader understanding of form and pattern will scaffold the learning experience to help the pupil develop an understanding on two levels. On one level there is the more immediate task of understanding about the relationship between particular letter combinations and sounds. On another level this task will be framed in the broader context of how sound and letter patterns can be identified and applied to produce particular effects for particular audiences and purposes.

An interesting parallel can be drawn here with comments made by Wray (1991) about the changing awareness children have about reading from entry to primary school and in later (post-seven) years. Wray notes that a large number of studies show that children bring to their first school experiences a range of existing knowledge about print and the way written language is used. Much of this knowledge centres around the primary purpose of print – to carry meaning and some of its primary forms – e.g. story structure, lists, captions etc. These concepts of purpose and form, held by young children before formal schooling has begun, can clearly be identified as being at the core of English in a way that Bruner would have called 'honest'. Wray (1994) contrasts this with research about the concepts of reading held by older children. These children appear to give much more attention to the deciphering of words and to have abandoned the meaning making, functional concepts they held previously. As Wray (1991) points out:

> If children learn in an environment where concentration is placed upon the
> technical aspects of literacy, upon words and letters, spelling and letter

formation, it should not be surprising that they come to believe that these are important to learn.

(P.5)

Such teaching has fostered an awareness of English that is not 'honest' to the core of authentic activity within the subject domain and as such is much less likely to be effectively transferred outside of the classroom. I will return to this when discussing authentic activity later in this chapter.

The Learning Cycle

In his thinking about the role of instruction, Bruner was heavily influenced by Vygotsky (e.g. Vygotsky, 1978) who also puts language and communication at the core of intellectual and personal development. He, too, places emphasis on the role played by culture and its systems of symbols in forming a child's intelligence. Such systems have a dynamic, structuring effect on learning and development and are not to be seen as mere content but part of the structure and activity of thinking.

Vygotsky argues that the capacity to learn through instruction is a fundamental feature of human intelligence. When adults help children to accomplish things they are unable to do alone they are fostering the development of knowledge and ability. He refers to the 'gap' that exists for individuals between what they are able to do alone and what they can achieve with help from a more expert teacher as the *zone of Proximal Development* (Vygotsky, 1978). He argues that a learner's development must be examined in relation to the external social world in which that individual life has developed. Cognitive and communicative skill appears:

twice, or in two planes. First it appears on the social plane, and then on the psychological plane. First it appears between people as an interpsychological category, and then within the child as an intrapsychological category

(P.163)

The social plane is where the role of the more expert other is seen as crucial. Children develop functional cognitive systems by which they are able to generalise new skills to new problems by internalising the social experiences. The expert will structure social experiences so that this happens in a way that will help children to structure their understanding and transfer skills and concepts to new situations. Through the process of internalisation the child will accommodate new understandings into a 'plane of consciousness' which is restructured to accommodate them and which will then be applied to future experiences.

For Vygotsky, co-operatively achieved success lies at the foundations of learning and development. Instruction - both formal and informal, in many social contexts, performed by a variety of more knowledgeable others, including peers, is the main vehicle for the cultural transmission of knowledge. Through guided reinvention children can move from the social plane to the psychological plane at an accelerated rate. Through the regulating actions of others they are able to engage in the social interactions (which would be beyond her/his reach alone) that precipitate a transferral of mental functions from the intermental to the intramental plane. This means that ultimately children are able to operate independently, as they are able to utilise newly formed concepts that are part of the structure of their plane of consciousness.

It can readily be seen that there are a number of stages learners will move through in order to go from one end of a zone of proximal development (ZPD) to another and that these stages will require differing amounts and types of support from others. Wertsch (1985) has pointed out that during the earliest stages in the ZPD, children may have a very limited understanding of the situation, the task, or the goal to be achieved. At this level they are highly dependent on the support of the adult or more expert peer. Support at this stage is likely to take the form of modelling, directing and explaining. Very young children who are at the earliest stages of phonological awareness are highly dependent on an adult to model, exaggerate and explain the patterns of sound the learners need to begin to discriminate. As the concepts of particular patterns start to develop and become part of the intramental plane, learners are able to transfer the concept and begin to identify the patterns with less help, until eventually it can be discriminated and articulated at will. However, it is not enough to differentiate the help needed simply in terms of quantity. Many of the actions taken at different stages will be qualitatively different. For example, Rogoff (1986) identifies an early form of support in the ZPD in terms of structuring situations. This is pre-task assistance in the form of choosing appropriate tools and materials; for example choosing songs and rhymes with exaggerated alliteration and rhyme as appropriate media for introducing sound patterns. Another commonly important feature of early support is what Tharp and Gallimore (Tharp and Gallimore, 1988) refer to as the structuring of the task into sub-goals and sub-sub-goals, in which the learner's conceptualisation of the goal of the activity may initially differ from the adult's. So the main aim of singing the songs may appear to the child as the experience of a pleasant interaction. The important thing is that the adult holds the ultimate goal as

constant, while breaking the learning down into a series of sub-goals. As the learning proceeds different goals and sub-goals emerge and develop as the participants work together. As Saxe and associates (Saxe *et al.*, 1984) conclude:

> The emergent goal structure simultaneously involves the child's understandings and the historical achievements of culture as communicated by the mother... As children generate coherent means to achieve these socially negotiated goals, they create for themselves a system of representation that reflects achievements that have been generated in our culture's social history.
> (P.116)

Tharp and Gallimore claim that:

> In the beginning of the transformation to the intramental plane, the child need not understand the activity as the adult understands it, need not be aware of its reasons or of its articulation with other activities. For the skills and functions to develop into an internalised, self-regulated capacity, all that is needed is performance, through assisting interaction.
> (P.86)

This shifting and developing of ultimately joint goals describes the inter-subjectivity expressed by Bruner (Bruner, 1996) as part of the cultural approach to the construction of knowledge. Through guided participation a joint understanding is eventually achieved.

As learning proceeds there is also a quantitative shift in support. Adult responsibility for performance will steadily decline alongside a proportionate increase in the learner's responsibility. At this stage the learning is still operating mostly on Vygotsky's *intermental plane,* as the learner is still relying on the social interactions to perform. To continue the example taken from developing phonological awareness, the child might begin to join in with completing the rhyme or alliterative pattern, but would be waiting for cues from the adult to do so.

The next stage of learning in the ZPD can be distinguished from the initial stage, in an identification that is more definite than simply being a point on a sliding scale, in that internalisation begins to take place. At this stage, the task has been what Bruner describes as 'handed over' and the learner has taken over responsibility and guidance and support is sought internally from her/himself. This may take the form of 'self-directed speech' or be manifested in the practical actions undertaken by the child as s/he attempts to solve the problem. The important thing is that the learner is drawing on newly developing internal structures in order to direct action. So the young learner may have cued into the sound pattern and so will be able to predict the next rhyme or alliterative sequence without help from the adult. This does not mean that the task is fully mastered or automated. The thought processes required need effort and sustained concentration, and mistakes are likely. Within this stage in the ZPD there is a sliding scale of self-regulation required. Immediately after having assumed responsibility from the adult, maximum regulation will be necessary. As procedures are tried out with increasing success, self-direction will become more automatic.

Tharp and Gallimore claim that once all evidence of the need to self-regulate has vanished, the child has emerged out of the far end of the ZPD. This perhaps suggests a model of learning that contradicts the notion of frameworks of understanding that are continually shifting and developing. It may be more useful to think in terms of achieving proficiency in an area that will continue to be regulated indefinitely. When the rhyming and alliterative pattern, which constituted the ultimate goal of singing the song can be automatically and instantly cued in, without the song being sung, the end of the ZPD has been achieved. The concept has been internalised at one level and is now automatic at that level- performance at this stage is for practice or public consumption. This does not preclude the continued development of understanding in that area. The patterns within the song may well be understood in deeper or more sophisticated ways at a later stage.

It is important not to allow the ZPD model to tempt us into an over-simplified view of what should be understood by the goal at the desired learning outcome. The notion of a 'zone' with a goal at the end of it can be interpreted to mean something like a production line with a finished product at the end of it. Notions of the ZPD need to be held alongside the earlier discussion of knowledge. In this I argued that knowledge is not a series of chunks of information but rather a framework of concepts and ideas that continually shifts and as it does so this impacts on the way we see and understand the world. This means that the goal of learning is not 'one product' but to help the learner to see the world in a new light and to be able to make new connections with previous experiences. This outcome cannot be conceived as one fixed state, but as Valsiner (1998) has claimed: 'a set of possible next states in the developing system's relationship with the environment' (P.69)

This distinguishing of the learning process into three stages is a relatively simple model. Others have differentiated more stages. For example, Gal'Perin (1970) identified a sequence of learning in which the learner moves through five stages each of which is managed by the teacher:

1. Creating a preliminary conception of an action.

2. Taking practical action steps.

3. Talking about the action and its implications.

4. Internalising the routine and potential implication of the actions.

5. Consolidating and understanding through incorporating ideas into practice.

In Gal'Perrin's stages, the talk of teacher and learner is an important feature. Control of the dialogue shifts from expert to novice at stages one and two, with a balance at stage three and gradually evolving ownership of the language by the novice by stage five. There is a mediation between language and action at each stage, but the emphasis is on language at the beginning (expert owned) and end (novice owned). Both models are similar in that they see the middle stages of learning as being essential. This is the stage at which Vygotsky claimed that through participation in activities that require cognitive and communicative functions, learners are drawn into the use of these functions in ways that nurture and 'scaffold' them. The process by which the social becomes the psychological involves the learner in transforming the externally acquired knowledge into a self-regulated plane of understanding.

Developing Norman's (1978) analysis of learning processes, Bennett, Desforges and Cockburn (1984) moved teacher's understanding of match from the neo-Piagetian view of providing novelty sufficient to stimulate accommodation processes to a categorisation of three of four learning stages. In summary, these are: introduction to new information, opportunities to make sense of the information, opportunities to fine tune new understandings and opportunities to practice and perform new understandings. Once again, this analysis links closely with the Vygotskian framework outlined, e.g. by Tharp and Gallimore (1988), with differing amounts and types of teacher support being required at different stages. Initial emphasis on teacher input, with much modelling, explanation and instruction will give way gradually to much more pupil control and self-initiated action. In common with the other models that have been examined, the middle stages of learning are crucial, with the opportunity for pupils to internalise new concepts and restructure their existing framework of understanding to accommodate them being held as central. At this stage, where Bruner's 'inter-subjectivity' is established, co-operative learning with fellow pupils may well be an important feature. Well monitored but teacher-less groups of learners provide semi-private, potentially very supportive contexts for using new language and trying out tentative hypotheses.

Another model for representing the learning cycle that is helpful in illuminating the importance of these stages is provided by Anne Edwards (1995) in the form of a series of quadrants.

Figure 3i A Neo-Vygotskian Model of Learning (after Edwards, 1995)

D	A
INTERMENTAL →	INTERMENTAL
↑	↓
C	B
INTRAMENTAL	INTRAMENTAL
↑	←

This represents learning as a cycle, which begins and ends in the public domain. Quadrant A is placed on the intermental or social plane where ideas and procedures are first encountered. In Quadrant B the process of internalisation is begun but the foray into testing out new understandings is tentative, with the expert on hand to provide support and clarification when required. Quadrant C is also on the intramental plane, but by this stage confidence is increased and the learner is more secure in applying the concepts and procedures to new situations, re-structuring existing knowledge to accommodate the new ideas as s/he does so. At this stage the role of the expert is reduced mainly to monitoring (bearing in mind that it is possible for the learner to encounter difficulties which precipitate her/his slipping back into a former stage). By Quadrant D at the end of the learning process, the learner is able to operate confidently and competently in the public domain, with a level of understanding that can contribute to the collective experience. The expert is now more a fellow

participant who can provide an appreciative audience for the demonstration of the skills and understanding.

It is possible to make links between the learning cycles that have been discussed and the structure and sequence of learning as it is presented in the National Literacy Strategy (e.g. Wray, 1998). The structure of the Literacy Hour (see Chapter Two for more details about this) follows a pattern involving a sequence of modelled activity, followed by joint activity, followed by supported activity and culminating in independent activity. Unfortunately the link between the National Literacy Strategy sequence and the model of learning that underpins it are not made explicit in its presentation and accompanying training, which can lead some teachers to misuse it .

Types of Assistance

Tharp and Gallimore identify teachers as experts assisting learners through the zone of proximal development. We have already seen that this is done in a number of ways, from structuring the task before it happens, to monitoring at a distance, to providing an audience for newly mastered skills. It is the type of teaching Tharp and Gallimore describe as 'assistive interactions', which forms the main focus of this study. Wood (1988) describes this type of teaching as making 'contingent interventions'. Successful contingent interventions depend on the teacher's ability to identify and respond appropriately to an individual learner's needs, drawing both on an understanding of the concepts being developed and knowledge of the learner. It could be argued that 'contingent teaching' is one of the key factors which will define a teacher's effectiveness, particularly in literacy teaching where so many literacy

teaching/learning opportunities arise as pupils tackle the range of the primary school curriculum.

Effective adult assistance will be constantly tuned to the needs of the individual, defined by his or her level of performance. Wood (1988) identifies 'contingent teaching' as a major factor in young children's' learning, involving pacing the amount of help children are given on the basis of their moment to moment understanding. In his study involving parents and young children he found that the children who learned most about a task did so by being helped in a way that was conditional on previous levels of understanding. The claim is that contingent teaching helps children to construct local expertise - expertise connected with a particular task or groups of tasks; if they do not understand at a given level, more help is forthcoming. When they do understand, the teacher stands back and s/he is allowed room for initiative. In this way, by breaking the task down into stages and offering help based on levels of performance, a child is able to do things far beyond what the child could do alone.

Particularly clear instances of this type of help occur in literacy teaching when an expert teacher scaffolds a young learner through a reading or writing experience, drawing on what he or she already knows and taking it a little further. For example, an experienced early years teacher will notice that an emergent writer is sometimes making a link between a particular sound and letter formation and build on this level of performance by talking about the letter and sound and modelling it in speech and writing. An experienced teacher of ten year old children will gather a small group of children who are at a stage in the composition of their own stories where s/he feels it will be useful to have a discussion linking their own characterisation with the way it

is done in the class story. In both examples the teachers are responding to a learning need by bringing together a range of knowledge about the children and the subject into an intense contingent teaching intervention.

According to the stage of learning in the ZPD that is being experienced the most appropriate form of assistance that can be offered by the teacher will vary. Other factors are also involved in determining this and include the concept that is being developed, the age of the learner and a range of other variables which will be explored in Chapter Four. Tharp and Gallimore focus their attention on the following categories: modelling, contingency managing, feeding back, instructing, questioning and cognitive structuring.

Modelling is defined as the process of offering behaviour for imitation. These processes are often far more complicated than simple mimicry and will include symbolic or verbal description of the mental procedures that guide performance. This type of assistance is also an important feature of Wood's (1988) study. He classifies the instructional options used by mothers in assisting their children to assemble building blocks in a particular way into five levels:

1. General verbal agreement
2. Specific verbal instruction
3. Assists in choice of material
4. Prepares material for assembly
5. Demonstrates an operation.

Wood found that demonstration was a powerful instructional device, but only when used contingently, in small stages and in conjunction with the other forms.

Modelling is a key teaching strategy within the National Literacy Strategy. 'Shared Reading' and 'Shared Writing' are corner-stones of the literacy hour and provide a sustained opportunity for the teacher to explicitly demonstrate concepts and ideas in action. The notion of shared reading draws on the work of Don Holdaway (1979,1982), in which teachers and pupils read aloud simultaneously from a shared, large-format text. The aim with Holdaway's work was to replicate the shared experience and visual intimacy that characterises children and adults sharing books in pre-school experiences. To an extent this fits with the notion of 'apprenticeship' (discussed in Chapter Two). Shared writing involves similar ideas, utilising a combination of demonstration and increasing pupil involvement, with more recent National Literacy Strategy training making this more explicit through the adoption of different types of shared writing (DfEE, 2000). These are: 'teacher demonstration' where the teacher writes in front of the children, explaining her decisions as she does so; 'teacher scribing', where children are involved in making decisions that the teacher then incorporates into the shared text and 'supported composition', where children attempt to write parts of the text themselves. Shared writing draws on the work of a number of studies, notably Bereiter and Scardamalia (1987) and Hayes (1996). Both shared reading and shared writing involve more than simple demonstration. 'Thinking aloud' and providing a running commentary are also key aspects. Tonjes (1988) has suggested that teachers need to model mental processes rather than simply demonstrate procedures. This could be conceived as combining modelling with types of 'cognitive structuring' as discussed below.

Contingency management is Tharp and Gallimore's second means of assistance. This refers to the systems of rewards and punishments that are arranged to follow behaviour. Their study found that effective teaching overwhelmingly focused on positive behaviour and that it was an important factor in moving children along the ZPD. However, contingency management cannot be used to originate new behaviours; it does not 'teach' anything new, but acts as a prop to strengthen each point of advance. Contingency management thus needs to be treated with some care. It undoubtedly has a very important contribution to make to the learning process, but it must be viewed differently to those means of assisting performance which have a cognitive input into the child's understanding. It is a vehicle, which will smooth the path for some of these other means, but it will not operate on its own in a useful way.

Feeding back, Tharp and Gallimore's third type of assistance does have a powerful cognitive function in that it will guide the next step taken. Tharp and Gallimore discuss tests, scores and grades as examples of feedback in teaching. On a day to day, or moment to moment basis, teacher response to performance is fundamental to the learning process. Self-feedback is also important; the ability to analyse an action taken and use that analysis to decide the next step is one of the most fundamental skills required in independent thought. As Tharp and Gallimore point out, if feed back is to assist performance there has to be some standard to compare it to; some means of judging its success.

Feedback needs to be considered hand in hand with assessment. Teachers need to have a clear understanding of what a pupil has or has not learned before they can give

appropriate feedback. Assessment and feedback have been found to be crucial aspects of effective teaching in a number of recent studies. Paul Black and Dylan William (1997) have produced an influential study that involved a review of a wide range of evidence about formative assessment as conducted by teachers in classrooms. They found that the general picture with regard to the use of formative assessment was overall one of weak practice. Key aspects of these weaknesses included: the encouragement of superficial and rote learning, a lack of review and reflection in relation to assessment questions, an emphasis on grading functions at the expense of learning functions, and a tendency to use normative rather than criterion based approaches. This led them to conclude that teachers are more likely to focus their assessment activities on getting pupils through the task and they resist attempts to engage in risky cognitive interaction. Consequently, teachers' assessments do not tell them what they need to know about their pupils' learning. Black and William found a tension between formative, internal assessment demands and the need for summative assessment accountability. They summarise the outstanding features of teachers' assessment practices thus:

♦ Formative assessment is not well understood by teachers and is weak in practice;

♦ The context of national or local requirements for certification and accountability will exert a powerful influence on its practice;

♦ Its implementation calls for rather deep changes both in teachers' perceptions of their own role in relation to their students and in their classroom practice.

(P.10)

In addition to reviewing current practice in general, Black and William use evidence from twenty quantitative studies to explore the impact of formative assessment on standards. All of these showed that innovations that included strengthening the practice of formative assessment produced significant (often substantial) learning gains. Some of the major features illustrated by this evidence include the following:

♦ The nature of the teacher/pupil interactions will be a key determinant for the quality of the outcomes – high quality cognitive transactions are key. Dialogue needs to be thoughtful, reflective and focused to evoke and explore understanding. Questions need to be asked in a way that allows children time to respond, and provides opportunities to discuss their thinking.

♦ Assumptions about the psychology of learning underlie all the approaches – these may be explicit or implicit. Where teachers see their role as building on each pupil's developing understanding through interaction, formative assessment becomes an essential component of a classroom culture of questioning and thinking.

♦ For assessment to be effective the feedback information has to be used – it must lead to action. This means that advice needs to be useful and targeted to the learning needs of individual pupils.

♦ The role of pupils is important – the core activity of formative assessment lies in the perception by the learner of a gap between a current state and a desired goal followed by the action taken to close it. It is a mistake to see the learner as a passive recipient of a call to action. Ways must be built in to actively involve pupils in the assessment process.

♦ The effectiveness of feedback also depends on the broader context of assumptions about the motivations and self-perceptions of pupils – in particular the assumption that a pupil can and will succeed. This is supported by the findings of Askew, Brown, Johnson, Rhodes and William (Askew *et al.*, 1997) who claimed that effective numeracy teachers believed their pupils would succeed.

Black and William argue that 'significant learning gains lie within our grasp'. They claim their review demonstrates conclusively that formative assessment does improve learning and that the gains achieved can be quite considerable.

This claim is very clearly supported by the work of Gipps, McCallum and Hargreaves (2000) in their study of the classroom strategies used by expert primary school teachers. In this they found that a key factor was the way that teachers incorporated informal assessment and feedback into the teaching / learning cycle. In exploring the links and relationships among teaching, assessment and feedback strategies, their findings show that:

> Teachers commonly used strategies in a cycle of assessment, feedback, teaching and within this sequence there were particular strategies that regularly followed each other.
>
> (P.2)

These strategies are outlined as follows:

a) Specifying or implying a better way of doing something (showing how to make specific corrections, advising quicker or more successful methods) following an assessment of a child's achievements

b) Following observation up by 'instructing' step by step. This usually led on to 'directing children to further practice'.

c)'Oral testing' followed up by the feedback strategy of 'telling a child what they have or have not achieved', and then the teaching strategies of explaining and re-demonstrating.

d) 'Delving' to find out how individual children arrived at an incorrect answer. a mixture of closed and more open-ended questions. 'Delving' was used in sustained interactions with individuals in which there were repeated instances of assessment-feedback-teaching.

Gipps, McCallum and Hargreaves also found that teachers typically used certain strategies alongside certain others. Particular feedback strategies were used consistently in connection with particular teaching strategies.

It could be argued that within the structure of the National Literacy Strategy, guided reading and writing are the times where explicit and targeted formative assessment and feedback are most likely to take place. Close observation of a small group of children who are at a similar level and working in a focused way should give the teacher important information on the skills and concepts children are using. The iterative nature of the procedure should also provide systematic opportunities for feedback, self-assessment and target setting.

Instruction, Tharp and Gallimore's fourth category, is defined as calling for a specific action. This seems to be such an obvious means of assistance that there is a danger of assuming too central a role for it in the learning process. It is similar to contingency management in that it will be insufficient unless it is seen as a vehicle for aiding some of the other strategies. Wood's (1988) study found that children who were taught mainly by instruction quickly became overwhelmed and unable to perform. As Tharp and Gallimore point out, effective instructions must be embedded in a context of other effective means.

Instructing, they suggest, must be used as a way of contributing to one of the other forms of assisting. The instructions must ultimately lead to an increased understanding (which would make them a precursor to cognitive structuring or feed back) if they are to play an important role in the learning process.

Questioning, as described by Tharp and Gallimore, has been the most characteristic means of assisting performance since the first Socratic seminars. In identifying the importance of questioning, they play down the types of questions that are very similar to instructions and concentrate instead on the potential of questions to call up the use of language and so assist thinking. In calling for an active linguistic and cognitive response questions 'provoke creations by the pupil'. A distinction is made between questions that assess and those that assist. The former type allows the teacher to gauge a pupil's understanding in order to help her pitch the next pedagogical input. The latter type inquires in order to produce a mental operation that would not otherwise have transpired. So a teacher may ask a pupil what sound a particular word begins

with merely to ascertain if s/he has remembered what was taught him/her the previous day. The same question posed in the context of a child producing some writing may be used in order to help them develop a strategy for independent spelling.

Cognitive structuring, Tharp and Gallimore's last category is perhaps the most important type of assistance, in that the other types are often valuable only in so much as they ultimately contribute to some form of cognitive structuring. This is defined as the provision of explanatory and belief structures that organise and justify. There are links here with Bruner's views on the importance of structure in subjects and the notion that constructing knowledge involves identifying patterns and regularities in experience. Cognitive structuring helps pupils to evaluate, group and sequence perception, memory and action. It does not, according to Tharp and Gallimore, call for a specific action, but provides an organisation for actions. An example of cognitive structuring taken from the teaching of phonological awareness that has already been used to exemplify would be when a teacher discusses the rhyming pattern with the children and points out that all of a particular group of words sound the same. This has provided the children with a pattern they can then apply to their own experience of the verse.

Clearly, useful as it may be to categorise the types of assistance children need in order to be helped through the ZPD, the assistance given cannot be viewed in isolated compartments. These forms of assistance will work in conjunction with each other, with the learning context, the stage of learning in the ZPD and the learning style of the individual in order to be effective. The teacher's role is to be able to find the most

effective way of synchronising these features to produce the best form of support for that situation.
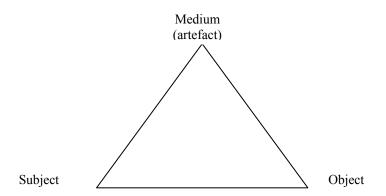
Mediation through Artefacts

The ZPD cannot be understood without the concept of mediation. Back in 1928 Alexander Luria (Luria, 1928) discussed the importance of 'tools' as an auxiliary means of mediating human activity. Tools, also called artefacts, can be both internal and external. These tools may be signs, language, instruments or machines. They are created by people and effect control over behaviour. Artefacts have an associated culture, history and permanence that exists across time and space. The most obvious tools in the educational context are conversations, texts and joint action where learners' mediated experience is easily evident. The less obvious forms of mediation include personal histories of previous interactions and the constraints and possibilities which are encoded in the social – historical expectations of particular settings and which allow particular ways of being in the world.

The notion of mediation through artefacts or tools figures prominently in what is referred to as *Activity Theory*. Activity Theory is a philosophical framework that allows the study of different forms of human practice. Practice can be viewed as developmental processes where both individual and social levels are inter-linked. Activity theory holds that tools, both internal and external, are created by people and effect control over behaviour.
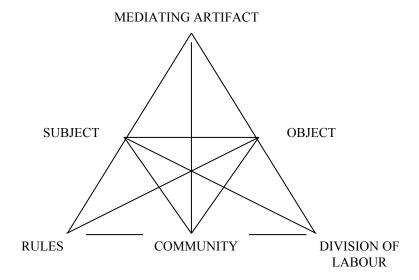
The basic structure of human cognition that results from tool mediation has traditionally been represented as a triangle (see figure 3ii below).

Figure 3ii. The basic mediational Triangle

Medium
(artefact)

Subject

Object

Natural (unmediated) functions are represented along the base of the triangle. *Cultural* (mediated) functions are those where interactions between subject and object are mediated by auxiliary means - placed at the vertex. Although this is a useful way of representing what is understood by the role of mediation and artefacts or tools, Cole and Engeström (1993) criticise it for being a description of human activity that is too limited. They claim that it fails to account for the collective nature of human activities – the fact that individuals and individual activity takes place in communities which are themselves culturally embedded. They add what they consider to be crucial elements to the basic model. See figure 3iii below.

***Figure 3iii The Basic mediational triangle expanded (after Engeström, 1987) to
include other people (community), social rules, and the division of labour***

MEDIATING ARTIFACT

SUBJECT

OBJECT

RULES

COMMUNITY

DIVISION OF
LABOUR

In addition to adding the important dimension of social context in the form of
community and its goals, this model also includes the idea that subject and
community are mediated by 'rules' (the norms and sanctions that specify and regulate
procedures and interactions) as well as artefacts. Communities also involve a
'division of labour' – the distribution of tasks, powers and responsibilities among the
participants of the activity system. These notions are considered in greater depth in
relation to the case study approach that I have taken to research as discussed in
Chapter Five. What is worth acknowledging at this point is the valuable contribution
that this model holds in that it helps us to find a way to go beyond mediated action to
specify the socio-cultural processes within which learning as participation in social
practices becomes meaningful.
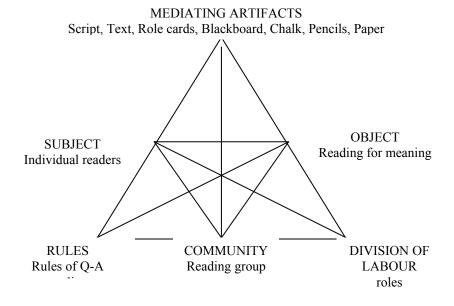
This combination of the notions of mediation through artefacts with the context and
systems in which this takes place may be particularly helpful when applied to

something as complex as reading acquisition. This is precisely what Cole and Engeström (1993) attempt to do. They make the claim that activity theory is especially appropriate in this context as:

1. The cognitive processing involved in learning to read is not an individual matter; the requisite cognitive processes are distributed among teacher, pupil, other students and the cultural artefacts around which they co-ordinate in the activity called 'teaching/learning to read'.

2. The expected future state, mature reading, must somehow be present at the beginning of instruction as constraints, enabling the development of the to-be-acquired new system of mediation, mature reading

    (P.23)

In this example the diagrammatic representation of this project (called Question-Asking-Reading) is shown below in figure 3iv

Figure 3iv Question-Asking-Reading represented in terms of the expanded activity system model

MEDIATING ARTIFACTS
Script, Text, Role cards, Blackboard, Chalk, Pencils, Paper

SUBJECT
Individual readers

OBJECT
Reading for meaning

RULES
Rules of Q-A

COMMUNITY
Reading group

DIVISION OF
LABOUR
roles

The model claims to overcome problems associated with traditional bottom-up approaches to reading which assume that reading is a solitary activity that takes place in the head of the reader. By acknowledging the fact that learning to read is part of a larger joint activity that takes place in a socio-cultural context Cole and Engeström argue that it is possible to combine 'bottom-up' and 'top-down' processes. The technical skills and concepts associated with 'bottom-up' models and the 'top-down' comprehension driven processes were more fully discussed in Chapter Two. Cole and Engestrom call this particular approach Question-Asking-Reading. Translated practically into an activity it can be briefly summarised as follows:

Each session begins with 'goal talk' about the children's reasons for wanting to learn to read. Next the group leader introduces the text and other resources (role cards, pencils, paper and a timer). Each group member is assigned a role from a range that includes things like 'the person who: asks about words that are hard to say/ words that are hard to understand/asks about the main idea/predicts what will happen next etc'. The next step is to read the first paragraph silently before engaging in the types of questions directed by the role play cards. This procedure would then be repeated with the next section of text and so on.

The aim was to create a medium that would repeatedly create moments where the child can mediate actions through the adult and the text within a community and so experience the full act (both bottom up and top down) of reading.

Cole and Engestrom claim that over a course of sessions as children became more certain of roles, procedures and goals their ability to perform well in the processes of

this activity increased dramatically. However they acknowledge that they had no data to show that the product of reading ability as measured against external criteria had increased. Because of this King (1988) replicated the same procedures in a follow up experiment that included appropriate control conditions and pre- and post-test measures. These conditions, in addition to a no-treatment group, included the involvement of a group who followed the kind of structured intervention that Scardamalia and Bereiter (1985) call 'procedural facilitation'. This involved children completing similar tasks to the Question-Asking-Reading group but in written form in workbook exercises. The study found that both the latter groups had boosted performance but that the children in the Question-Asking-Reading group retained significantly more material than the procedural facilitation group. The children in the Question-Asking-Reading group also spent more time actively engaged with the task and displayed greater enthusiasm for, and interest in, the content of the readings.

The Question-asking-Reading approach is remarkably similar in both aims and procedures to the model of 'guided reading' advocated by the National Literacy Strategy. In this the teacher works with a small group of pupils and follows a similar sequence of introduction (including discussion of purposes and goals) – independent reading – focused discussion etc. This is discussed more fully in Chapter Two. The point to note is that the use of adult, other children, text (and often other resources too) and goal oriented, specifically focused interaction replicates an activity theory model of learning which seems highly relevant in this context.

The Roles and Natures of Classroom Tasks

Having introduced and explored the role of mediation through artefacts it seems relevant to develop this discussion further by considering in more depth the nature of *the tasks* teachers set for children and the role that this can play in their learning. The work of Walter Doyle and Kathy Carter (1984) on task is particularly interesting. Doyle uses the term 'classroom task' to designate 'the situational structures that organise and direct thought and action'. He saw the study of such tasks as a way to examine how pupils' thinking is ordered by classroom events.

Doyle and Carter used intensive case analysis to study the academic tasks in two average ability classes and one high ability class in junior high school in America. They found that there were distinct patterns to the types of tasks experienced and the level of cognitive processes they demanded. Higher level thinking was typically associated with tasks that were 'unstable' in the sense that they required pupils to exercise judgement and express ideas and impressions. Tasks involving lesser cognitive demands were associated with the unambiguous retrieval of information, the use of standardised formula or routines and very clearly defined parameters. Doyle and Carter also found that there was a marked tendency for pupils to 'bid down' the cognitive demands of tasks by asking for more specificity both directly and indirectly by the use of many questions that were directed to narrow the range of possibilities. Higher level tasks would be transformed into lower level tasks through a process in which the normal smoothness and momentum of the class would only be restored by the teacher supplying the prompts and information requested by the pupils. As the teacher pushed for independence the pupils pushed for specificity and the tension

between these conflicting demands threatened the equilibrium of the working environment.

This conflict between the creation of the necessary conditions for higher order knowledge construction and the maintenance of ordered and workable conditions will be familiar to anyone who has experienced classroom-working life. It is useful though to consider this in relation to activity theory and Engeström's (1987) expanded model of mediation. The inclusion of the role of community, social rules and division of labour to the model which already emphasises the importance of artefacts and goals may help to resolve (to some extent) the tensions identified by Doyle and Carter. An approach which involves goal-directed activity that is both mediated by a range of well defined artefacts (including people, language and resources), clarifies rules, community and the division of labour, and builds in the necessity for independent thought and decision making may serve two apparently very different but necessary purposes. It allows for the reassurance and a level of unambiguity provided by clearly defined roles, systems and adult mediation that pupils appear to require for stability. It also requires decision-making, the exercising of judgement and risk taking (moments of ambiguity) - as associated with Doyle and Carter's higher level tasks - but within a 'community' with built-in support and structure.

Doyle and Carter's study links with the work of Clayden, Desforges, Mills and Rawson (1994). An earlier study (Desforges and Cockburn, 1987) had involved a five-year-old boy who was observed doing a series of maths activities which involved drawing objects. When asked what the work was all about he said 'colouring'. This is a very familiar type of incident, where a pupil's view of his activity is different from

what his teacher would say he is learning from it. However, Clayden *et al.* use this and other similar examples to argue that there is a real danger that pupils focus on working practices (which seem much more immediate and salient) rather than abstract ideas and use this to make sense of their classroom experience. From this they make the claim that:

> What they learn from classroom experience is how to do work, how to be neat, how to finish on time (or sometimes how to spin work out) and how to tidy away.
>
> (P.164)

If this is how children view their classroom tasks it is difficult to see how a 'generality of knowing' (Greeno, 1997 – see Chapter Four for further discussion) can be generated. If, as I have argued, knowledge is socially situated and in part a product of the culture in which it is developed and used, then what Clayden and her colleagues describe as the 'practices of the culture' will determine the type of knowledge that is developed. If the culture that drives the practice is 'schooling and classrooms' rather than the culture of the domain or subject that is being learned, then this is primarily the type of knowledge that will be developed. Clayden *et al.* argue that it is important for teachers to recognise and support activity that is 'authentic' to the culture of what is supposed to be being learned. This means that the way in which both teachers and pupils perceive classroom activities and the way in which teaching and assessment strategies support the learning must be driven by the culture of the subject. This suggestion again links with Bruner's view on the structure of subjects and with the discussion in Chapter Four on the syntactic aspects of *content knowledge*

and the importance of underlying structures and frameworks in subjects. Children learning science should be behaving as scientists; pupils engaged in literacy activities should be working with purposes, audiences and forms that would be used authentically outside the classroom as well as in it.

In order for teachers to enable learning of this nature to happen they need a deep level appreciation and understanding of the syntactic and substantive nature of the subjects they are teaching (see more on this in Chapter Four). This suggestion links with Wray's (1994) discussion of awareness and literacy in which he notes that children at the beginning of their schooling have an understanding of literacy that focuses on meaning and purpose. This is because their experiences up to this point have been authentic in that they have seen shopping lists being used, information texts being referred to and books being read for pleasure. These are all activities that Bruner would no doubt agree are honest to the subject. By the time they have experienced literacy in school for several years children's perception becomes much more narrow and centred around the surface aspects of texts, rather than their primary functions.

The challenge for student teachers and those involved in supporting their learning is to develop the necessary skills and understanding to enable them to support literacy learning that is authentic while still helping children to acquire all the sub-skills and concepts that ensure it is also effective.

Introduction

This chapter will attempt to construct a framework to describe the processes and contexts through which student teachers develop as teachers of primary school literacy. There are a number of similarities between this task and the attempts in Chapter Three to describe the learning process of young children and links will be made accordingly. In both cases the aim is to explore the processes experienced by learners as they develop sets of understandings and learn to operate with them. The management of the mediation is important for both sets of learners. However, the focus on student teachers will be different from that on pupils in a number of respects. These differences arise from the context of school based Initial Teacher Education. The study has particularly examined school-based learning and the impact that these school-based settings have had on the development of student teachers. This has led to an emphasis on the need to consider the range of factors influencing the learning of student teachers within the complex settings of school-based learning contexts.

The Importance of Context

An examination of context is fundamental to this study. The socio-cultural approach that has been adopted takes its inspiration from the idea that the mind could not exist as it does without the culture that provides the social practices and shared meanings that shape it. Within this cultural context reality is represented by a symbolism that is shared by members of a community. I have looked at this in relation to children

mainly through consideration of the role of the mediating 'expert' in the construction of knowledge. For student teachers, the mediating factors are shaped by the diverse nature of the multi-layered contexts within which their learning takes place. The broad, diverse and immeasurably complex influences of these contexts will be a particular focus in this chapter. Wertsch (1991) asserts that:

> The basic tenet of the socio-cultural approach to mind is that human mental functioning is inherently situated in social interactional, cultural, institutional and historical context.
>
> (P.86)

Consequently, attention needs to be given to the origins and current construction of the contexts in which learning can occur and to the functions and identities of the actors within these contexts, as well as consideration of the learning itself.

The school contexts within which student teachers learn to engage in the practice of teaching primary literacy require them to be both learners and performers of the practices they are learning at one and the same time. The situation is much more complex than is necessarily acknowledged by recent policy. An over-emphasis on classroom performance, in which a series of teaching competences can be assessed, can result in an outcome-led view of student learning which overlooks 'the start-up of the learning process' (Edwards 1995). 'Performativity' (as described by Ball, 1994) can offer a view of learning which is based on an over-simplified transmission model, in which the learner simply needs to be given (or have observed in action) the knowledge in order to go right ahead and perform it. I will discuss below the failure of

this view to take account of the complex factors involved in effective teaching and the difficulty of mediating this process simply by observing and working alongside other teachers. The question of context, knowledge and identity and how these relate to effective teaching will also be returned to.

A reasonable starting point for considering student teacher learning, at this stage in the discussion, is to consider what is involved in expert practice. The intention is that this will provide a reference point from which to construct a notion of the learning continuum along which student teachers must proceed in order to move from novice to expert. This will involve an attempt to analyse the essential differences between the practices of a novice learner and an expert as s/he performs within the classroom. This analysis will assist in the task of identifying the knowledge bases required by an effective teacher and beginning to understand the processes involved in ultimately acquiring the competence of an expert.

Expert Practice

In considering children's learning I have already made the claim that to identify the types of knowledge and the forms of assistance needed to move children through the ZPD is not a sufficient description of how effective teachers operate. An understanding of the way in which these types of knowledge and strategies are drawn together is also necessary in understanding what is involved in expert practice.

It may be useful first to consider what can be understood by the term 'expert' in relation to teaching. This is not straightforward. There is a temptation to either define teaching expertise restrictively (e.g. as a disposition to reflective practice) or to

describe it loosely as a list of observed differences between experienced and less experienced teachers. Restrictive definitions can be problematic because examples can often be found that don't fit the definition but do fit with an intuitive judgement. The problem with the latter, looser definition is its assumption that length of experience is a sufficient measure of expertise. Most people are able to bring to mind teachers who have years of experience behind them, but who would not be commonly accepted as experts in their practice.

As Sternberg and Horvath (1995) state 'there exists no well-defined standard that all experts meet and no non-experts meet'. They argue that instead experts bear a 'family resemblance' to one another that enables us to categorise them in this way. They claim that teaching expertise can be usefully viewed as a similarity-based category, in which similarity is defined as an increasing function of shared features and a decreasing function of non-shared features. For example a trombone and trumpet share sufficient features (e.g. made of metal tubing, flared at one end) to be judged similar despite their clear differences. So expert teachers may be different in some ways but are sufficiently similar to be classified as such.

The 'fuzziness' of this type of categorisation (the impossibility of an 'all or nothing' judgement about the membership of objects) produces both advantages and disadvantages. The advantage is the possibility of a graded structure wherein some objects are more clearly members of the category than others. This fits with our anecdotal and intuitive experience of who can be considered as an expert teacher and who cannot. There will always be examples where few would challenge the person in question's categorisation as an expert and equally there will be others where there is

scope for disagreement.

The disadvantage is the obvious possibility of disagreement about what counts as expert and what does not. This is where Sternberg and Horvath's (1995) notion of 'prototype' proves useful. They argue that prototype provides a convenient way of talking about the expert category in that it can represent the central tendency of all the exemplars within the category. So a category will contain a list of features which members must possess, e.g. knowledge. The prototype will possess that feature in a way (or at a level) that is calculated from the intermediate point of the range of the feature values across the category (ie between the highest and lowest exemplars within the category). This means that determining if a person belongs to the category can then be judged by computing the similarity between the person and the prototype – the higher the similarity the higher the probability that the person belongs to the category. Of course the category will involve several features and determining if a person fits within it will involve looking at each feature in turn. The beauty of Sternberg and Horvath's model is that it allows for the differential weighting of features in the computation of overall similarity to the prototype. Some features can be assigned much more importance than others. This means that it may be possible to be a member of the category with relatively few shared features as long as the features that are possessed are sufficiently heavily weighted.

While the prototype model allows for a more complex view of expertise, it still leaves the question of what features must be included and how they should be determined. Sternberg and Horvath attempt to provide some answers. They discuss three main features: *knowledge, efficiency* and *insight*.

The knowledge bases required in effective teaching will be discussed at much greater length below, but it is worth noting here some particular observations that Sternberg and Horvath make. They comment that there are a number of studies (e.g. Chi, Feltovich and Glaser, 1981, Larkin, McDermott, Simon and Simon, 1980) that show that it is not mainly the amount of knowledge that the expert possesses but how it is organised in the memory. In general experts are sensitive to the deep structures of the problems they solve – they are able to group problems together according to underlying principles. This meshes with the earlier discussion on the structure of academic subjects (e.g. Bruner, 1966). In contrast novices tend to be more sensitive to surface structure – e.g. obvious physical groupings. Sternberg and Horvath suggest that expert teachers possess knowledge that is thoroughly integrated in the form of propositional structures and schemata. These will take account of and connect with a range of types of knowledge (which are also discussed below) including knowledge of subject, pedagogy and the social and political contexts in which teaching occurs. As they claim, 'An expert in the *domain* of teaching must know subject matter and pedagogy. An expert in the *field* of teaching must know how to apply teaching knowledge in a particular social and organisational context.'

Sternberg and Horvath's second key feature of expertise is efficiency. They claim that experts can do more in less time than non-experts. Experts seem not only to perform better than novices do but they also seem to do so with less effort. Sternberg and Horvath explain this by claiming that cognitive processes can be divided into those that are resource consuming or controlled and those that are relatively resource independent or automatic. What is initially effort-full and resource consuming

becomes effortless and automatic with practice. By virtue of experience experts are able to perform tasks effortlessly. This can be linked to what has already been claimed about the expert's organisation of knowledge. If the expert has access to a store of meaningful patterns, corresponding to classroom situations, recognising and utilising them in problem solving situations requires less effort. Research has also shown (Sternberg, 1980) that experts use different processes in different proportions to novices. Experts typically spend a greater proportion of time trying to understand the problem whereas novices spend more in actually trying out different solutions. Novices tend to be generally more 'solution-oriented' and less concerned with developing an adequate model of the problem (O'Connor & Cooney, 1990).

The expert teacher, then, can perform many of the constituent activities of teaching with little or no cognitive effort. This skill enables the prototype expert to devote attention to high level reasoning and problem solving. Sternberg and Horvath's third main feature of teaching expertise is insight. This links closely with what they claim about efficiency in that the claim is that experts reach solutions that require them to be able to see into a problem deeply. Davidson and Sternberg (Davidson and Sternberg, 1984) use the notion of 'selective encoding', which involves distinguishing information that is relevant to the problem solution from that which is irrelevant. This obviously provides the expert with an insight into the situation, which will; a) enable her/him to make the most efficient use of the time available and b) draw on the most useful areas of knowledge.

It could well be argued that the notion of a 'list of features' on a sliding scale of expertise is simplistic. It is in danger of implying a reductionist view of teaching as a

set of technical skills. It is the *combining* of Sternberg and Horvath's three main features of expertise that is at the heart of their argument and which makes their model useful. To summarise their claims, the prototype expert is knowledgeable in a way that is accessible and organised and covers a range of domains including subject, pedagogy and context. S/he is able to perform many activities rapidly with little cognitive effort allowing her/him to invest more effort in problem solving and in doing this s/he is able to encode information to arrive at insightful solutions. It can be seen that these features depend on each other to some extent and it is the complexity and potential variability of these relationships that makes the model attractive. It may well be possible to possess these features in very different proportions, which will make for experts who manifest their expertise very differently, or who are more obviously expert in one type of teaching situation than another. So there may well be a teacher who is well versed in literacy and able to make it wonderfully accessible to young children but who is less efficient with use of time and allows routine tasks like tidying away to eat into teaching and learning time. Equally, there could be a teacher who has an efficiently organised classroom but is less able to instantly diagnose the misconceptions demonstrated by a pupil. The important thing is that they demonstrate sufficient similarity to the prototype to be judged as members of the category. It also means that there can be a sliding scale within the category – where some members will be more definitely expert than others as they conform more closely to the prototype.

Sternberg and Horvath's work can be usefully linked to a study by Tochon and Munby. Tochon and Munby (1993) studied novice and expert teachers as they operated within the classroom and noticed significant differences in the 'time

epistemologies' within which they worked. Epistemology is defined as a way of knowing and organising thinking - a crucial element in practice within the complex setting of the primary classroom. Tochon and Munby describe expert teachers as having a mainly synchronic notion of teacher time. This primarily centres on the intensity of particular moments, which pull together a number of attributes in a context in one informed professional action. This way of working places considerable emphasis on the contingent nature of teaching – the ability to perceive the demands of a situation as it arises. Teaching in this way also involves drawing on a number of knowledge bases to make the most effective response.

Novice teachers are described as operating within a diachronic time epistemology. This is an essentially linear approach with a strong emphasis on planned use of curriculum time. So novice teachers will direct their actions mainly through preordained planning and will be much less likely to respond contingently or to even be open to the need to do so.

Tochon and Munby make a distinction between didactics and pedagogy. The former is defined as the organisation of subject-matter knowledge either before or after the teaching action has occurred. Pedagogy is seen as stemming from the interactive management of time around and within the teaching act. Didactics deals with the subject content within a sequential processing and has a central role in the codifying and formalising of time within the planned curriculum. It is a diachronic anticipation of the content to be taught or a diachronic representation of the content that was taught. In contrast pedagogy is seen as the immediate image of the teaching situation, which is essentially interactive and drawing on a range of factors synchronically.

Tochon and Munby refer to the expert teachers' thought and action as a pedagogic 'wave function' in which learner and curriculum are connected as a result of the teacher's capacity to read cues, seize the moment and work synchronically. Novices tend to anticipate and sequence their teaching actions in advance, whereas experts often adapt entire semantic or propositional mappings to a particular event.

The combining of knowledge and the synthesising of strategies (see discussion of teaching strategies below) would appear to be a key factor. This is supported by the work of Caroline Gipps (Gipps, McCallum and Hargreaves, 2000) in which she identifies the key elements in the work of expert primary teachers. They conclude:

> This understanding of a range of ways of learning within and across learners underpinned their use of a complex range of strategies.
>
> (P.5)

Gipps argues that it is impossible to properly separate the strategies that expert teachers use (although this is what she attempts to do for the purposes of discussion). This is because they are dependent on each other. One strategy is integral to another, and in particular, assessment and feedback is at the heart of the pedagogic process.

The skills required for contingent teaching in a synchronic epistemology are very complex and difficult to develop in Higher Education settings, which are distanced from the contextual characteristics (i.e. knowledge of the learner and the learning environment) that help to define them. In addition, traditional methods of school supervision (e.g. lesson observations, scrutiny of plans, records etc.) are essentially

diachronic in their emphasis. While these are undoubtedly important for the development of student teacher expertise they fail to capture the more intensive, contingent teaching skills requiring a synchronic epistemology.

Contextual characteristics seem once again seen to be defining factors in the processes of effective teaching. It is clear that an exploration of the role of context must be seen as central to understanding the situated learning of student teachers. Before undertaking a more detailed examination of the role of context on student learning, however, it may be useful to explore and identify the knowledge bases required in effective teaching.

Types of Teacher Knowledge

The question of what categories of knowledge an effective teacher needs is an interesting one. English ITT policy-making in the early 1990s appeared to rest on the assumption that practical knowledge is the most important feature of good teaching. Towards the end of that decade policy makers had shifted their attention to the role of the prescribed curriculum (while maintaining the emphasis on practical delivery) in the form of the National Literacy and Numeracy Strategies in primary education and the ITT National Curricula in Initial Teacher Education. It would clearly be wrong to claim that practical knowledge is not important and that prescribed curricula do not have a significant role to play. It is, however, equally clear that there must be more to good teaching than this.

In fact, the types of knowledge necessary to effective teaching are complex and difficult to pin down. Lee Shulman (1987) has classified the knowledge base of

teaching into seven categories:

Content knowledge,

general pedagogical knowledge,

curriculum knowledge,

pedagogical content knowledge,

knowledge of learners and their characteristics,

knowledge of educational contexts,

knowledge of educational ends.

Content knowledge is what is often referred to as 'subject knowledge' - this is the knowledge, understanding, skill and disposition that are to be learned by school children. In the case of early literacy, it includes the areas of knowledge that have been outlined in Chapter Two. In the case of the teacher, as we have already seen, the knowledge required must go well beyond the knowledge to be taught. That is to say that in order to teach the subject effectively, the teacher must have knowledge of its underlying structures and organising principles in order to structure learning experiences so that they will be revealed, in a more basic way, to the learner. As Shulman claims:

The teacher has a special responsibility to content knowledge, serving as the primary source of student understanding of subject matter. The manner in which that understanding is communicated conveys to students what is essential about a subject and what is peripheral.

(P.9)

'Content knowledge' has received particular recent attention in the teaching of literacy. This has come in shape of the ITT National Curriculum for English (1998) and in the National Literacy Strategy (1998). The National Literacy Strategy is one part of a government policy aimed at raising standards in education. It comes in the form of a detailed framework for teaching English in primary schools and has been used by most schools in England and Wales since September 1998. The ITT National Curriculum for English is another strand in the same policy. All providers of Initial Teacher Education for the 4-11 age range in England and Wales have used this since September 1998. The documents combine to provide a highly detailed framework of objectives for teaching primary English.

There is much to commend the model that is proposed. It puts knowledge of the subject at the centre of teaching. Student teachers are given more guidance than ever before to help them decide what appropriate literacy learning should look like. However, there is a danger that the model being offered may lead student teachers, at least in the initial stages of training, to teach literacy in a way that is limited in its effectiveness. This is because the detail and prescription of the framework can obscure for student teachers the underpinning structure of the subject and core concepts that give coherence and cohesion to all its component parts. The ITT National Curriculum for English is supposed to serve this purpose. However, while the knowledge referred to in that document is certainly more detailed and refers also to pupils' development, the notion that there are underlying principles and core concepts which structure and organise English is not explicit. There is a danger that the model being offered is fragmented, with the relationship between the different

components of content knowledge not made clear.

Shulman makes use of Schwab's (1964) characterisation of knowledge structures as substantive - knowing which are the important concepts or skills within a domain or syntactic - knowing the procedures for structuring them. It is helpful to think of syntactic knowledge in terms of ways of knowing a subject – the enquiry methods that are integral to it. This interpretation resonates with Bruner's views on the importance of structure and an understanding of the fundamentals of a subject. In English, where communication and expression lies at its heart, most skills and concepts can be traced back to the conventions and forms that make this most effective. Subjects also have their own languages, to which specific meanings are attached. For example the term 'form' has a different meaning when used in relation to science compared to English.

This specialised use of language and understanding, the discourse of the subject, is described by Clayden *et al.* (1994) as a set of shared understandings held by experts. They argue that learners need to be brought in as participants in the real discourses of the subjects. An effective teacher will not only be able to identify the key concepts of a subject but will also know how to stage the pupils' introduction to an acquisition of these concepts through a range of teaching and class management techniques. Subject or content knowledge, then, as used to inform the effective teaching of that subject cannot be defined or described simply by a set of pieces of knowledge. It needs to encompass a strong underlying conceptual framework (and the specialised language that provides it with a vehicle) such that it can be structured in a way to make it accessible to novices, while still being true to its fundamental components. If syntactic knowledge is understood as a way of knowing, as suggested, then subjects

can be seen more clearly as sets of social practices that use and generate knowledge.

The importance of underlying structures and the role of teachers in helping pupils to make connections is supported by the work of Medwell, Wray, Poulson and Fox (1998) in which they examined the work of teachers whose pupils made effective learning gains in literacy. In this they claim that effective teachers are much more likely to embed their teaching in a wider context and to show how specific aspects of literacy relate to each other. They assert that such teachers tend to make connections, both explicitly and implicitly, and to put features of language use into the broader context of texts.

It is appropriate at this point to note the further findings of this study in relation to effective literacy teachers' subject knowledge. In exploring this area Medwell *et al.* (1998) rightly indicate the problematic nature of defining content knowledge in literacy. Much of the knowledge and skills required to be literate may be implicit rather than explicit. We have often acquired particular skills and understandings in reading and writing without even being aware of them.

In the Medwell *et al.* (1998) study content knowledge was defined using the National Literacy Strategy categories of the use and functions of language at word, sentence and text level and the use, function and relationships of text types and texts. Both effective teachers and 'validation' teachers (a control group) were investigated for their content knowledge in a range of ways. These included an initial questionnaire designed to investigate what children needed to know about literacy at key points in their learning, a test of literacy knowledge in the form of a quiz and observations of

the teachers as they taught literacy.

The findings from this data are initially surprising in that they show that both the validation teachers and the effective teachers had limited content knowledge when it was tested out of context. Both sets of teachers experienced difficulty in recognising many of the technical aspects of literacy. For example, they had only limited success in identifying types of words and, in particular, sub-units like phonemes, onsets and rimes. However, the effective teacher group were observed to use some of the very knowledge they appeared to lack within the context of their teaching. Medwell, *et al.* explain this apparent contradiction by claiming that the effective teachers 'knew the material they were teaching in a particular way'. They claim that it is not possible to separate their knowledge into a separate body of content that was transformed to be represented to pupils but that:

> The knowledge base of these teachers *was* their pedagogical content knowledge. This is a rather different concept of pedagogical content knowledge from that of Shulman… Our interpretation of what we have observed is that the effective teachers only know their material by how they represented it to children … through experience of teaching it, their knowledge seemed to have been totally embedded in pedagogic practices.
>
> (P.24)

This finding appears to pose problems for the validity of both Shulman's content knowledge and pedagogical content knowledge categories (see below for further discussion of the latter). If teachers do not explicitly possess the 'body of knowledge'

that is associated with English, but are still able to teach it effectively, how can content knowledge retain validity as a necessary feature of effective teaching? Possibly the answer lies in recalling the discussions about the nature of knowledge in Chapter Three. Using the socio-cultural approach, knowledge is not viewed as a series of 'chunks' of information, but as frameworks of understanding that are inextricably linked to the socio-cultural contexts in which they are developed and used. Shulman himself wrote of Pedagogical Content Knowledge as situated practice (Shulman 1987, p.9). This explanation resonates with the contextual nature of the effective teachers' knowledge. They could utilise the knowledge that they struggled to identify in an abstract way. When this is linked to the wider context of the study's other findings about teachers' beliefs and how these connect to their practice this argument is strengthened further. Medwell *et al.* found that the effective teachers tended to have more coherent belief systems linked to the importance of communication, composition and understanding. They claim these belief systems led these teachers to pursue an embedded approach where the more technical aspects of literacy were taught within a broader framework of meaningful contexts. This suggestion links very strongly with what Shulman has to say about the 'syntactic' aspect of content knowledge. The teachers in the Medwell *et al.* study appeared to have very well developed understanding of the structures and relationships within the frameworks of understanding of the subject. These understandings cannot be fully separated from the social context in which they exist. Seen in this way the study does not appear to contradict Shulman's categorisation.

The theme of syntactic understanding is echoed by the parallel study into effective teachers of numeracy undertaken by Askew, Brown, Johnson, Rhodes and William

(1997). In this they claim that;

> Highly effective teachers had knowledge, understanding and awareness of conceptual connections within and between the areas of the primary mathematics curriculum which they taught.
>
> (P.5)

Askew *et al.* characterise effective numeracy teachers as being 'connectionist – oriented', which involves a conscious awareness of connections and relationships. They claim that the highly effective teachers believed that being numerate requires having a rich network of connections between different mathematical ideas. This clearly links with the work of Bruner on the structure of subjects and with Shulman's use of Schwabian notions of syntactic and substantive notions of content knowledge.

General Pedagogical Knowledge. This is Shulman's next category**.** It is described as those broad principles and strategies of classroom management and organisation that appear to transcend subject matter. These principles and strategies will include an understanding of how knowledge is constructed and the learning processes as discussed in the previous section, along with knowledge of the practicalities involved in translating this knowledge into classroom practice. There may well be overlap between this and the ability to structure subject knowledge in the way that has just been discussed. However, this category will particularly emphasise those aspects of pedagogy that are not particular to a subject. So an understanding of the importance of involving children as active participants in the discourse of a subject may be included in general pedagogical knowledge, but knowledge of the particular discourse of a

particular subject - and how to make it accessible to learners, would not.

Curriculum Knowledge is defined as a grasp of the materials and programmes that serve as 'tools of the trade' and as such is relatively straightforward. An over-dependence on curriculum knowledge, however, can lead to particular consequences for the effectiveness of the teacher, as was seen in the Tochon and Munby (1993) study discussed earlier. In many ways, the National Literacy Strategy framework is a clear example of curriculum knowledge. The framework has now been presented for student teachers in such detail that they can be very clear about the content of their lessons. Therefore, even student teachers near the beginning of their training have a prop that provides a script that is not focused merely on keeping the children busy. The challenge for ITT, and indeed any one operating with a highly detailed externally given curriculum is to allow student teachers to create spaces in their curriculum delivery in which pedagogical interactions can occur. There is a danger that the detailed curriculum can squeeze out the scope for responsive, flexible teaching. This is a problem on two levels. Firstly, as I have already discussed, effective teaching requires a 'wave function (Tochon and Munby, 1993) between the planned script and the unfolding situation. Secondly student teachers need to develop problem-solving skills which require time and space which may be predetermined in a detailed and prescriptive curriculum like the National Literacy Strategy.

Pedagogical Content Knowledge is particularly interesting in that it represents a blend of knowledge of subject and pedagogical knowledge and identifies distinctive bodies of knowledge for the effective teaching of particular subjects. I have already

discussed the notion that subjects have their own structures and related key concepts. I have also claimed that they also have their own languages, to which specific meanings are attached. For example the term 'form', which has already been examined in relation to its importance within literacy, has a different meaning when used in relation to science. This is where pedagogical content knowledge is required. As Wood (1988) notes:

> Common experience suggests that not all experts can teach, and that many attempts to help children to learn do not succeed.... the teaching itself may be inadequate or inappropriate: a teacher might, for instance, rely too much on demonstration.... talk too much... make excessive demands on children's linguistic understanding.
>
> (P.87)

An effective teacher will not only be able to identify the key concepts of a subject but will also know how to stage the pupils' introduction to an acquisition of these concepts through a range of teaching and class management techniques. Pedagogical content knowledge, then, involves knowing the structure of the subject and knowing how to transform this knowledge into an opportunity for pupils to be inducted into it. As I have suggested in the discussion of content knowledge, this cannot necessarily be separated from the context in which it occurs. It is also dangerous to think of pedagogical content knowledge (PCK) in terms of a 'body of knowledge' – Shulman describes it as a 'body of understanding'. This can be usefully interpreted in a way that is much broader than one type of knowledge base among many. Turner-Bisset (1999) takes this view when she argues that PCK might be seen as providing:

An overarching knowledge base comprising all the other knowledge bases …

Pedagogical Content Knowledge is the set which contains all the other sets.

(P.47)

It is worth noting that *Turner-Bisset*'s interpretation of teacher knowledge develops from Shulman's seven categories to include further categories: *beliefs about the subject*, *knowledge of self* and *knowledge of models of teaching* as well as separating out knowledge of learners into two sections – *cognitive* and *empirical*. It may be useful to explore these further before considering how her interpretation and extension of Shulman's work informs a notion of PCK.

In an earlier study Turner-Bisset (Turner-Bisset, 1997) had found that student teachers' beliefs about the subject had a direct impact on what and how they taught it. This finding resonates with the study on effective literacy teachers (Medwell, *et al.*, 1998) that has been already discussed. Beliefs about the purposes and values of a subject, according to Turner-Bisset, will be one of the organising systems of its content – a way of prioritising and linking concepts and skills. She views beliefs as part of the content knowledge, which seems to fit with this notion.

Self. Turner-Bisset's addition of the category of *'self'* is also welcome. The development of identity as a teacher is seen as central to this study and is discussed further below. Turner-Bisset claims that the self is a crucial element in the way that teachers themselves understand the nature of the job. I will explore this further in my discussion of *identity* later in this chapter.

Knowledge/Models of Teaching is also a helpful additional category, which links to notions of identity. Calderhead (1992) for example has suggested that teachers' knowledge about teaching from their own experience as pupils shapes their own identity as teachers.

Knowledge of Learners, both Empirical and Cognitive is a more detailed way of describing knowledge of learners and their characteristics (see below for Shulman's explanation of this category). Empirical or social knowledge is knowledge of what children of a particular age are like and cognitive knowledge consists of understanding about child development and understanding about the learning needs and styles of a particular group of learners in context.

These are welcome additions and expand Shulman's categorisation usefully. However, the most striking aspect of Turner-Bisset's argument is the way in which she deals with PCK, seeing it as an over-arching category, containing all the others. Here PCK is the totality of all teacher thinking. This status as being at once part of but more than other knowledge bases helps us to think about how the knowledge bases are brought together in teaching actions. The danger of the Turner-Bisset categorisation (and indeed the Shulman basis from which it derives) is that it can seem like an attempt to fully describe sets of understandings in a way that is sufficient and closed. At the same time it seems clear that any framework of this nature is open to endless extension with the addition of further categories.

However, if the analysis is seen as three-dimensional, and use is made of Tochon and Munby's (1993) distinction between 'didactics' and 'pedagogy' (as discussed in

Chapter Three) to understand how the dimensions operate, this danger can be avoided. The various forms of knowledge, apart from PCK, outlined by both Shulman and Turner-Bisset would belong in the two-dimensional representation of knowledge (to be related to didactics). The bringing together of aspects of what the teacher sees to be the relevant features of these into a 'synchronised' teaching action would belong in the other, to be termed PCK.
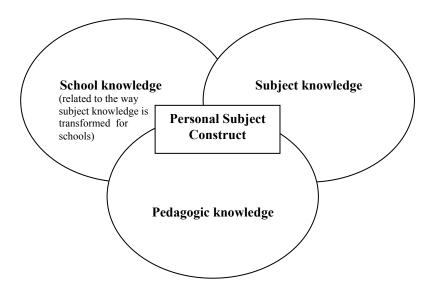
This reorientation would also help to account for the findings in relation to the pedagogical content knowledge of effective teachers of literacy in the Medwell *et al.* (1998) study. Their claim that the effective teachers only knew their material by how they represented it to children suggests that Shulman's description of the pedagogical content knowledge category is lacking in some respects. If, instead, this type of knowledge is used to refer to the bringing together of knowledge held by teachers who are able to interpret affordances for action, and to bring into play the knowledge embedded in a sophisticated set of social practices, the effective teachers fit the category. To abstract the knowledge from the contexts in which it was applied is to subtract the second dimension – the 'bringing together'. This changes the nature of the knowledge so drastically that (in the case of the Medwell *et al..* study) it is no longer recognisable to the teachers who held such knowledge when it was in context.

This way of thinking about teacher knowledge is to some extent supported by Banks, Leach and Moon (1999). They too criticise Shulman's model for its static nature:

> Shulman's work leans on a theory of cognition that views knowledge as a contained, fixed and external body of information.

(P.91)

Banks *et al.* make use of the distinction between didactics and pedagogy that was also employed by Tochon and Munby (1993). They make use of Verret's (1975) notion of 'didactic transposition' to represent the place of 'school knowledge' in a dynamic model of teachers' professional knowledge. Didactic transposition is the process by which subject knowledge is transformed into school knowledge. School knowledge is distinct from subject knowledge in that it is codified, partial, formalised and ritualised. The didactic transposition of the former from the latter is the same as the process described by Tochon and Munby (1993) as the 'diachronic anticipation of contents to be taught' (P.206). This is a closed, static model and as such lacks cognitive validity. Consequently such knowledge cannot fully represent teachers' knowledge. Banks *et al.* claim that teachers' professional knowledge is a synthesis of subject knowledge, school knowledge and pedagogic knowledge. Subject knowledge is seen as dynamic and process driven in nature. School knowledge is the codified product of didactic transposition and subsumes Shulman's curricular knowledge. Pedagogic knowledge, while including the generic set of beliefs and practices that inform teaching and learning, goes beyond this into an understanding of the relationship between subject knowledge and school knowledge. Banks *et al.* represent this diagrammatically in Figure 4i below.

Figure 4i Teachers' Professional Knowledge (after Banks et al., 1999)

The strength of this model is three-fold. Firstly, it emphasises the process driven nature of teachers' professional knowledge – an aspect I have argued is lacking in Shulman's model. Secondly, it recognises the dynamic, non-linear nature of subject knowledge. Thirdly, Banks *et al.* recognise the importance of context. They state:

> We would argue that the development of professional knowledge is a dynamic process. It depends on the interaction of the elements we have identified, but is brought into existence by the learning context itself – learners, setting, activity and communication as well as context in its broadest sense.
>
> (P.96)

The model as represented by Banks *et al.* certainly appears to fit more comfortably with the findings of the Medwell *et al.* (1998) study.

Tochon (2000) develops our understanding of the relationship between didactics and

pedagogy further by using the notion of axes. He discusses the axis of didactic knowledge linked to prior experience and the axis that is situated in the present situation and claims that didactics become operational at the point where the two axes converge. He states:

> Potential associations emerge from this intersection; and it can be postulated that those associations that stand the best chance of being productive in relations with knowledge are those that 'hook into' the learner's experience in learning situations (Tochon, 2000a,b). These will be perceived as 'authentic', because they will engage with pupil's lived experience.
>
> (P.333)

Again, this model helps to explain the findings of the Medwell *et al.* (1999) study more adequately than the more static Shulman categorisations.

Knowledge of Learners and their Characteristics, another of Shulman's categories is also an area that will link subject with pedagogy. For there will be concepts and skills related to the way children develop which transcend subjects but there is also knowledge of how specific concepts are developed within a subject. Examples of this, such as phonological awareness and the development of conventional spelling, have already been discussed. An effective teacher will have a longitudinal understanding of the progression a child will pass through in order to make the best decisions about how to support her/him at any given stage.

Knowledge of Educational Contexts To an extent Shulman's next category, knowledge of educational contexts, will be at the heart of the discussion below on context and identity. Although it could be argued that Shulman does not pay this area as much attention as the others, I will be arguing that contextual knowledge has a key role to play in the learning of student teachers. This may not be so much because it is a crucial element in effective teaching (although it could be argued that this is so). Rather, I am claiming that it is pivotal to an understanding of the construction of teacher identity and that this is understood as being central to student teacher development. What is actually understood by *knowledge of educational contexts* appears very open. It could be argued that student teachers at the very beginning of their initial teacher education rely on a limited version of this type of knowledge. They know classrooms should look busy, teachers should seem in control and the children should complete their tasks - so that is their focus. Very often they begin their Initial Teacher Education with already deeply entrenched notions developed from their experience of classrooms and teachers when they were themselves pupils. This is highly likely to be an unbalanced and incomplete image, based on a time where their concerns and priorities were very different. On the other hand a definition of knowledge of educational contexts could be broadened out into a much more complex set of beliefs, attitudes and understandings relating to both local and national information.

Knowledge of Educational Ends, Purposes and Values and their Philosophical and Historical Grounds To an extent the importance of context (both personal, local and national) also links with Shulman's final knowledge category**.** This category must not be under-estimated in its importance. Teaching is concerned with ends as well as

means. Shulman claims that the knowledge base must therefore deal with the purposes of education as well as the methods and strategies of educating.

Aspects of this argument have already been discussed in relation to 'inter-subjectivity' and 'shared understandings' (see an exploration of Kripke, Descartes and Bruner in Chapter Three). These issues lie at the heart of this study and take us on to the crucial questions of context, knowledge and identity.

Context, Knowledge and Identity

To some extent we have seen that the types of knowledge required in being an effective literacy teacher are complex and wide-ranging. We need now to return to questions about the nature of knowledge itself and how it relates to our external experience of the world. Bruner's use of the concept of 'inter-subjectivity' describes the way we come to know each other's minds and the way reality is represented in symbolism which shapes the minds of individuals as they make meaning from particular events, in particular settings on particular occasions. Knowledge is thus a complex construction, which cannot be separated from the contexts and experiences that shape it. As Michael Eraut (1994) notes:

> People are so accustomed to using the word 'knowledge' to refer only to 'book knowledge' which is publicly available in codified form, that they have developed only limited awareness of the nature and extent of their personal knowledge.... the process of using knowledge transforms the knowledge so that it is no longer the same knowledge.
>
> (P.25)

This is in line with the socio-cultural approach to knowledge, action and learning offered, for example, by Wertsch (1991) when he explores the relationship between human action and cultures, institutions and situations within which the action occurs. A socio-cultural view of teaching and learning allows attention to be given to the origins and current construction of the contexts in which learning can occur and to the functions and identities of the actors within those contexts. Wertsch claims it is a mistake to study social interaction (in the present study this involves the processes through which student teachers learn to teach literacy) as if it occurs outside of social structure (and *visa versa*).

Wertsch outlines a view that seeks to encourage a fundamental compatibility between the analysis of psychological processes on the one hand and social 'situatedness' on the other. Wertsch claims his view is grounded in, but goes beyond, the framework provided by Vygotsky. He identifies the limitations of the Vygotskian framework as being rooted in its lack of formulation of the function of the cultural settings in which the psychological processes (that are the main focus) take place. Wertsch's work is largely limited to a focus on language and its role in the formation of mind. He draws on Bakhtin (Bakhtin, 1981) to explain more fully what is missing from the Vygotskian account. Wertsch agrees with Vygotsky that social interaction (particularly communication through speech) is a key factor that influences the psychological processes involved in learning. He uses Bakhtin's work to explain the functions of the relationship between these social interactions and the contexts that surround them. Bakhtin focused his analytic efforts (as a scholar of language) on the 'utterance' or 'the real unit of speech communication' (Bakhtin, 1986, p.71). Bakhtin's

analysis takes account of the context in which an utterance takes place, paying particular attention to a 'speaking subject', to which the utterance belongs. Bakhtin viewed the utterance as the site at which the systematic constancy, with which we normally attribute language, enters into contact with unique, situated performance. Part of this situatedness concerns the social language it represents.

Social languages belong to groups of people who are united in some way, either through profession, gender, generation and so forth. So social languages shape what an individual voice can say and mean. Bakhtin terms 'ventriloquation' as the process whereby one voice speaks through the voice type as found in the social language. The social languages involved in the learning of student teachers will vary according to the groups within which the interactions take place. So a different set of contextual understandings will underpin interactions with fellow student teachers, tutors and mentors etc.

As Wertsch points out, the notion of ventriloquating through social languages has major implications for how one formulates an account of the socialisation of cognitive skills. It suggests that linguistic units cannot be examined away from voices and communicative contexts – any communicative act is linked in a fundamental and concrete way to sociocultural context. Using the Vygotskian framework, which puts so much emphasis on the sociocultural process of mediation, therefore (according to Wertsch) entails that mental functioning in the individual is inherently tied to sociocultural setting.

The implications of this for the study of the development of student teachers are

threefold. Firstly some attempt must be made to identify and characterise the social language(s) through which they operate. Krauss and Fussell (1991) have identified ways in which the identity of particular kinds of speakers shapes how utterances are formulated and understood. Thus it is important to consider the sense of identity with which student teachers are operating in order to characterise the social language with which they operate. Secondly, some attempt must be made to specify how these social languages both reflect and create particular social settings. So attention must be given to the beliefs, attitudes and prior knowledge student teachers bring to the learning context as well as examining the impact of the context on student teachers' existing frameworks. Thirdly, there is a need to examine the processes whereby the appropriation of the social languages associated with the settings within which the student teachers operate affects their intrapsychogical functioning as they develop as literacy teachers.

The characterisation of student teachers' social language (and those involved in their development as literacy teachers) is a central part of the process of probing the multi-layered contexts impacting on their learning. The sense of identity that helps to shape the creation and uses of the social language through which utterances occur is a key factor. Following Harré's definition of personal identity as 'an organising principle for action' (Harré, 1983), it seems that a teacher's sense of self-hood and agency provides a key to understanding how she or he might approach the management of pupil learning.

This links with the work of Lave (e.g. Lave and Wenger, 1991) on knowledge use in communities of practice. Applying this analysis to primary schools would seem to

indicate that personal identity, as a disposition for action within a professional setting such as a primary school, is largely a learned phenomenon. Lave and Wenger's work would represent learning as a process of acculturation into the ways of thinking and acting of a specific community of practice. An examination of teacher knowledge, and its relationship with the actions taken by the teacher, cannot therefore be separated from an examination of teacher identity and the cultural practices which help to shape it.

This perspective finds support in the analyses of identity and context offered by Bourdieu (Bourdieu, 1977) in his exploration of the origins and purposes of commonly held social and work practices. Bourdieu examines the relationship between habitus (a learned way of being or individual disposition for action) and field (the network of relationships which constitute the site in which the habitus is both constructed and constructing). He shows how professional identity and the contexts in which that identity is enacted are mutually constitutive. So the knowledge base underpinning effective teaching has to be seen in relation to the contexts within which it is practised.

Krauss and Fuller (1991) claim that communicators use two interrelated sources of evidence to construct hypotheses about the contents of their shared communicative environments. These are prior beliefs (and expectations) about others and feedback that derives from the dynamics of interaction. Prior beliefs and expectations in relation to what it is to be a teacher have been shown to be a key influence on student teachers (Calderhead, 1992).

Krauss and Fuller suggest that the strength and confidence with which the knowledge and beliefs are held will depend on the basis from which they are derived. All student teachers have at least one powerful basis for such beliefs in the form of their own experience of teachers when they were pupils. Many also have been directed into the profession through their relationship with family or friends who are teachers. These are likely to be influential sources of belief determining the sense of identity student teachers link with the role they are seeking to develop.

Krauss and Fullers' other identified source of evidence involves the interactional dynamics through which communicators receive feedback. They state:

> The linguistic copresence heuristic fails to capture the dynamism and flexibility of human communication that account for much of its effectiveness. It portrays the process as one in which participants alternate in producing discrete messages, much like correspondents using electronic mail. However, conversation (and similar interactive forms) permits communicators to formulate messages that are tightly linked to the immediate knowledge and perspectives of the individual participants, because it affords the participants moment-to-moment information on each other's understanding.
> (P.175)

The success of this shared communication is partly dependent on what Krauss and Fuller describe as a 'shared communicative environment'. This involves the identification of shared group memberships from which certain bodies of knowledge can be inferred. Determining the precise nature of this knowledge is not a

straightforward matter and may require a substantial amount of inferential work on the part of the participants. As with other forms of social reasoning a variety of knowledge structures may be used (including the schemata discussed in Chapter Five). While these structures facilitate the task of drawing inferences, they are also open to the possibility of widespread systematic errors or biases. The high availability of one's own individual perspective may lead one to overestimate the extent to which others share it. Fuller and Kraus also claim there is a dynamic relationship between prior suppositions and interactionally provided evidence. Expectations guide the elicitation and interpretation of feedback. At the same time – to a greater or lesser degree, partly dependent on the strength of prior expectations and the extent to which knowledge structures are shared with fellow participants – feedback leads to modification of prior beliefs.

For student teachers, the contexts for shared communication are (as always) complex and multi-layered. Eraut identifies three main contexts for using knowledge about education: the academic context, the school context and the classroom context. It could be argued that there are others that have a direct and notable impact on student teachers' learning. These could include diverse elements, from peer and family settings, to the broader context of the LEA or government. The relationships between these contexts are particularly complicated for ITE. Student teachers acquire and utilise knowledge in all contexts but they perform an explicitly different role in each one. Only in the academic context of university institutions are they explicitly and exclusively regarded as learners. This brings both advantages and disadvantages. In this context they are not put in the 'performance spotlight' that is often the case in the classroom. This should mean that they have more time and space to reflect on

knowledge and learning and to see the bigger picture to which the details and practicalities belong. However, this can also bring disadvantages in that the very time and space that allows for reflection and knowledge acquisition can produce a perceived distance between this context and the 'real world' of the school and the classroom. Knowledge as portrayed in this setting can therefore seem at best de-contextualised and lacking in immediacy (and therefore urgency) and at worst irrelevant and pointless. Consequently it may be difficult for student teachers to make important conceptual connections on both theoretical and practical levels. In the school setting (taking the school as a whole, rather than the individual classroom) student teachers find themselves in an ambiguous situation. They have to operate as peers and not-peers. They are often expected to 'prove' their knowledge (sometimes with expectations that this will be at the 'cutting edge' and they will be fully versed on all the latest thinking) but at the same time to acknowledge their inferiority and lack of knowledge. As Edwards (1997) claims, they are often treated (and behave) as 'guests bearing gifts' – extras in the classroom with a highly ambiguous role to perform. They will often be supported and assessed by the same people meaning that the role of learner and performer is confused.

For the purposes of this study contexts are seen as 'multi-layered', with each layer being directly or indirectly related to the others, as if in a series of concentric circles. These contexts will include the three identified by Eraut (the academic context, the school context and the classroom context), but will also include different social groups with whom interaction (through social languages) takes place – children, mentors, other teachers, tutors, fellow student teachers etc. For each of these groups there will be a range of contextual factors guiding the creation and interpretation of

these interactions, including the nature of the relationships governing these dynamics and the impact of external factors.

The socio-cultural emphasis on the role of cultural symbolism and the shared perceptions and values of members of a community in the construction of knowledge is consistently being shown as central to this study. The tight relationship between identity and the contexts in which it is constructed and constructing is a key factor. A teacher's image of self, and the way s/he constructs knowledge, is tightly bound up with the contextual characteristics of the field in which that identity is enacted. A sense of identity, both individually and communally, will shape the context and the context will impact on the identities of its actors.

Supporting the Learning Process of Student Teachers

Michael Eraut (1994) criticises traditional forms of teacher training, where 'practical knowledge' and 'propositional knowledge' are delivered in discrete blocks of teaching practices and college course on two grounds. He claims that the university delivery is based on propositional knowledge in an academic framework, which does not fully use and develop the professional context. On the other hand, the practical delivery does not necessarily analyse and develop the propositional knowledge effectively. This difference is compounded by the problems already discussed where student teachers find themselves required to fulfil very different and sometimes-conflicting functions and take on different roles in each context. Clearly an approach which combines the development of broad-ranging knowledge bases with good use of the professional context is required. The learning process of students, as outlined, cannot be properly developed unless they have some kind of almost continuous access

to the professional context. However, the question is how to structure the school-based education so that an effective knowledge base is developed. As Eraut suggests, practical experience by itself is not likely to do this.

If a continuous interplay between practice and discussion, action and reflection, is to occur in the way apparently demanded by the model(s) of student learning proposed, then the school situation does seem to be the place where most of this will happen most effectively. But the extra demands placed on schools in terms of responsibility, time and understanding of student learning cannot be overlooked. Edwards and Collison (1996) found in their study of the school-based experience of a group of early years students that many class teachers experienced extreme difficulties, for a variety of reasons, in meeting these responsibilities. Those teachers who had specific mentor training (Associate Tutors) were slightly better placed to provide the necessary support in the learning cycle, as through their training they:

> … were receiving course related training and had been directly involved with college staff in planning the programme. Consequently they were in touch with the course aims and the planned sequence of student teacher learning.
> (P.14)

However, there is more to the problem than this, for even those mentors who are fully in tune with the teacher training course as a whole do not have sufficient influence over the practice in the rest of the school. There is, it seems, an enormous problem associated with helping students to make links with the concepts and ideas they are told are important in college and those they see applied in school.

Traditionally Higher Education has accorded priority to discipline-based theories and concepts, derived from bodies of coherent, systematic knowledge. As Eraut points out, the problem with public theories is that they tend to remain within academic, educational discourse, without affecting practice. Eraut makes use of Broudy's four categories for describing how knowledge acquired during schooling is used in later life (Broudy *et al.*, 1964) to explain this. These are: 'replication', 'application', 'interpretation' and 'association'. Eraut claims interpretation is of particular importance in the application of knowledge within the complex setting of a primary classroom, as this describes the criteria a teacher, or student teacher, will use to select which concepts and ideas are relevant from a very large number which are potentially relevant. Eraut's argument links with the earlier discussion of organising schemata and the interpretation of utterances within social languages. In order for a discipline-derived idea or concept to be seen as relevant and incorporated into the existing organising schemata with which a student teacher operates, it has to have been demonstrated as such.

It is also important to consider what can be understood by the incorporation of ideas and concepts in different contexts and between contexts. If, as I have argued, learning is 'situated', how can ideas and concepts developed in one place or on one occasion be transferred to another place or time? As Greeno (1997) has argued, people learn adaptively in situations where they engage in activities. They do not simply 'lift' knowledge gained in one context and apply it in another, as Greeno states:

When an analysis of an individual's knowing is proposed, the analysis should

take account of the ways that person *interacts* with other systems in the situation. Just presenting hypotheses about the knowledge someone has acquired, considered as structures in the person's mind, is unacceptably incomplete, because it does not specify how the systems in the environment (including other people) contribute to the interaction.

(P.8)

Some have claimed that this holding view leads to the conclusion that there cannot be a 'generality of learning' (e.g. Anderson, Reder and Simon, 1996). The argument is that concepts cannot be developed other than in relation to the specifics of an individual context, which can have no significance beyond it. This claim implies that the knowledge is so bound up in the situation in which it is used that it can have no separate identity. Greeno refutes this criticism by stating that situative research recognises that successful participation in activities across a wide range of situations can contribute to an individual's identity as an effective participant in those activities in general. In other words the individual's identity as a person who can operate effectively is a generalised state so that successful activity can be applied in a range of relevant situations.

Greeno sees learning as bound up with the situations that provide its context. He claims that, while methods of instruction may be instruments for acquiring skills, they are also practices in which students learn to participate. In doing this they develop patterns of participation that contribute to their identities as learners. While individual exercises may usefully help individuals to develop particular skills and concepts, the value of such development lies in its contribution to that individual's growing identity

as an effective participator in the broader context to which the particular skill or concept relates. So, academic knowledge gained in the university is not seen as providing the student teacher with a set of sub-skills, which can be considered separately from their operation in the classroom. Indeed, Greeno argues that it is misleading to consider it possible to 'isolate' concepts and skills in this way. A student studying a particular idea in a room by herself with the aid of a textbook is operating within a social environment that is just as complex as a busy classroom. The factors impacting on her learning are just as complicated and have been shaped by a wide range of social arrangements including the production of the book, the seminar that preceded the task etc.

It follows that it is not possible to take a concept or skill and isolate it – the recognition that all learning involves socially organised activity means that the question is not whether to give instruction a social environment but what kinds of complex environments to arrange. The aim cannot be to develop 'chunks of knowledge' but should be regarded as a striving to develop further individual identities which will increase the effectiveness of the student teacher as a participant in a range of teaching situations. The knowledge developed in a study room is not separate and isolated if it contributes to a 'generality of knowing' (Greeno, 1997) that can be used effectively in other contexts. It is not so much a question of being able to 'transfer' knowledge from one situation to another as of generating a 'generality of knowing' that can be effectively employed across a range of situations. The outcome of such a state is improved participation in the interactive systems of educational settings – this involves being more closely attuned to the affordances and constraints of the activity systems in the situation.

This clearly links with the earlier discussion of Tochon and Munby (1993) and their claims about the expert teacher's operation within a synchronic time epistemology. They maintain that effective teaching will involve the disruption of a linear delivery of the curriculum to allow the pedagogical bringing together of knowledge and skills from a range of sources. This fits very well with Greeno's notion of being attuned to the affordances and constraints offered by a situation. These will have their basis in many understandings (e.g. individual pupil behaviour, physical factors, social relationships) of which the knowledge encapsulated in the plan will be only a part.

Interactive participation also involves being structured into the 'social language' and the shared underlying bodies of knowledge that inform the professional dialogue that is informing practice in the classroom. This form of participation has a number of implications for what will make the school context effective in developing the knowledge bases of the student teacher. These relate both to the immediate teaching situations the student teacher is involved with, and to the conversations that surround them.

According to most constructivist frameworks the meaning of a concept is largely carried by knowledge of examples of its application in action. An individual's knowledge of a concept is expanded, even altered by each experience of its application. If the concepts that are part of an academic discipline are not explicitly seen in action there is very little chance that they will become part of the knowledge base and developing identity of the student teacher. So the concepts which are being promoted within the academic course need to be explicitly modelled by mentors and

other class teachers in the school situation. Student teachers will interpret situations by using frameworks of conceptual understanding that seem relevant. Relevance will come from perceiving their effectiveness in action.

This is not as straightforward as it may seem. Some conceptual frameworks are more obviously accessible by an external observer than others. A teacher who is modelling the process of constructing the opening passage of text to a class of children is clearly demonstrating the use of a set of subject-related concepts. This much should be clear to an observing student teacher. Although even in an example as public and structured as this, why these concepts are important and how they link with other concepts in a broader framework may well be less obvious. However, a teacher who is deliberately responding to an individual pupil in a way that is informed by her knowledge of his particular learning style is performing using knowledge that is much less obvious. Not only does it involve utilising knowledge derived from prior experiences to which the observer may well not be a witness, it may also only take a moment and be unconscious on the behalf of the teacher. Thus an example of the synchronically organised teaching action, underpinned by a range of knowledge bases, which Tochon and Munby found to be the very essence of expert teaching may go unnoticed by the student teacher and unanalysed by the unconsciously expert teacher who initiated it.

Conversations and Knowledge Construction

There are implications for the conversations and actions that need to take place around the actual teaching episodes. I have discussed the importance of the social interactions that student teachers experience, and the particular role of the shared knowledge frameworks that underpin them. If the feedback that student teachers receive as part of

these interchanges is not instrumental in developing these frameworks of understanding, the students are more likely to fall back on prior beliefs and understandings (Calderhead, 1992). Mentors and others need to be actively creating knowledge frameworks and challenging or developing existing ideas.

Edwards and Collison (1996) found in their study that this extension was only happening very patchily. School based mentors and class teachers tended to view their role mainly as providing opportunities for students to try out ideas with 'real' children. While acknowledging the importance of theory, they saw the main job of 'unravelling' it as belonging to the Higher Education Institution. As already discussed, it is very difficult for HEI tutors to do this at a distance from the practical context which gives it meaning. School based mentors, in the Edwards and Collison study, were noticeably more able to engage in the kinds of discussions which helped student teachers to link theory and practice, than their un-trained colleagues. Interview data from head teachers in the study confirmed that mentors were undergoing considerable professional development as a result of their involvement in the student-training programme and HEI tutors felt that mentors were beginning to 'speak our language'. This suggests that school based mentors can give the kind of support that will help student teachers move successfully through learning cycles, but that they themselves need support and training in order to do so.

Schön's discussion of the 'Dialogue Between Coach and Student' (1987) emphasises the need for the development of shared meaning in professional dialogue. In this, he argues, the student begins as a non-cognitive performer going through the motions of (for example) designing, without really understanding what designing is. Executing

such performances, she experiences them in such a way as to enable her, through reflection on them, to discover new meanings:

> When coach and student co-ordinate demonstrating and imitating, telling and listening, each component process fills gaps of meaning inherent in the other. (P.118)

Through a constant interplay of action and dialogue between coach and student, the student's understanding increases and her knowledge base develops. This has a clear relationship with the type of framework that has been discussed in relation to children. A neo-Vygotskian framework of supported learning across the zone of proximal development is a useful model for discussing the learning of both children and students. Edwards and Brunton (1993) use a simplified model of Gal'Perin's (1970) sequence of five stages of learning (discussed above in relation to children's learning). Edwards and Brunton adapted it for use in continuing professional teacher education but it is equally relevant to understanding processes in school-based ITE:

1. Creating a preliminary conception of an action.
2. Taking practical action steps.
3. Talking about the action and its implications.
4. Internalising the routine and potential implication of the actions.
5. Consolidating and understanding through incorporating ideas into practice.

Edwards and Brunton argued that stages 1 and 5 can be related to a Vygotskian concept of the interpsychological or intermental plane of understanding in which ideas

are presented and discussed at a public, social level. In stage 1, in the case of a student teacher, this would be the initial immersion in the ideas and language of teaching. By stage 5 the student would be able to actively participate in these experiences, using and understanding the concepts and language necessary and relating their own experience to them. Stages 2,3 and 4 relate to Vygotsky's intrapsychological or intramental plane, in which the student internalises the newly introduced knowledge and makes personal meaning out of it, through testing ideas against experience and beginning to use the language in context.

In this process, teaching and learning can be seen as a joint enterprise in which the expert(s) has a role not as a transmitter but as a contingent supporter of the learning of the less expert student. Initially, the expert will supply the knowledge base and shape the discourse. As the student grows in understanding through experience and reflection, and becomes more confident in the language use (as outlined by Schön, 1987), the balance shifts and the student takes more and more control of the interchanges and develops mastery of their actions.

This is a useful model but there is a danger of limiting its usefulness by applying it in a way that is too linear. In particular, if stages 4 and 5 take place separately and only *after* the previous stages, this would not fit comfortably with what has already been said about situated learning. As Eraut has claimed, interpretation takes place during the activity. Teachers will use criteria to select from a wider conceptual framework the particular understandings they see as relevant to a particular situation. This is conceptual understanding in action as opposed to 'ideas in the head'. Student teachers will also apply criteria in determining the practical action steps they take at stage 2 –

this will involve part of what is described at stages 4 and 5. The conversations that take place after the event must involve exploring the organising schemata and interpretation through which the student has acted. The potential reorganisation of frameworks of understanding takes place before, during and after the situation in which specific actions were taken. Mentoring conversations must take account of the thinking that has taken place at every stage. This is one of the potential strengths of school based ITE. The immediacy of the expert support means that the linear approach to practice and guided reflection (which was possibly the outcome of school experience when it was externally supervised) is avoided. With the school based model there is the potential for 'guided participation' (Edwards and Ogden, 1999). With experienced mentors on hand who know the contexts well it should be possible to help student teachers to read situations with deepened understanding and to guide them in this before, during and after teaching activities have been experienced. Unfortunately, as discussed below, other factors (both historically and politically derived) often seem to prevent this from happening.

Griffiths and Tann (1992) offer another useful way of approaching teacher education, which takes more account of the central role of interpretation and organising schemata. In this model they categorise ways of reflecting in and on classroom events. The first two levels are described as reflection *in* action, consisting firstly of the rapid reaction mechanism of act and react and then the process of reflection in action for repair purposes. The remaining three levels are described as reflection *on* action. These are: practical review, research (in which understandings from elsewhere are consciously tested) and re-theorising and reformulating. Griffiths and Tann claim that all five levels are necessary for effective reflection and are clear that they are not

offering a developmental model. However, it could be argued that there is a developmental element built in to their categories. In order to achieve level five, a student teacher will have to have experienced the other levels. A case could be made that student teachers need a sufficiently broad base of experience at levels 1-3 in order to be able to make the most useful gains at levels 4 and 5. However it is viewed this model links in with a neo-Vygotskian framework in which, through a process of internalisation as a result of social experience, independence and mastery is achieved.

Edwards' representation of the cycle of learning in quadrants (Edwards, 1995) which has already been discussed in relation to children's learning in Chapter Three can be applied here too.

Figure 4ii –A Neo-Vygotskian Model of Learning (after Edwards, 1995)

D	A
→	INTERMENTAL
INTERMENTAL	↓
↑	
C	B
INTRAMENTAL	INTRAMENTAL
↑	←

The model maps learning as a shifting of understanding from half-understood procedures and observations, through processes of clarification in quadrants B and C to effective performance in quadrant D. This model of student learning provides a context against which the role of school-based education should be examined. A simple 'apprenticeship' model of teacher training, where students 'pick up the trade'

by working alongside those who have already mastered it, is clearly not adequate. A continuous interplay between action and discussion would appear essential if the student is to move successfully through these stages of learning. Importantly, intramental does not imply learning in isolation in Edwards' model. Interactions with others are part of the process of internalisation. Dialogues with more expert practitioners and consequent professional language acquisition by the student teacher are key features in this model. It may also be necessary to contrive explicit sites for interaction of this nature. It can be very difficult to focus on the relevant aspects of the highly complex situation represented by a classroom experience. There is a temptation to concentrate on the more tangible, obvious and immediate factors like the lesson plan, social behaviour of the children and the organisation of resources. Important though these are they do not capture the full range of factors involved in making a teaching and learning experience effective. As has already been discussed the pedagogy by which an expert teacher makes decisions that are underpinned by her/his interpretation of what s/he considers to be the relevant conceptual frameworks is influenced by 'moment by moment' (Wood, 1988) responses to the unfolding situation. To recall the detail involved in these actions after an event has taken place or to anticipate them beforehand can be very difficult. It may be necessary to devise 'tools' specifically for the purpose of capturing this detail and providing a focus for mentor-student teacher discussions.

The potential for school based ITE to pick up on the situated learning of student teachers is clear. Unfortunately studies show that in many cases this potential is not maximised. Edwards and Collison (1995, 1996), (Edwards, 1997) found that student teachers, once placed in the classroom were required to 'perform' and participate as

teachers with responsibility for delivering the curriculum to children. Mentors took on the role that had been associated with traditional forms of external supervision where lessons were observed and performance critiqued. In this traditional model, university tutors would previously have drawn on frameworks of knowledge about teaching and learning in order to do this. School mentors, for a variety of reasons, do not do this, as they do not demonstrate these strengths (Anning, 1988, Edwards and Collison, 1995). The model that mentors try and replicate is therefore in danger of actually being reduced in its effectiveness. Student teachers are in a position where their role is ambiguous (are they learners or performers?) and are supported (and assessed) by people who may help them to see mainly the superficial elements of the learning situation. As Edwards and Ogden have claimed (1998), the main pattern building that appears to be occurring in action relates to student teachers' ways of interpreting the curriculum and delivering it to children. The emphasis on diachronic linear epistemologies that ensues from the traditional observation/critique model of supervision leaves student teachers 'performing' alone with only their written plan for guidance. Student teachers shape their view of being a teacher and develop their identity as such in what can be described using Ball's phrase of an 'accountability-led system'. As Edwards and Ogden claim (1999), this leads them to represent themselves as competent performers of curriculum delivery rather than interactive supporters of pupil learning. It seems, in following a historical model of student supervision based partly on their own ITE experience, mentors and student teachers are missing out on a teaching and learning experience that could be so much richer.

Pedagogical decision making in the complex settings of primary classrooms is influenced by many factors that a mentor is far better placed to understand than an

external supervisor. A mentor will be much more familiar with the children, the teaching styles they are used to, the physical constraints, the school context etc. Recent analyses of effective teaching (e.g. Askew *et al.*, 1997) emphasise its interactive nature. Askew and his team particularly identified the *connectionist* teacher to be more effective in promoting pupil learning than teachers who emphasised the curriculum. Like Tochon and Munby's experts these people were seen as connecting the curriculum to the children through interactive and responsive pedagogy. Responsive teaching of this nature is much more likely to be demonstrable and explainable by teachers who are familiar with and already themselves active participants in the context.

It could be argued that the observer/assessor role that many mentors have taken from the historical model of supervision does not capitalise on the contextual understanding they bring to school based ITE. As Edwards and Ogden argue, an approach to the learning needs of student teachers that emphasised 'guided participation' would help to emphasise the importance of responsive pedagogy that draws on a range of conceptual frameworks. This would be particularly enhanced by a model of support that went beyond passive observation on the behalf of the mentor followed by discussion. As Edwards and Ogden claim, mediation in the complex contexts of classroom teaching consists of more than labelling activities after the event.

A more active modelling of the interactive teaching in question and the guided participation of the student teacher in such teaching could enhance the mentor role.

Devices or 'Tools' in Scaffolding Student Learning

The question of what would constitute effective scaffolding in the development of students as literacy teachers is very relevant here. It would seem that some mechanism that will both scaffold the student teacher and support the Mentor is required. According to Activity Theory, human activity is mediated by artefacts – tools both internal and external. These tools may be signs, language, instruments or machines. There are a number of obvious artefacts designed to mediate student teacher activity: lesson plans and evaluations, observations and critiques etc. These traditional methods of supervision, whether undertaken by college tutors or school-based mentors emphasise diachronic use of time and knowledge; 'didactics' as opposed to 'pedagogy'. They are unlikely to adequately support student teachers in their ability to make the most effective contingent interventions in the teaching of literacy and so develop the conceptual frameworks that must underpin them.

The challenge for all those involved in supporting the learning of student teachers is to find more effective devices, tools and methods to help them to develop the frameworks of understanding and the ability to bring them together into effective teaching practices.

CHAPTER FIVE

THE DESIGN OF THE STUDY AND GENERAL DISCUSSION OF

METHODOLOGIES USED

The Context of the Study

This study is framed by the contextual affordances and constraints of a shifting policy environment that shaped the learning of student teachers. The focus on student teachers and how they are able to make meaning takes place against a background in policy that determined expectations of the performance of both student teachers and pupils.

Research Questions

The central area to be addressed in this study is an examination of the development of the knowledge, understanding and sense of identity demonstrated by student teachers as they learn to teach primary literacy.

In order to address this question the following issues have been explored over the duration of the study:

♦ *What are the main roles student teachers identify as central in the teaching of literacy?*

- *What kinds of literacy teaching strategies do novice teachers use?*

- *What kinds of literacy teaching strategies does an experienced teacher use?*

- *What are the main kinds of knowledge that an experienced teacher draws on in using these strategies?*

- *How does knowledge use vary at different stages of ITE?*

- *How does knowledge use vary at different stages of the teaching session?*

- *What initial impact does the National Literacy Strategy have on student teachers' knowledge and understanding in its first year of implementation in schools?*

- *What kinds of knowledge do school based mentors view as central to effective literacy teaching?*

- *How do school based mentors support student teachers as developing literacy teachers?*

- *What are the main types of experience that inform student teachers' knowledge?*

- *What is the impact of the National Literacy Strategy on student teachers' knowledge and understanding in its third year of implementation in schools?*

Organisation

In this chapter I will outline the design and methodology issues stage by stage and briefly present the rationale for the choosing of samples. I will summarise the stages through which the study has developed and explain how this development has been a strength and a challenge. I will present a rationale for each of the methods used, opening this with a discussion of the overall merits of the case-study approach that is central to each stage of the study. In chapters Six, Seven and Eight I will examine each stage in more detail to

explain the ongoing development of the study. I will also summarise the findings at each stage as these have inevitably informed developments in the next stage.

The study took place over a period of five years (1996/7 - 2000/1), during which major national policy changes took place. The most prominent of these in terms of the impact on this study was the implementation of the National Literacy Strategy, which occurred during the year 1998/99. Another major policy implementation the same year came in the form of the ITT National Curriculum, which included an extensive and detailed list of standards that student teachers needed to have demonstrated before they could be awarded Qualified Teacher Status at the end of ITE. As they arose these developments necessarily had a direct and profound impact (that changed in its nature over time) on the experiences of the student teachers. Additionally, these policies were implemented in a more general national context of increasing accountability and a regime of target setting, monitoring and inspection at all levels in both schools and ITE institutions. Again, the progression of these themes had an impact on the study that will be discussed more fully in Chapter Nine.

Figure 5i: Outline of Samples and Methods Stage by Stage

PILOT STUDY (A)

Questions: What are the main roles student teachers identify as central in the teaching of literacy?

What kinds of literacy teaching strategies do novice teachers use?

What kinds of literacy teaching strategies does an experienced teachers use?

What are the main kinds of knowledge that an experienced teacher draws on in using these strategies?

What are the main roles an experienced teacher identifies as central in the teaching of literacy?

Time-scale	Sample	Methodology
December 1996 – March 1997	96 student teachers(19 specialist and 77 non-specialist) 1 experienced teacher (English specialist) 10 student teachers (3 specialist, 7 non-specialist	Written reflections from 96 student teachers Unstructured interview with 1 experienced teacher Sequential observation with 10 student teachers and 1 experienced teacher

PILOT STUDY (B)

Questions: What are the main roles student teachers identify as central in their teaching of literacy?

What kinds of literacy teaching strategies do novice teachers use?

What are the main types of knowledge that student teachers draw on in using these strategies?

How does knowledge use vary at different stages of ITE?

Time-scale	Sample	Methodology
April 1997 – June 1998	5 specialist student teachers 14 non-specialist student teachers (5 1st years, 4 2nd years, 4 3rd years, 6 4th years)	Sequential observation Semi-structured interviews Written evidence, e.g. questionnaires, lesson plans

STAGE ONE

Questions: What are the main roles student teachers identify as central in their teaching of literacy?

What kinds of literacy teaching strategies do novice teachers use?

What are the main types of knowledge that student teachers draw on in using these strategies?

How does knowledge use vary at different stages of the teaching session?

How does knowledge use vary at different stages of ITE?

What initial impact does the National Literacy Strategy have on student teachers' knowledge and understanding in its first year of implementation in schools?

What kinds of knowledge do school based mentors view as central to effective literacy teaching?

Time-scale	Sample	Methodology
Nov 1998 – July 1999	6 specialist student teachers 12 non-specialist student teachers (five 1st years, three 2nd years, five 3rd years, five 4th years) 5 Mentors	Observation of one literacy teaching session per student as above. Semi-structured interview with each student Semi-structured interview with the school based mentor attached to each student. Written evidence, e.g. plans, evaluations

STAGE TWO

Questions: How do school based mentors support student teachers as developing literacy teachers?

What are the main roles student teachers identify as central in their teaching of literacy?

What are the main types of experience that inform student teachers' knowledge?

What is the impact of the National Literacy Strategy on student teachers' knowledge and understanding in its third year of implementation in schools?

Time-scale	Sample	Methodology
STAGE 2 (A)		
April 2000 - June 2000	2 mentors 4 student teachers (final placement - 2 specialists, 2 non-specialists) 1 head teacher	A)Observations of student teachers as above B) semi-structured interviews: mentors, students as above C) semi-structured interviews: mentors, students, head teachers to probe: • The main influences on the teaching of English within the school context • The impact of this context on the developing identity of the student teachers as teachers of English
STAGE 2 (B)		
June 2001	35 4th year English specialist student teachers 2 4th year English specialist student teachers	A) Seminar activities with written evidence B) Semi-structured interviews to probe: • The main influences on the teaching of English • The impact of this context on the developing identity of the student teachers as teachers of English

Rationale for the Choosing of Samples

The samples were all drawn from one BA/BSc (QTS) four year degree programme. I was a primary English tutor on it. See Appendix One for more details.

Pilot Study (A)

96 student teachers - 19 specialist, 77 non-specialist (written reflections) December 1996

Ninety-six student teachers constituted four seminar groups of student teachers (mixed English specialist and non-specialists) in their second year of ITE (representing a midpoint in progression through ITE). This size of sample is considered broad enough to produce general patterns that could be followed up in greater depth with smaller numbers. The questionnaire given to this sample was only a minor, preliminary stage in the study and produced a relatively small amount of written evidence of a reflective nature from each participant. The use of a questionnaire made it possible to process and analyse evidence from a large number of student teachers at this stage.

10 student teachers - 3 specialists, 7 non-specialists and 1 experienced teacher (observations with all, interview with experienced teacher) January - February 1997

The sample was chosen to represent a range of experience and subject specialisms. The experienced teacher was used to provide a basis for comparison with novice student teachers. She was an English specialist and had been identified by OFSTED as an excellent teacher. She was studied as a case, but the case was not contextualised. At this point the focus was clearly on her decision making in her interactions with young

children. The observation and following interview with the experienced teacher provided a basis from which to design the initial interview schedule for the novice teachers. The student teachers were used to provide a pilot sample for developing the observation/interview methodology. This needed to be broad enough to allow comparisons to be made and patterns to develop, while being small enough to allow for some detailed analysis.

Pilot Study (B) April 1997 – June 1998

19 student teachers: (five 1st years, four 2nd years, four 3rd years, six 4th years -5 specialist, 14 non-specialist)

(observation and interview with all)

The size and nature of the sample was determined by considerations relating to the main research questions. These centred on the main roles student teachers identified as central in their teaching of literacy, the kinds of literacy teaching strategies that they used, the main types of knowledge they drew on and how this varied at different stages of ITE. To examine student teachers' learning and developing identities as literacy teachers the sample needed to be large enough to demonstrate patterns and regularities which might be reproduced amongst several students, while still being small enough to permit detailed analysis of each one. It also needed to allow some initial comparisons to be made between the behaviour and understanding of students at different stages of training.

Stage 1 Nov 1998 – July 1999

18 teachers: (five 1st years, three 2nd years, five 3rd years, five 4th years - 6 specialist, 12 non-specialist)

5 school-based mentors

(observations and interviews with all student teachers, interviews with mentors)

The sample of student teachers was chosen for similar reasons as in Pilot Study (B). The aim at this stage was to test the patterns established in the pilot studies, while still being open to new themes and possibilities. At this stage the question of exploring actions at different stages of lessons was included, as this had been noted as being important in the previous stage. In Pilot Study (B) there had been distinct differences between the teaching strategies used (and the student teachers' reflections on them) between the beginning, middle and end of the lesson. The pattern of learning at each stage of lessons had become a new area to be probed further. Again, an attempt was made to include student teachers at different stages of ITE to facilitate comparison.

The school-based mentors were also included in the sample at this stage in order to address the sub-questions: *What kinds of knowledge do school-based mentors view as central to effective literacy teaching? What criteria do mentors use in making judgements about the literacy teaching ability of student teachers?* The mentors were chosen simply because they were supporting the student teachers in the sample at the time the data was collected. There are fewer mentors than student teachers because some mentors were responsible for more than one student teacher.

Stage 2 (A) April 2000 -June 2000

4 student teachers (all 4ᵗʰ years, 2 specialist, 2 non-specialist)

2 school based mentors

1 head teacher

(observations and interviews with student teachers, interviews with mentors and head teacher)

It was decided to focus on two case studies in order to explore the context of two school settings in depth and detail while allowing some scope for comparison between classrooms and schools. It was also important to study more than one student teacher in each school setting so that themes that were common to student teachers or schools could be identified, reducing the probability of patterns in the data being dependent on idiosyncratic features relating to one student teacher. One school was small and rural and the other was in a larger urban setting. In both schools interviews were carried out with people who were identified as having a direct or indirect impact on how the student teachers in question taught English.

Stage 2 (B) June 2001

35 4ᵗʰ year English specialist student teachers

2 4ᵗʰ year English specialist student teachers

(focus group activity with written evidence from 35 student teachers, interviews with 2 student teachers)

The last stage of data collection was designed to address again questions about the main roles student teachers identify as central and the main types of knowledge they draw on,

but in a context that was removed from the immediacy of the practical demands of the school setting. I also wanted to examine the impact of the National Literacy Strategy on student teachers' knowledge and understanding in its third year of implementation in schools. This was at a stage when the National Literacy Strategy had been in schools for some time and had had more time to become incorporated into school practices. I particularly wanted to study student teachers outside of their school placements, at a time when they would be in a position to reflect over their ITE experiences in general, including other placements and other contexts for learning. My main intention was to conduct two interviews that would address these issues in depth and detail. The focus group discussion and written evidence was used as a preliminary stage leading up to the interviews, and gave me a means of identifying common themes to be used to structure the interview schedule. The focus group was chosen as a sample of student teachers who were at the very end of their ITE, having successfully completed all school placements. As English specialists they had received the fullest possible formal education in the teaching of primary literacy within the constraints of current ITE guidelines. A large group was required to generate common themes that would be used to formulate the schedule for the semi-structured interviews that would follow on from evidence gathered from the group. The focus group met on one occasion only.

The two student teachers who were interviewed in depth were volunteers from the focus group.

The Development of the Study

Undertaking a study of literacy teaching over a period of time within a constantly changing cultural context has meant that the study is based on a theoretical framework that has progressed through several stages. As the data have suggested new questions, these have demanded further developments in the design of the study. The development of the study is summarised in Figure 5ii below:

Figure 5ii Summary of the Development of the Design and Methodologies in the Study

An initial focus on:
- Student teachers learning in action within the school setting.
- The types of knowledge used by student teachers in their decision making as they teach English.
- The constraints and affordances impacting on that decision-making.

LEADING TO
↓

- Examination of the induction of student teachers into the communities of practice within the school setting.
- Consideration of both how knowledge and practice is mediated by school based mentors and how it is allowed to develop in schools in partnership with Higher Education.

LEADING TO
↓

- A clearer focus on the role of the various contexts that comprise the learning experience of student teachers, and an examination of this alongside some of the ideas in relation to activity theory being currently discussed in the socio-cultural field.

An initial primary focus on the experience of students has developed into an examination of how that experience is mediated and the role of the contexts within which it occurs. Thoughts, beliefs and values exist within an individual mental reality that is related to but distinct from the physical reality from which they derive. Particular physical experiences give rise to particular thoughts, but these are constructed as part of an existing mental framework. This framework is at least partly constructed from a combination of the individual's previous experiences and the cultural system in which s/he is operating. This means that the thoughts, beliefs and values underlying student teachers' actions in the classroom needed to be examined not only in the context of particular episodes but also

in relation to the cultural setting(s) that help to shape them. American anthropologist Leslie White (1949) wrote:

> With words man creates a world of ideas and philosophies. In this world man lives just as truly as in the physical world of his senses … This world comes to have continuity and a permanence that the external world of the senses can never have. It is not made up of the present only but of a past and a future as well.
>
> (P. 236)

The relationship between the mental and physical world lies at the heart of this study. Every cultural element has a subjective and an objective aspect. The mental processes involved in the construction of knowledge and the development of identity are subjective in the sense that they uniquely belong to an individual. However, these processes occur in relation to the external, physical world that has an objective existence. Thus an exploration of the roles played by the cultural settings in which the student teachers were operating became central to understanding the mediation of their experiences as they learned to teach English. This realisation unfolded as the study progressed.

The study has at its centre the relationship between teacher behaviour and the thoughts, beliefs and values that underlie the actions taken by student teachers as they teach English to primary age children. The strength of the design of this study lies in its close relationship with the data. The longitudinal design and the movement between larger samples and more focused case study enquiries means that the student teachers and the

contexts within which they operate can be studied in depth and detail and issues explored in both larger and small scale samples. The richness of the data collected in the more detailed case study work allows the examination of the relationship between thoughts, actions and settings in a way that is multi-layered.

There was an additional factor that was not known when the study was first proposed that provided both an exciting opportunity and a further challenge to be considered in relation to the design. This was the implementation of the National Literacy Strategy (DfEE, 1998), which occurred after the Pilot Studies had taken place and during Stage One. This provided an opportunity to study the impact of changes that had been initiated at national level on the local settings in which the student teachers were learning and inevitably on the actions and thoughts of the student teachers themselves. This was a unique opportunity to be examining changes in thinking and action that were taking place on many different levels, from individual children, teachers and student teachers to the machinery of national policy making. The importance of capitalising on this opportunity is reflected in the design in its attempt to capture the impact of different layers of cultural contexts on the developing knowledge base and identity of the student teachers (see discussion of the layers of context later in this chapter). The fact that these national changes were not foreseen at the proposal stage is also reflected in aspects of the design that could have been strengthened to study the impact in greater depth and with surer validity. If the usefulness of being able to make such direct comparisons between student teachers pre and post National Literacy Strategy implementation had been recognised from the beginning it would have been helpful to build in ways of examining the changes

that were taking place more systematically. While the design did allow for this to an extent, it would have been useful to be able to follow the same student teachers through this period, as well as comparing different groups, as happened in the present study (see the critique of the design and methodology in Chapter Ten for further discussion).

The study is essentially an attempt to illuminate practice and enlighten it by providing information which questions assumptions or offers a fresh way of seeing familiar events (Hammersley, 1997). The potential of social science research to throw new light on existing practice is emphasised by Chaiklin when he considers the power of descriptions of practice and contexts and their usefulness for the development of practice (Chaiklin, 1993). The study takes the view of Miles and Huberman that 'social phenomena exist not only in the mind but in the objective world as well, and that there are some lawful, reasonably stable relationships to be found among them.' (Miles and Huberman, 1994). This illuminatory model of research is essentially about building up pictures and investigating patterns of behaviour. This takes time and requires a richness of detail and depth of exploration. This was facilitated by a study that at several stages involved relatively small samples and a relatively long period of time.

This multi-layered, in-depth approach, which has these strengths, also brings challenges. The complexity of the study and the fact that it was undertaken on a part-time basis has inevitably meant that it has taken a considerable time to complete. The contexts that are of such central importance to the interpretation of the data have undergone continuous change at both local and national levels. This has meant that the study has had to adapt

and evolve as it progressed. As such it has been both iterative and progressive. Several research sub-questions have been revisited at different stages, in different contexts and with different size samples, while new questions have arisen and been applied at later stages as a result of earlier findings.

This cyclical and evolving design resonates with Miles and Huberman's (1994) view. They describe their approach as analytic induction used within an iterative procedure - a succession of question and answer cycles, moving from description to explanation and back again. This procedure involves the researcher in taking raw experiences and converting them into words. In this study the words arise in the form of observational notes, interview data and written evidence. The words are processed to look for patterns and regularities; the patterns identified are then used to refer both back at previously collected data and forward to the next stage of collection. The two levels of description and explanation are thus interwoven; the question 'what is going on here?' can, in Chaiklin's terms, be answered in such a way that theory and practice are not separate entities but related parts of robust patterns in practice.

The Rationale for Case Study Work

The search for patterns in behaviour in the fine detail captured in 'moments' of teaching (as discussed in Chapter Three) must involve a degree of intense analysis that cannot be done on a large scale involving many people. In the present study there was a movement backwards and forwards between small scale investigation involving samples that were studied intensely (for example the study of the experienced teacher in Pilot Study [A])

and work on a larger scale. The latter involved samples with greater numbers but that were still small enough to allow for some exploration in depth and detail. For the purposes of this discussion I will include all samples (other than the group of ninety-six student teachers studied in Pilot Study (A)) under the broad category of case study. This is because even where samples included as many as nineteen student teachers they were studied over a period of time that was long enough to allow for each case to be given considerable time and attention (as will be discussed more fully later in this chapter). This allowed me to go into some depth and detail in relation to the research questions with each one.

The case study approach was taken with the view that complex patterns of behaviour could be observed in depth and detail in small samples of student teachers. The strength of examining cases in this kind of depth is that it acknowledges the complexity and inter-relatedness of the factors involved and the importance of investigating them in context. As MacDonald and Walker (1975) claim, case study is the examination of an instance in action. The 'in action' element brings in a range of influencing factors. The influence of these factors will be defined by the context and therefore needs to be examined in relation to it. As Stake (1988) states, 'the boundedness and behaviour patterns of the system are key factors in understanding the case' (P.237).

In his discussion of the role of culture in the construction of knowledge, Cole (1996) makes use of the notion of cognitive schemas that channel individual thinking by structuring the selection, retention and use of information. Cole describes schemas as

selection mechanisms employed by individuals as they engage with their worlds. The schemas specify which elements of information are essential and how they relate to each other. Schemas serve as guides to action and their use is context specific. The study of the factors influencing the thoughts and actions of student teachers as they learn to teach English required an exploration of the schemas operating within and in relation to the contexts in which they took place. This required a richness of data that could only realistically be provided by the case study approach.

Cole makes particular mention of a kind of schema often referred to as a script. A script is an event schema that specifies the people who appropriately participate in an event, the roles they play, the objects they use and the sequence of causal relations that applies. As such it is generalised from a range of experiences and may develop continuously. Schemas provide a bridge between the physical world and the mental processes that are derived from it. They determine how information originating from the physical, objective world is processed into a subjective construction which may also have what Bruner (1966) terms cultural 'inter-subjectivity' - i.e. a subjective identity shared between members of the same culture.

Roy D'Andrade (1995) links the use of schemas in psychology to their use in anthropology to introduce the idea of cultural schemas. These are patterns of elementary schemas that are shared between members of the same culture. So a member of a culture will learn scripts from other members – children will learn from adults and so forth. Once a person has a crude script he or she can enter the flow of a particular event with partial

knowledge, which gets enriched in the course of the event itself, facilitating later co-ordination.

According to Bruner (1990), scripts are best considered elements of a narrative. For Bruner, it is narrative, the linking of events over time, that lies at the heart of human thought. The representation of experience in narratives provides a frame that enables humans to interpret their experiences and one another. The use of cultural schemas has a direct relationship to the main question in this study. As student teachers develop identities as teachers of English they could be described as learning and developing schemas that guide their behaviour. So a student teacher processes her perceptions of the physical actions that take place in the classroom according to schemas that will help her both to perceive what has already taken place in a particular way and to regulate her actions in the future. These are subjective, mental processes that may be at least partly learned as part of her membership of a particular cultural group.

It is particularly important in understanding the methodology to note that schemas are context specific. Rumelhart (Rumelhart and Norman, 1980) makes the point, with respect to adult reasoning, that most of the reasoning we do does not involve the application of general purpose reasoning skills, but relates to specific bodies of knowledge related to the particular context within which we are operating. So although schemas relate to mental processes they are situated in a cultural setting. They operate both inside and outside the head. They bridge the mental and the physical and the physical is highly context specific. The question ultimately at the heart of this study involves the investigation of the

relationship between these mental processes, the event schemas or scripts with which student teachers operate and the complex cultural settings within which they develop. As the study progressed the exploration of these settings became an intensifying focus.
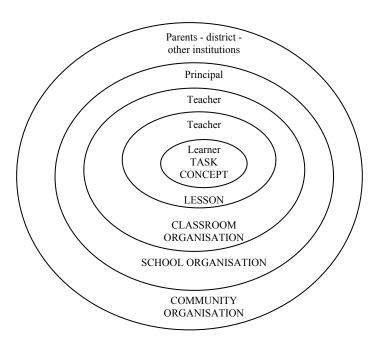
The cultural setting is a complex entity operating on a number of different levels and within a number of different physical situations. Within each case in this study there were several areas which could be described as cultural settings. These can be seen as represented in Figure 5iv below. The methodology focuses on the school setting and specific literacy teaching sessions within it. Within that setting there are a number of influencing factors, both internal and external, ranging from the belief system of the class teacher who works alongside the student teacher, to the impact of national policy. The study of these complexities is a necessary part of answering the question at the centre of this study. John Dewey (1938) comments that that there is a danger that the psychological treatment of experience will approach situations in a reductive fashion, taking a singular object or event as a unit of analysis. As he states:

> In actual experience, there is never any such isolated singular object or event; an object or event is always a special part, phase or aspect, of an environing experienced world – a situation.
>
> (P.67)
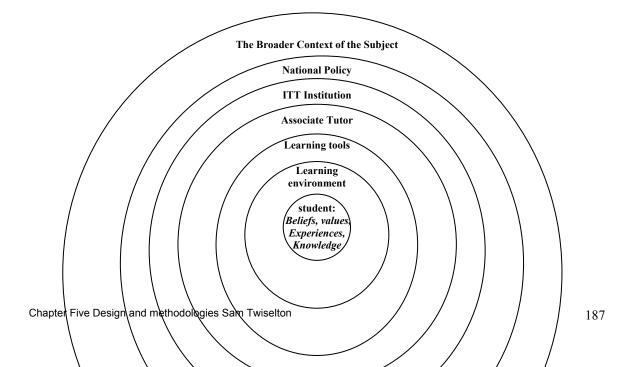
Isolating what is thought from the circumstances which give rise to the process of thinking can be fatally obstructive to understanding the thought itself. Taking the notion of context as that which surrounds, the context can be represented as a series of

concentric circles representing different levels of physical immediacy. This form of representation is developed from Cole's model that was used to represent the embedded systems impacting upon teacher-pupil exchanges that were part of a lesson that was part of a classroom that was part of a community (Cole, Griffin and LCHC, 1987). This was developed from Urie Bronfenbrenner's (1979) work on the ecology of human development. Bronfenbrenner describes embedded systems, starting with the micro-system at the core. The model then proceeds outward through meso-systems and exo-systems), to the macro-system. Cole *et al's* (1987) model is represented in Figure 5iii below.

Figure 5iii Concentric Circles Representing the Notion of Context as 'That Which Surrounds' used by Cole, Griffin And LCHC, 1987

For the purposes of this study, the model has been adapted so that student teacher behaviour is the unit in the middle and the levels that surround it represent the factors that

potentially shape it. The many layers of context that have a direct or indirect impact on the learning of student teachers are shown as radiating out from the student teacher at the centre. However, both the context represented by each circle and the way they relate to each other are subject to variables that will make the impact of contexts vary widely for each student teacher. These are discussed more fully in Chapter Nine. The outer circle, the broader understanding of the subject in relation to contexts beyond educational systems is shown at the outside as it represents the student teacher's potential to bridge thought and action within the system to the world beyond it. There is, however, an argument for placing it at the centre, as this potential is so bound up with the student teacher' own beliefs and sense of identity. It is important to note that Cole *et al.'s* model makes use of the notion of a 'weaving together' (Cole, 1996, P.135), in which the boundaries between layers are not clear-cut and static. They are seen rather as ambiguous and dynamic. Thus, relationships between each of the circles must be seen as shifting and complex. These issues will be more fully discussed in Chapter Nine.

Figure 5iv Concentric Circles Representing the Multi-Layered Contexts of the Study

The Broader Context of the Subject

National Policy

ITT Institution

Associate Tutor

Learning tools

Learning environment

student:
Beliefs, values,
Experiences,
Knowledge

Class-teacher,
Pupils
School practice

plans, evaluations,
assignments, profiles

observations, tutorials,
feedback

Subject/generic courses

NLS, National Curriculum

A generality of knowing that
extends beyond schools
and schooling

The type of case study approach taken could be termed as what Stake (1994) describes as instrumental case study. In this form of case study a particular is examined to provide insight into an issue or the refinement of a theory. Although the case is looked at in depth and its contexts are scrutinised, this is done because it helps us pursue the external interest (in this instance, an examination of how student teachers develop knowledge and understanding as teachers of literacy). Because the particular case is not in itself the primary interest a number of cases are studied in order to inquire into the phenomenon in a wider context.

The validity of studying particular cases to inquire into more general phenomena may be questioned. As Simons (1994) states, the paradox of case study is that the uniqueness which allows for complexity to be understood in a particular context seems to lead to the impossibility of generalising from something which is particular to something which is universal. However, as Simons points out this misrepresents (or over-simplifies) the role

case study plays in the relationship between the individual case and the more general situation. Case study does not claim to be able to give examples that will be uniformly replicated in a universal way. Instead it can be used to illuminate a situation in a way that helps us to see it differently. Stake (1994) has highlighted that to study a case is to open up the possibility of new knowledge constructions and fresh perceptions. While these may have been provoked by a particular case they may also lead us to think differently in a way that goes beyond that case. So studying a case may lead to new ways of understanding a broader situation.

It has been argued in Chapter Three that experience and reflection on experience are the mediums through which we construct meaning. Meaning making stems both from the physical world and from the mental activity we bring to it. Our perceptions are based on our experiences but they are mental events that have a subjective reality. Representing the world is a process of transforming what is in our mental consciousness into a public form so that it can be examined and shared. By examining something in depth and analysing it in detail we alter our perceptions of what is happening. By representing these new perceptions and making them public we open up the possibility of other situations also being seen in new ways. Case study can help us to perceive experiences differently in a way that goes beyond the individual case.

Data Collection Methods

Observations

A data collection method that was used at every stage of the study involved observing teaching episodes and taking detailed notes. The main function of these observations was to provide a basis for the interviews that followed them up. The observations of practice - an attempt to look at what Woods describes as the teachers' ability to seize the 'teachable moments' that occur (Woods, 1996) - were a vital key to accessing the understandings that lay behind them.

The need for the interviews to be at least partly based on the observation of an actual teaching episode was of central importance in answering the research questions relating to teacher behaviour and the thoughts, beliefs and values that underlie it. The study is based on the assumption that teachers or student teachers act, at least some of the time, according to underlying notions about their roles within the classroom and the knowledge required in carrying them out. It was consequently important that the interview data centred on the actions taken by the student teachers as a way of exploring the knowledge, understanding and sense of identity that underlay them.

The observations were done through an adaptation of the target child method that has been developed by a number of researchers, from the observational methods originally used by Sylva, Roy and Painter (1980) in their study of nursery children. In this an individual target is identified who is closely observed for pre-determined time intervals. Detailed notes are made of everything the target does and says during that interval. On occasion events happen so quickly that only cursory notes can be made at the time they occur. In this instance it is important to ensure that they are expanded on as soon after the

event as possible. In this study the target was the teacher or student teacher and notes were made on the flow of behaviour and responses of the target/pupil interactions. The observations were conducted by time sampling in ten - fifteen minute periods of intense observation within a looser observation of the whole teaching session, in order to contextualise the actions of the target teacher or student teacher.

In this study, to an extent, the criticisms commonly levelled against observational research as unreliable and invalid can be countered by the claim that the main findings of the study are based not on the observational data, but on the interview data they were used to trigger. In addition a number of steps were taken to ensure that for the intended purposes the observational data were as valid and reliable as possible:

- At each stage of the study at least one observation was carried out with more than one observer present. Using this method it was possible to cross-check findings – an approach advocated by Adler and Adler (1987), Denzin (1989) and Phillips (1985).
- Observational notes were shared with and verified by the target student teachers. In each case they were validated as reasonably representative of the pattern of events.
- The iterative, 'question and answer' process of systematic and repeated data collection through several stages allowed for patterns to be established over a number of occasions.

This non-participant method of observation was chosen in preference over a more ethnographic approach because of the emphasis on description of practice that was as

uninterrupted as possible. Some disruption is almost inevitable but it was important to keep this to a minimum. Event sampling was also rejected because of the necessity to describe what was there rather than to predetermine what was being examined to such an extent that important patterns of behaviour could go unnoticed. This was, once again, very much in line with Huberman and Miles' question and answer cycle; using description and explanation to focus, refine and modify the conceptual framework allowing sufficient flexibility for the description to throw up new question and patterns.

Following this method of refinement and modification as the study progressed, the notes made during observations became more focused. Adler and Adler (1994) note that the observational research process evolves through a series of different stages as it progresses. This was very much the case in this study. The progression is summarised in Figure 5v below.

Figure 5v The Progression of Observations in the Study

Initially a relatively crude analysis of first set of data in Pilot Study (A) - this involved a comparison between experienced teacher/student teacher data. This highlighted three immediate areas of interest. Experienced teacher data was:

♦   richer in references to literacy concepts

♦   showed a greater range of strategies being used

♦   included much more use of assessment (see Chapter Six)

The value of identifying the range and nature of teaching strategies became clear. This led to the development of a coding system to categorise the teaching strategies in each session.

The coding was used to direct the observations in Pilot Study (B) and in constructing an interview schedule to follow them.

The findings from Pilot Study (B) led to a need to focus observations in Stage 1 on the relationship between strategies and on pattern of strategies that flowed during each stage of the lesson. Did they vary? In what way?

The focus in Stage 2 was on the relationship between the student teachers' development of literacy teaching strategies and the contexts that influenced them towards the end of ITE.

Each stage of this progression is discussed in more detail in each of the stage chapters (Chapters Six, Seven and Eight).

Interviews

A second method that was introduced at an early stage was interviewing. Tuckerman (1972) has described interviews as providing access to what is inside a person's head. He claims that interviews make it possible to measure what a person knows (knowledge or information), what a person likes or dislikes (values and preferences), and what a person thinks (attitudes and beliefs).

The question at the centre of this study relates to the developing identities of student teachers as teachers of literacy. As such the study is an exploration of knowledge, values, attitudes and beliefs; how they are shaped and developed and how a range of factors impacts on that process. This necessarily involves delving into the understandings of the student teachers in question. This is a complex area requiring depth and flexibility.

Interviewing was the best-suited approach for providing the core data. As Edwards and Talbot (1994) state:

- You can probe and explore meanings and interpretations held by the participants.

- They yield the good rich data essential to, for example, case study.

(P.86)

The interviews were semi-structured (see appendices for examples of the schedules), using observational data as a main focus, but with some more general questions designed to probe the interviewees' understanding and approach within the broader context of their literacy teaching. The aim was to build up a picture of how the target understood the events that had been observed previously: specifically, how the actions taken related to an understanding of what and how the pupils were learning and the role of the teacher in supporting this. It was also important to try and understand how the student teachers viewed their own learning; the types of knowledge they felt they needed most in order to progress and their perception of which sources were most fruitful in providing them with such knowledge. This was a vital part of the question and answer cycle. The analysis of data was sequential and interactive: this meant that patterns thrown up by the observations could be probed in the interviews and patterns thrown up by the interviews could be used to interrogate the observational data. Good theory, Glaser (1978) suggests, has categories that fit the data; is relevant to the core of what is going on and can be used to predict, explain and interpret what is going on. The interviews had a vital role to play

in the construction of the theory in that they allowed previously identified patterns to be followed up further while retaining scope for throwing up new patterns too.

The interviews were semi-structured at every stage. This means that there was a basic framework of questions that all interviewees were asked. However, within that framework there were a number of points where the interviews became personalised and therefore different from each other. In particular this relates to the main part of the interview where interviewees were reminded of the actions they had taken in each part of the teaching session and asked to reflect on the knowledge base and reasoning underlying them. Although at this point in the interview the basic strategy remained constant: (e.g. 'So why did you do that? Where did you get that idea? What was your thinking there?), the actions to which such questions referred clearly differed from one interview to the next.

The semi-structured interview approach used is similar in nature to the 'focused interview' developed by Merton and Kendall (1946). They identified the main ways that this approach differs from other types of research interview as:

1. The interviewees are known to have been involved in a particular situation.
2. Elements in the situation that the researcher deems significant have been previously analysed.

3. Using this analysis an interview guide has been constructed, determining the major areas of enquiry and the hypotheses that determine the relevant data to be obtained in the interview.

4. The actual interview is focused on the subjective experiences of the person exposed to the situation.

(P.543)

The approach taken in this study conforms to all four points. In the quest for what Merton and Kendall term 'significant data' the interviewer continuously evaluates the interview while it is in progress. They specify a set of criteria to this end:

1. *Non-direction:* interviewer guidance should be minimal.

2. *Specificity:* respondents' definitions of the situation should find full and specific expression.

3. *Range:* the interview should maximise the range of responses reported by the subject.

4. *Depth and personal context:* The interview should bring out the affective and value-laden implications of the subjects' responses. It should elicit the relevant personal context, the idiosyncratic associations, beliefs and ideas.

The approach taken conformed to these criteria in every respect. As the study progressed the specificity and range aspects of the interview became fuller, as the research questions were refined and the interviewer's skill in prompting responses without directing developed.

The use of semi-structured interviews was adopted for a number of reasons. Firstly, the dialogue needed to be kept close to the research question, particularly the sub-questions relating to the knowledge underlying the actions taken during the teaching session and the perceived sources of that knowledge. Interviewees therefore needed to be asked similar questions that kept close to this goal.

Within this framework, however, obviously no two observed sessions were the same so the schedule had to be flexible enough to accommodate the different observational notes that were used to 'trigger' responses from the interviewees. This flexibility was also important in terms of allowing particular avenues (that may not have been planned in the schedule, but were deemed as significant in relation to the research questions) to be explored further.

There needed to be enough common ground between interviews for patterns to emerge across the whole sample. This meant that all interviewees had to be asked a similar set of questions so that comparisons could be made between responses given. As the study progressed and the focus became more specific, the aims of the interviews were also clearer. More precision could be achieved by the use of a structured set of questions.

Using interview has its difficulties. Cicourel (1964) lists five unavoidable features of the interview situation that would normally be regarded as problems:

a) There are many factors that inevitably differ from one interview to another, such as mutual trust, social distance and the interviewer's control.

b) The respondent may well feel uneasy and adopt avoidance tactics if the questioning is too deep.

c) Both interviewer and respondent are bound to hold back part of what it is in their power to state.

d) Many of the meanings which are clear to one will be relatively opaque to the other, even when the intention is genuine communication.

e) It is impossible, just as in everyday life, to bring every aspect of the encounter within rational control.

Several measures were taken to account for these factors:

Interviewees were all encouraged to view the interview as non-threatening and helpful. They were conducted on an entirely voluntary basis. The analysis of their actions was presented as an opportunity to reflect in detail in a way which would help them in future sessions. Guidance was offered outside the taped interview so that interviewees felt they were gaining something from it. Without exception the interviewees expressed gratitude about the usefulness of the process. Although some interviewees may have been more forthcoming than others, this did not invalidate the data, but merely dictated its level of richness. Potential difficulties with unclear meanings were alleviated by the shared experience (the teaching session) on which much of the interview was based. This was practical experience, fresh in the memories of both interviewer and interviewee. Notes

made during observation of the session were cross-checked with interviewee and this formed an agreed summary on which much of the interview was based.

A number of other factors were also shared between interviewer and interviewee:

* Both had knowledge of the school and classroom.

* Both had knowledge of the college course.

* Both had knowledge of the wider context of primary education.

* Both had a common goal of helping the student to develop into an effective literacy teacher.

These increased the likelihood of shared meanings and interpretations.

The open-ended nature of the questions allowed for responses to be probed further and concrete examples to be sought. Potential misunderstandings could be clarified. While it could be argued that there was a strong likelihood of bias from interviewees who naturally wanted to show themselves in a good light, this in itself was not a problem. What constituted 'a good light' in the eyes of the respondent was a valuable source of data, in that it helped build up the picture of the role they sought for themselves. The question at the heart of the study relates to the developing identity of student teachers of literacy. This identity is held to be enacted both in the roles they believe are central to good literacy teaching and the knowledge that underpins them as well as in the roles that are actually conducted.

Analysis

The basic approach taken was one of content analysis. This was based on the assumption

that analysis of language in use can reveal meanings, priorities, understandings and ways of organising and seeing the world. As Edwards and Talbot state:

> The process of content analysis can be likened to passing a comb through the texts. The comb is shaped by the concerns of the research and the degree of detail required to answer the research questions. Sometimes, like tangled hair, the text fights back, resists the comb and may even alter its shape and hence the research question or concern. An interplay between data and analytic process is therefore an important feature of content analysis.
>
> (P.67)

This fits well with the iterative question and answer cycle that has been discussed. Analysis of interview data at each stage fed into analysis of both observational data and other interview data, backwards and forwards, as the questions and methodologies became more refined.

At each stage the interview data was analysed broadly following the guidelines recommended by Hycner (1985). These are summarised:

1. *Transcription:* having the interview tape transcribed, noting not only the literal statements but also non-verbal communication.

2. *Bracketing and phenomenological reduction:* for Hycner this means 'suspending as much as possible the researcher's meaning and interpretation

and entering into the world of the unique individual who was interviewed'.

3. *Listening to the interview for a sense of the whole:* this involves listening to the entire tape several times and reading the transcription a number of times to provide a context for the emergence of specific units of meaning and themes later on.

4. *Delineating units of general meaning:* this entails a thorough scrutiny of the transcripts to elicit the participant's meaning.

5. *Delineating units of meaning relevant to the research question:* this is a sifting of the units delineated in step 4, to identify the relevant ones. It was particularly important at this stage that the main question was broken down into sub-questions. For example: What kinds of knowledge do student teachers draw on in using these (observed) strategies? What are the main sources of this knowledge? Data relevant to such questions are more clearly identifiable than to the broader main question.

6. *Training independent judges to verify units of relevant meaning:* Hycner recommends verifying the findings by using other researchers to carry out the above procedure. This was done on a group basis, with a number of people participating.

7. *Eliminating redundancies:* the list is revised accordingly.

8. *Clustering units of meaning:* units that naturally cluster are put together, e.g. units all about keeping the children on task, or giving encouragement, or task instructions.

9. *Determining themes from clusters of meaning:* the researcher examines all the

clusters of meaning to determine if there is one or more central theme.

10. *Writing a summary of each individual interview:* this should be done incorporating themes that have been elicited from the data.

11. *Identifying general and unique themes for all the interviews:* the researcher now looks for themes common to most or all interviews as well as individual variations and themes common to groups of interviews.

12. *Contextualization of themes:* at this point Hycner claims it is useful to place these themes back within the overall contexts from which they emerge. Stage Two was explicitly designed to do this.

The unit of analysis was what Hycner calls a 'unit of meaning'. This is a stream of discussion that carries a completely meaningful statement. So 'My main role was making sure they took it in turns' counts as a unit of meaning. However 'and I was also concerned that they enjoy themselves', although part of the same sentence is a separate unit because it carries a new meaning.

Written Evidence

A third method involved the collection of written evidence. This was taken in a variety of forms. At the very earliest stage of Pilot Study (A) a simple initial survey of 96 student teachers was conducted - see Chapter Six for more details of the survey itself. Cohen and Mannion (1994) note that 'typically surveys gather data at a particular point in time with the intention of describing the nature of existing conditions' (P.83). This was precisely

the rationale for conducting a simple survey at this earliest of stages in the study. It served to give me a 'first glimpse' of the situation with a relatively large group of student teachers at a mid-point in their ITE. The survey was developed in the form of a simple questionnaire that was completed by the student teachers as part of a seminar task. The data and findings from the survey were not anticipated as having a major impact on attempts to answer the research questions in the study, but were seen rather as a tool to help to develop the methodology. The intention was to gain a simplified picture of the situation from a large group of student teachers in order to focus the observation and interview methodology to be used with a smaller group in a much more intense and probing approach. The survey served this purpose very well. The findings (discussed in Chapter Six) helped to clarify the situation with regard to student teachers' notions about the role of the teacher in teaching literacy. This was helpful in directing the first set of observations with student teachers and with the experienced teacher and also helped to provide a focus for the interview with the experienced teacher.

Written evidence was also collected in Stage 2 (B) as part of the focus group discussion with fourth year English specialists at the end of their ITE. This was a very informal method of data collection that was designed simply to provide a starting point for the construction of an interview schedule to be used with the two volunteer student teachers from the same group (see appendix seven).

Written evidence was also used in a more general way in the sense that it provided important contextual information that served to fill in background detail and to

triangulate some of the other data. Items such as plans and evaluations had the main function of helping to contextualise the events under scrutiny. These documents also helped identify the perspective of the student in relation to the knowledge and strategies they felt were important. These too could feed into the question and answer cycle by helping to illuminate perspectives which could in turn help to identify patterns of behaviour.

Written evidence of this kind served as a form of triangulation, providing another source of information alongside observations and interviews. Research methods act as filters through which the environment is selectively experienced. This means they are never neutral. Exclusive reliance on one method may bias or distort the picture. Written evidence could be used to check and balance both what interviewees claimed were their intentions before teaching and their view of what had happened after teaching.

Lesson plans, schemes of work and policy documents provided a useful summary of intentions both in relation to the individual episodes that were observed and in relation to general approaches taken by individuals (e.g. student teachers, mentors, class teachers etc.) and by the school as a whole.

Lesson evaluations provided a helpful source for summarising student teachers' reflections on the lessons and their role in it. Written critique sheets from mentors provided another source for confirming their perceptions of what had happened and the priorities they were identifying.

Ethical Considerations

The ethical acceptability of the procedure undertaken and potential outcomes that might transpire will be an issue in any study. This is particularly evident when participants in the study are used as vehicles for exploring complex phenomena, involving probing thoughts, actions and circumstances in depth and detail. The costs/benefits ratio has been a driving principle for determining what is and is not ethically acceptable.

> The costs/benefits ratio is a fundamental concept expressing the primary ethical dilemma in social research. In planning their proposed research, social scientists have to consider the likely social benefits of their endeavours against the personal cost to the individuals taking part. … The costs to participants may include affronts to dignity, embarrassment, loss of trust in social relations, loss of autonomy and self-determination and lowered self-esteem. On the other hand the benefits to the participants could take the form of satisfaction in having made a contribution to science and a greater personal understanding of the research area under scrutiny. The process of balancing benefits against possible costs is chiefly a subjective one and not at all easy.
>
> In Cohen and Manion, (1994), P.348: Adapted from Frankfort-Nachmias and Nachmias, 1992

The costs/benefits ratio can be applied to the participants in this study. Possible costs include:

- The intrusion involved in being closely observed and interviewed;

- The time commitment involved in this process;

- The possible indignity and lowered self-esteem involved in being shown in an unfavourable light.

The first two points are balanced by the following observations:

Observation is an accepted part of student teacher experience and learning. Many participants expressed gratitude for the thoroughness with which this was done, as they felt they gained useful feedback in the process. It should be noted that although I was known to most of the student teachers as a tutor, I was not making formal assessment judgements that contributed to the assessment of the placement and this was made very clear. The time given to interview was viewed positively rather than negatively. As has previously been suggested, the interview was approached in a way that allowed for constructive comments to be made after the taped interview was finished.

In the case of the school based mentors the interview was seen as providing the opportunity for feedback within the partnership between schools and the Higher Education Institution. All those involved were pleased to make use of this, although they did have less time available than student teachers for purely logistical reasons.

The student teachers, as representatives of student teachers in general, had a stake in the study. It was in their interest for their school experience to be probed with a view to finding more effective ways of supporting their learning. They understood that the outcomes of their participation would be fed back into the development of the training process.

The school-based mentors had a similar stake. Many expressed their lack of confidence in the role they had taken on. It was clearly in their interest as representatives of their group that the outcomes of the study feed in to the development and clarification of how this role could be made most effective.

The third potential cost, the potential for being shown in an unfavourable light, was perhaps the most difficult. Student teacher and mentor data did indeed show some who were operating in a less than ideal way. However, the data was kept completely anonymous and this was made clear from the outset. Participation was completely voluntary and based on the principle of informed consent. Diener and Crandall have defined this as 'the procedures in which individuals choose whether to participate in an investigation after being informed of facts that would be likely to influence their decisions' (Diener and Crandall, 1978). This definition implies four elements that must be present if consent is truly informed: competence, voluntarism, full information and comprehension.

The student teachers were fully competent to make the decision and had absolute freedom to refuse. 'Full information' is clearly a relative concept. Student teachers were informed of the nature and purpose of the research and given detail in relation to what the procedure would involve. They were held to be in full comprehension of this before they agreed to participate.

CHAPTER SIX

DATA COLLECTION AND ANALYSIS IN THE PILOT STUDIES

In this chapter the processes of data collection and analysis for each of the samples scrutinised in the pilot studies are explained and the development of each type of methodology is discussed. Each pilot study is examined separately as Pilot Study (A) and Pilot Study (B). At the end of each section I present the findings for that stage of the study. Although some discussion of findings is necessary in order to explain how each set of findings informed the next stage of the study, the main discussion of findings from the whole study is in Chapter Nine.

Pilot Study (A) **December 1996 – March 1997**

Questionnaire Data **December 1996**

(Sample 96 second year student teachers)

Question: What are the main roles student teachers identify as central in the teaching of literacy?

An initial survey of a relatively large sample of student teachers was conducted in the form of a simple questionnaire (see Appendix Two). This was not a major part of the methodology but reflected an initial period in which I was attempting to conceptualise the frameworks within which the study would operate and to identify some of the main issues that were likely to be raised. This is in line with the approach suggested by Miles and Huberman (1994) discussed in Chapter Five. In this the study is seen as an iterative process of questions and answers moving backwards and forwards from description and explanation. This survey was an early attempt to sketch a rough description before beginning to define and refine questions.

I considered that the question underpinning the survey (*What are the main roles student teachers identify as central in their teaching of literacy?*) was too general for student teachers to be able to respond to. I sought a more immediate and concrete context to trigger their responses. The sample of student teachers had recently completed a five-week block placement in school at the time of the survey. I used this placement as a focal point and asked them to reflect on all the literacy teaching they had experienced, either at first hand through their own teaching or at second hand through observing other teachers. I followed the lead suggested by Cohen and Mannion (1994) in translating a more general purpose into specific aims. These were to:

- *Identify examples of effective literacy teaching and learning on block placement;*
- *Describe the main roles of the teacher in promoting the learning.*

The first question asked them to identify and list lessons or parts of lessons they remembered as being particularly successful in promoting literacy learning. For each item on the list they were asked to outline the main roles played by a teacher in the learning. In structuring this simple questionnaire in this way I hoped to provide a preliminary picture of student teacher thinking about teachers' roles in literacy learning. The questionnaire was completed in a series of seminars, which meant that I was on-hand to clarify the task and ensure the questions were understood in the same way between student teachers.

This approach had obvious weaknesses. It was dependent on student teachers being able to recall specific events from a long and intense experience, in which they were

likely to have had many other concerns, not least surviving to the end of the placement. To some extent though, the dependence on their memory was also an advantage. In relying on this recall, there was an element of selection and value judgement, which, it could be argued, helped my exploration. I wanted to know what student teachers considered to be important in supporting literacy learning. As discussed in Chapter Five, it can be argued that cognitive schemas (e.g. Cole, 1996) channel individual thinking by structuring the selection and retention of information that is considered to be useful. By depending on student teachers' recall, I was tapping into the schema underpinning the way they conceived their roles in the classroom and how they remembered what they considered to be important and effective.

The information gathered from the questionnaires was also necessarily limited by the time available and the ability of student teachers to record thoughts of this nature in this way. However, in making this tentative first exploration, limited but wide-ranging (as dictated by the size of the sample) information was useful. It allowed me to build a first picture in outline, without becoming too distracted by detail at this stage. In acknowledging the superficiality and limited nature of this data, I was reinforcing the need to ensure I attempted to go into greater depth and detail using the case-study approach that would be at the heart of the rest of the study.

Analysis of the questionnaire data

Edwards and Talbot (1994) liken content analysis of written evidence to passing a comb through the text. In this case the comb was shaped by the concern to build up a picture of the main teaching roles student teachers considered to be important in

literacy teaching and learning. From this 'combing' it was possible to develop broad categories to sort the student teachers' written responses.

Findings from questionnaire data

(96 student teachers)

Question: What are the main roles student teachers identify as central in the teaching of literacy?

Table 6 i Summary of student teachers' views of main teacher roles in the teaching of literacy

Role Of The Teacher	Number of mentions
Overseeing activities *e.g. keeping children in order*	86
Encouragement *e.g. telling them their work was good*	71
Introducing activities *e.g. introducing the worksheet*	58
Demonstration *e.g. showing them how to play the game*	36
Enforcement *e.g. reminding them what to do*	15
Clarification *e.g. helping them to understand*	13
Explanation *e.g. telling them about the story*	12

These findings threw up several issues that informed the methodology for the rest of the study. They also helped to clarify the nature of the questions that needed to be followed up. This can be summarised as follows:

♦ Student teachers find it difficult to identify roles from a broad teaching experience. They need the 'trigger' of specific incidents, ideally in the very recent

past. This helped to formulate the observation/interview methodology that became a central strand of data collection in subsequent stages of the study.

♦ Student teachers (at this stage in their ITE progression) may have a limited view of the teacher's role in prompting literacy learning.

♦ Student teachers (at this stage in their ITE progression) may have a limited range of strategies for supporting literacy learning.

♦ Student teachers (at this stage in their ITE progression) may have limited knowledge bases to draw on in supporting literacy learning.

♦ Student teachers (at this stage in their ITE progression) consider task management and encouragement to be particularly prominent aspects of the teacher's role in promoting literacy learning.

♦ The categories in Table 6i proved helpful in directing the observations with the next sample of 10 student teachers and in conducting an interview with an experienced teacher later in the pilot study. I was alert to the need to identify strategies used and find ways of relating these to the teaching roles underpinning them.

Observations In Pilot Study (A) **January 1997 – February 1997**

(Sample 10 student teachers, 1 experienced teacher)

Research Questions:

What kinds of literacy teaching strategies do novice teachers use?

What kinds of literacy teaching strategies do experienced teachers use?

This stage of the study was very much concerned with developing the methodology, and the observations were an extremely important part of this process. Spradley (1980) and Jorgensen (1989) discuss initial observation as being primarily descriptive in nature. The observations carried out at this stage were relatively unfocused and general in scope. They were conducted in relation to the broad question of the strategies employed by the target student teachers (and an experienced teacher) in the teaching of literacy. As such they provided a base for refining the question, developing sub-questions and constructing an interview schedule to be used in the next stage.

The real development of methodology, which informed the next stage of the study, came in the analysis of the observational data.

Analysis of Observations

An initial, relatively crude analysis of this first set of data threw up three immediate areas of interest when comparing the data taken from the experienced teacher with that taken from the student teachers:

1. The data from the experienced teacher was much richer in explicit and implicit references to identifiable literacy concepts.

2. The experienced teacher data showed a greater range of strategies being used. The student teacher data showed a narrow range of strategies being used repeatedly.

3. The experienced teacher data showed much more use of assessment.

In order to probe these obvious differences further a coding system was developed to categorise the teaching strategies in each observed session. This was done following a method explained by Hutchinson (1988). While coding and analysing the data, researchers look for patterns. They compare incident with incident, incident with category and finally, category with category. By this method analysts distinguish similarities and differences amongst incidents. By comparing similar incidents, the basic properties of a category are defined.

Classification of Teaching Strategies

The observations were coded according to the strategies demonstrated and the knowledge they appeared to be based on. Specific teaching strategies were categorised into a series of headings. An initial examination of the observation data revealed potential links with Tharp and Gallimore's (1988) categorisation of ways of assisting performance (see Chapter Three for further discussion). This classifies assistance into the following headings: *modelling, contingency managing, feeding back, instructing, questioning* and *cognitive structuring*. Clear links could be made between strategies revealed in the data and these categories. However, not all the strategies used could be classified in this way. In particular the data from student teacher observations included strategies that were too unfocused and lacking in clear

references to concepts or skills. This made it impossible for them to be fully described by Tharp and Gallimore's descriptions.

To accommodate this, the categories *elicitation questioning, diagnostic questioning, cognitive support, motivational support* and *task management* were added. The two specific types of questioning were seen as more descriptive than the more general category of questioning identified by Tharp and Gallimore. *Elicitation questioning* was particularly associated with data from the student teacher sample and refers to questions that appear designed to prompt general thoughts or ideas in the pupils. Strategies classified in this way would be distinct from cognitive structuring in that there was no clear link to concepts or skills. Typically student teachers would explain these strategies in very general terms, e.g. *I wanted him to come up with some ideas*. However, in contrast to the student teachers, the data generated from the experienced teacher was particularly rich in a very different type of questioning I have termed *diagnostic questioning*. This was very specifically designed to assess pupils' understanding e.g. *Why did that letter need to go there?* and it was often followed up by specific cognitive structuring that was based on the information gained as a result of the assessment. This form of interaction resonated with the work of Black and Wiliam (1998) and Gipps, McCallum and Hargreaves (2000) who identified that a key factor in effective teaching was the way that teachers incorporated informal assessment and feedback into the teaching / learning cycle (see Chapter Three for further discussion).

Cognitive support was added as an extra level to be associated with strategies similar to Tharp and Gallimore's cognitive structuring category. The term was used to

classify those strategies where the assistance had an implicit rather than explicit link to particular skills and concepts, for example, pointing to words as they are read. *Motivational support* was added as an additional category because this was such a strong feature of the data from student teachers. This describes general encouragement that is not explicitly or implicitly linked to supporting skills or concepts, e.g. *Aren't you doing well?*

Task Management was used to describe a type of teaching strategy that proved to be a strong feature of some of the student teacher data. This depicts behaviour that is aimed at solely at keeping the task running smoothly, e.g. making sure children are working, finish the sheet, take their turn, etc.

Table 6 ii Summary of ways of classifying teaching strategies

TEACHING STRATEGY	DEFINITION AND EXAMPLES
COGNITIVE STRUCTURING	Providing explicit information in order to develop conceptual understanding, e.g. *That's the same sound as the end of your name*
COGNITIVE SUPPORT	Implicitly reinforcing conceptual understanding, e.g. *Pointing to words as the pupil tries to read them*
INSTRUCTING	Directing pupils in specific ways, e.g. *Explaining that they are going to write a story today*
DIAGNOSTIC QUESTIONING	Questions specifically aimed at assessment, e.g. *Where should I put the full stop?*
ELICITATION QUESTIONING	Questions designed to prompt thoughts or ideas in the pupil, e.g. *What are you going to write?*
MOTIVATIONAL SUPPORT	Encouraging and promoting self-esteem, e.g. *That's a lovely piece of writing!*
MODELLING	Demonstrating actions and thought processes, e.g. *Scribing and explaining*
TASK MANAGEMENT	Keeping order, e.g. *Making sure they are doing what they are supposed to be doing*

In addition to using the above classification of teaching strategies, reference to specific *literacy concepts and skills* were noted as they were revealed by the data. In order to do this the key skills and concepts headings outlined in Chapter Two were used as the main framework of reference. These include: *The Nature Of Print, Directionality, Concepts About Letters, Words, Sentences And Texts, Phonic Knowledge, Graphic Knowledge, Word Recognition, Grammatical Knowledge,* and *Contextual Understanding.* Sometimes sub-skills or concepts were identified from these categories, e.g. *associating utterances with words* or *words carry meaning* to help the coding to be more specific.

This categorisation and analysis proved useful because it illuminated in detail the contrast between the novice and experienced teachers that had initially been revealed in a general way. The two analysed extracts in figures 6 iii and 6 iv help to illustrate this.

Figure 6 i: Experienced Teacher in Nursery

LITERACY CONCEPTS	OBSERVATION NOTES	TEACHING STRATEGIES
WORDS CARRY MEANING	9.23 X is talking to child (C1) about her picture of a ladybird: "Do you want to do some writing to tell everyone about this?" (C1 nods)	COGNITIVE STRUCTURING
PURPOSES OF PRINT	"What shall we write?" C1: "The ladybird is sitting on a leaf"	COGNITIVE STRUCTURING
DIRECTIONALITY	X: "Excellent. Which side shall we start?"	MOTIVATIONAL SUPPORT DIAGNOSTIC QUESTIONING COGNITIVE STRUCTURING
	C1 "Over here" 9.25 X: "You go ahead and write it and show me in a minute" X is explaining the spiders web pattern to a child (C2)	INSTRUCTING
DIRECTIONALITY	9.27 X "Can you make the lines go all along the web? It's very important you start at the left and finish on the right because we are practising for writing. Where's the left? Where will you start?" (C2 shows her; she observes closely as C2 starts the web.)	ELICITATION QUESTIONING COGNITIVE STRUCTURING DIAGNOSTIC QUESTIONING
	X: "Lovely, don't forget to keep your pencil on the line. Nice and slow."	MOTIVATIONAL SUPPORT COGNITIVE SUPPORT
PHONIC KNOWLEDGE NAME RECOGNITION	9.30 X: "What a lot of lovely writing. I can see some of the letters of your name. Where's the "m"?"	MOTIVATIONAL SUPPORT COGNITIVE STRUCTURING DIAGNOSTIC QUESTIONING
	C1: Here and here	ELICITATION QUESTIONING
WORDS CARRY MEANING	X: "You've done those beautifully. Can you read me your writing now?"	MOTIVATIONAL SUPPORT COGNITIVE SUPPORT
	C1 "The ladybird is sitting on the leaf. She has lots of	

LITERACY CONCEPTS	OBSERVATION NOTES	TEACHING STRATEGIES
	children and they like flying."	
	9.32	MOTIVATIONAL SUPPORT
	X: "Wow! You've added more to it! You told me earlier on	COGNITIVE STRUCTURING
	that there was a "l" at the beginning of ladybird. Where	DIAGNOSTIC QUESTIONING
PHONIC KNOWLEDGE	might the "l" have gone here?" (C1 points randomly and	
	vaguely)	
ASSOCIATE	X: Can you read it again and point to the words at the same	DIAGNOSTIC QUESTIONING
UTTERANCES WITH	time?" (C1 moves her finger along the line from left to right,	COGNITIVE SUPPORT
WORDS (ONE TO ONE	but there is no attempt to match up the writing with what she	
CORRESPOND-ENCE)	is saying.)	
DIRECTIONALITY		
DIRECTIONALITY	9.34	MODELLING
	X: Now I'll write my writing. Where shall I start?" (C1	DIAGNOSTIC QUESTIONING
	shows her, X writes the words and reads them as she does	ELICITATION QUESTIONING
	so)	COGNITIVE STRUCTURING
ONE- TO-ONE	X: "Let's read it again together." They read it, X gently	MODELLING
CORRESPOND-ENCE	holds C1s finger and helps her to point to the words as they	COGNITIVE SUPPORT
	read.	

Figure 6 ii A Non-Specialist 1ˢᵗ Year Student With Reception

LITERACY CONCEPTS	OBSERVATION NOTES	TEACHING STRATEGIES
	10.10	ELICITATION QUESTIONING
DIRECTIONALITY	TT to C1: What does that say? (points from left to right over	COGNITIVE SUPPORT
WORDS CARRY	the label)	
MEANING	No answer from C1	
PHONIC KNOWLEDGE	TT: What does it start with?	ELICITATION QUESTIONING
	C1: It's a drink	COGNITIVE SUPPORT
	TT: Yes, but what does it start with?	
	C1: Don't know	
	TT: It's milk!	TASK MANAGEMENT
TASK MANAGEMENT	10.12	TASK MANAGEMENT
	TT to the whole group: Take it in turns to choose a card - see	
	if you can match it.	
	C2 takes a card	ELICITATION QUESTIONING
WORDS CARRY	TT: What does that say? (C2 is looking at the picture)	
MEANING	C2: Chocolate	
	TT: Good girl! Put it in the right place.	MOTIVATIONAL SUPPORT
	10.14	ELICITATION QUESTIONING
WORDS CARRY	C3 takes a card with a sandwich label	
MEANING	TT: What does that say? Have you got that?	
	C3: It says pizza	
WORDS CARRY	TT: It's not pizza. What does it say? It says sandwich!	ELICITATION QUESTIONING
MEANING		TASK MANAGEMENT
	10.17	ELICITATION QUESTIONING
PHONIC KNOWLEDGE	C1 takes a card	COGNITIVE SUPPORT
	TT: What does that card say? (no answer)	MOTIVATIONAL SUPPORT
	TT: W….	
	C1 Watermelon	
	TT: Brilliant!	
	10.19	ELICITATION QUESTIONING
	C2 takes a card	COGNITIVE SUPPORT
	TT: What does it say?	
	C2: Ice-cream	
	TT: Have you got ice cream? (TT points to game card)	
	C2: No	MOTIVATIONAL SUPPORT
	10.20	
	TT: Well done!	

Findings from observation data

Question: What kinds of literacy teaching strategies do novice teachers use?

The contrast between data taken from student teachers and the experienced teacher is marked and the analysis helps to illuminate this. The examples given above help to demonstrate the nature of this contrast, which although particularly extreme in this case, is common to all the student teacher observation data. There is no explicit assessment in the student teacher extract and the student teacher is restricted to using a narrow range of both strategies and literacy concepts. The concepts themselves are covered in a much more tentative way, with no cognitive structuring and a high frequency of elicitation questioning. The student teacher appears to have a much less confident grasp of the literacy concepts the pupils need and is happier to prompt in a general, undirected way. Managing the task and ensuring things run smoothly in a general way is a high frequency occurrence. The common themes arising from student teacher data can be summarised as follows:

♦ There is very little explicit assessment.

♦ student teachers employ a narrow range of strategies.

♦ There is explicit linking to few literacy concepts.

♦ Those concepts that are covered are promoted in a very tentative way.

♦ There are no clear examples of cognitive structuring.

♦ There is a high frequency of elicitation questioning.

♦ The student teachers appear happier to prompt in a general, undirected way.

♦ Managing the task and ensuring things run smoothly in a general way is a high frequency occurrence.

Question: What kinds of literacy teaching strategies do experienced teachers use?

The analysed data from the experienced teacher demonstrates a wide range of concepts and strategies. The number of different strategies that are used in a relatively short period of time is particularly notable. Three strategies warranted special examination: the constant use of cognitive structuring, cognitive support and diagnostic questioning. The teaching is directed by a system of frequent checks and is strongly underpinned by a range of literacy concepts. These are kept to the fore and the teaching actively promotes them at every opportunity. The concepts themselves are covered in a fairly balanced way; a small number of inter-related concepts are revisited regularly, and they are directed by the assessments the teacher is constantly making. The teacher is visibly drawing on her knowledge of individual children to direct both her assessments and actions. This linked with the work on expert teachers conducted by Gipps, McCallum and Hargreaves, (1998), in which:

> Teachers commonly used strategies in a cycle of assessment, feedback, teaching and within this sequence there were particular strategies that regularly followed each other.
>
> (P.2)

These findings can be summarised:

- A wide range of concepts and strategies are used.

- A large number of different strategies are used in a relatively short period of time

- There is constant use of:

cognitive structuring

cognitive support

diagnostic questioning

♦ The experienced teacher is directed by a system of frequent checks.

♦ Her teaching is strongly underpinned by a range of literacy concepts.

♦ Her teaching actively promotes literacy concepts at every opportunity.

♦ Concepts are covered in a fairly balanced way.

♦ A small number of inter-related concepts are revisited regularly.

♦ The experienced teacher visibly draws on her knowledge of individual children to direct both her assessments and actions.

Interviews in Pilot Study (A) **January 1997 – March 1997**

Questions: What are the main kinds of knowledge that an experienced teacher draws on in using teaching strategies?

What are the main roles an experienced teacher identifies as central in the teaching of literacy?

At this stage only the experienced teacher was interviewed - two interviews were carried out with her. Interviewing was used as a way of probing the knowledge base underpinning the strategies that seemed evident in the observation data. The observation notes made during her teaching sessions were so clearly showing a pattern of behaviour that contrasted with the student teachers that it was important to try and understand why she was taking the actions she did. This first interview was the most unstructured of all the interviews conducted at any time in the study. This type of interview captures the differences between structured and unstructured interviews described by Fontana and Frey (1994). The former aims at capturing

precise data of a codable nature in order to explain behaviour within pre-established categories, whereas the latter is used in an attempt to understand the complex behaviour of members of society without imposing any a priori categorisation that may limit the field of enquiry.

This form of unstructured 'immersion' was highly appropriate at this early stage. At this point the primary aim was to understand what was going on rather than to seek particular explanations. This meant, as far as possible, attempting to see the situation from her perspective. Professional rapport was established using this approach, as in understanding expertise it was important that the 'expert' in question was allowed to control and direct the interview as much as the interviewer. Typical questions included

I noticed you kept coming back to that point with Kelly, why was that?

and

How did you know that was the best way to approach that problem?

In the second interview with the same teacher an informal structure had begun to emerge. Both interviewer and interviewee were interested to probe the thinking behind actions taken and this provided the main focus for the discussion. It became a general pattern that each strategy noted prompted a question like:

What was your thinking there?

Analysis Of Interview Data in Pilot Study (A)

Units of meaning were delineated following the Hycner method that was outlined in Chapter Five. They were then clustered into groups, which related to the knowledge the teacher described as underpinning her actions. Four main groups emerged.

Findings from the Interview Data in Pilot Study (A)

Question: What are the main kinds of knowledge that an experienced teacher draws on in using teaching strategies?

The interview data taken from the experienced teacher was clustered into four main groups:

Knowledge of literacy concepts and skills*:* There were many statements about the concepts and skills the teacher was trying to develop in the pupils, e.g.

> *They need to see the relationships ...between sounds, words, letters. If they have not got the ability to hear first and then link what they hear they will struggle.*

And

> *It's about understanding about writing. Why we do it, why it's good, fun, useful ...*

Knowledge of the literacy developmental level of the pupils*:* The experienced teacher was very aware of differing stages and levels of understanding and stated that she was checking this all the time, e.g.

I could see he wasn't clear – he needed to get that first before moving on.

Knowledge of how pupils progress in literacy*:* This links clearly with the previous theme. In addition to seeking to identify understanding and misconceptions, there were many related statements about how to proceed, e.g.

They need to be immersed in the sound patterns in an informal way before being helped to make the link ...between sounds and letters, perhaps more formally.

Knowledge of the learning style of the pupils: Understanding about literacy and progression was often combined with knowledge that was specific to individual pupils, e.g.

I find children like Ryan need time to experiment first before they're ready for my input.

Question: What are the main roles an experienced teacher identifies as central in the teaching of literacy?

From these groups, several themes related to how she saw the role of the teacher emerged:

- ***Making connections.*** The types of knowledge were highly inter-related and it was important for the teacher to make the links. The use of one type would quickly lead

on to the use of another. For example, knowing that Carl is motivated by working in the environmental area leads onto the importance of real purpose in setting writing tasks for him.

- ***Ongoing formative assessment.*** The knowledge being used was frequently informed by on-going assessment of the children's performance. So Jessica is seen to be making an intermittent link between initial sounds and letters, therefore she needs this reinforcing to move on to the next stage. The teacher was also clear that it was important to share assessment information with pupils, e.g. '*I always try and explain why we're doing this, why I'm pleased … how it will help.*'

- ***The role of the Curriculum***. Although the planned curriculum was mentioned, it was always in relation to one of the other types of knowledge, e.g. '*I planned to do this with Ryan because ...*'. The curriculum was seen as a tool to aid teaching rather than as an aid in itself. The teacher talked about the statutory guidance as one source of reference from which she selected, but this was always combined with her knowledge of her pupils and the subject.

Issues Arising as a Result of Pilot Study (A)

The analysis of the observation data proved extremely helpful in directing the next stage (Pilot Study (B)) of the study, both in helping to direct the observations and in constructing an interview schedule to follow them. This was part of what Spradley (1980) has called the 'funnel effect', where the stages of observation progressively narrow and direct researchers' attention deeper into the elements of the setting that have emerged as theoretically essential. In this study there were three prominent elements that became central to the next stage:

♦ The relationship between strategies used and the knowledge and understandings that underpinned them. This was central to the study as a whole and the experienced teacher interview data had illustrated the potential for using observational notes as a trigger for probing the thinking that underlay the observed action.

♦ The pattern of strategies that flowed during each stage of the lesson. The student teacher observational data showed a sparser density of teaching strategies and less variety in the strategies used. Was this true at all stages of the lesson? Might there be variations between the beginning, middle and end?

♦ The pattern of knowledge use at different stages of ITE. It was clear from the observational data taken from student teachers in Pilot Study A that some of the student teachers had very limited experience to draw on. It would be natural to expect that the richness of teaching strategies used and the depth and breadth of knowledge that underpinned them would improve as student teachers progress towards the end of their ITE. This needed further exploration.

***Observation in Pilot Study (B)* April 1997 – July 1998**

Sample: 12 student teachers

Questions: What are the main roles student teachers identify as central in their teaching of literacy?

What kinds of literacy teaching strategies do novice teachers use?

How do these vary at different stages of the teaching session?

How does knowledge use vary at different stages of ITE?

As already explained, at the stage of Pilot Study (B) it became possible to conduct more focused observations. Attention was directed towards a narrower range of behaviour i.e. to the strategies employed by the student teacher and the references to literacy concepts and skills with which they linked. The aim was to collect data which would help to establish and refine the categorisation and analysis and that would provide suitable 'triggers' for probing in interview the knowledge base and sense of identity which underlay the actions taken. From this point onwards, the observational data was seen mainly as servicing the interviews. The interviews were structured to pick up the issues that had originally been identified through observation in Pilot Study A – i.e. the types, range and frequency of teaching strategies being used. While these were noted in the observational data, the main method of analysing them further was to be through the interviews and analysis of the interview data.

***Interviews in Pilot Study (B)* April 1997 – July 1998**

Questions:

What are the main types of knowledge that student teachers draw on in their teaching strategies?

What are the main roles student teachers identify as central in their teaching of literacy?

How does knowledge use vary at different stages of the lesson?

How does knowledge use vary at different stages of ITE?

The semi-structured approach taken at this and subsequent stages was developed from the less structured interviews with the experienced teacher in Pilot Study (A). These interviews demonstrated that using specific actions that had been observed in the teaching session as prompts was a fruitful way of exploring the knowledge base underlying them. Further questions were added to allow a broader picture to be constructed. To an extent this process follows an 'ethogenic' approach (Harré, 1978). This focuses on actors' intentions, their beliefs about what sorts of behaviour will enable them to reach their goals, and their awareness of the rules that govern those behaviours. Harré (1978) claims that it is assumed that in social interactions action takes place through endowing inter-subjective entities with meaning. The ethogenic approach therefore concentrates upon the *meaning system,* that is the whole sequence by which a social act is achieved. The ethogenic approach is founded upon the belief that a human being tends to be the kind of person his language, his traditions, his tacit and explicit knowledge tell him he is.

A discussion of the observed actions formed the main part of the interview schedule. This involved a method of 'accounting' for actions as described by Cohen and Mannion (1997). They claim that explaining behaviour can be thought of as accounting for our actions in order to make them intelligible and justifiable to others. The importance of the meaning of events and actions to those who are involved is generally recognised in social science. In exploring this, distinctive insights can be made available which focus on *process* rather than *product*.

Analysis of Interview Data in Pilot Study (B)

In this case the units of general meaning were delineated according to the three sub-questions. The method outlined in Chapter Five (Hycner, 1985) was used. Initial analysis resulted in the following list of clusters of meaning:

- *Management.* This described interview data related to management issues – knowledge of how to keep children on task, how to ensure they finish, how to keep the children in order etc.

> *I needed to get it finished to give to Mrs T.*

and

> *I didn't want them to start being silly.*

- *Motivation/confidence*. This relates closely to the *Motivational Support* category used to analyse the observation data in Pilot Study B. This cluster included those statements about the need to encourage children in ways that are linked to specific concepts or skills.

I wanted to build up his confidence so I like to ... say "well done, good boy"

...things like that

and

They get put off – so I wanted to encourage them...

- ***Helping the children to build up ideas (general).*** This relates closely to the Elicitation Questioning category used in the analysis of the observation data in Pilot Study (A). This cluster included statements about prompting ideas or thoughts in a general sense, not related to specific concepts or skills.

I wanted to get them thinking ... set them off.

- ***Development of specific literacy <u>concepts</u>***. This cluster included statements about understandings that children needed to develop.

I wanted them to have an understanding of story structure.

- ***Development of specific literacy <u>skills</u>***. This included statements about the need for helping children to apply specific types of knowledge, e.g. to follow the text from left to right, to identify initial sounds. These statements were often combined with discussion of other types of knowledge, e.g. modelling. An example from this cluster:

I wanted her to know how to ...go the right way with the text ... where to start.

- **Understanding of teaching and learning strategies**. These statements related to discussion of pedagogical approaches, e.g. modelling, questioning.

    They follow better if you've shown them what you mean.

- **Assessment**. These were statements related either to the need to find out about children's understanding, or to the use of assessment information already in the student teacher's possession.

    I wanted to find out if she could remember the main bits of the story.

and

    I knew he needed help with full stops.

- **The 'given curriculum'.** These were statements about actions that had been taken as a result of what had to be covered, as dictated by an external source, e.g. the class teacher's plans, the scheme, a university task etc.

    That was what Mr X wanted.

And

    The next bit had to be comprehension questions because that's the way they always do it.

- *'Given' practices.* This links closely with the previous cluster, but refers to processes rather than content. These were statements about how things had to be done in a particular context.

Mrs Y likes the books to be done like that.

Findings from the Interview Data in Pilot Study (B)

Questions: What are the main types of knowledge that student teachers draw on in their teaching strategies?
What are the main roles student teachers identify as central in their teaching of literacy?

Having identified the clusters into which statements could be categorised, it became evident that there were clear trends that could be associated with individual student teachers. Student teachers tended to be associated strongly with some clusters and much less with others. For example, a number of students had a high percentage of statements about management and general motivation but a very small number of statements about concepts or skills. Others would have more statements about the given curriculum than about management etc. There were also clear patterns in comparing student teachers. By considering the clusters that appeared most strongly in each interview transcript it was possible to roughly categorise each of the student teachers into one of three categories:

Task Management

Student teachers who fell into this category were very product orientated, i.e. concerned with completing the task rather than developing the learning it was supposed to promote. The student teachers judged whether the lesson was successful by the children apparently being on task during it and there being some concrete product at the end. Examples of comments made by student teachers in this category include:

My role was organisation - make sure they went in turns - went clockwise.

And

Really I was just concentrating on getting it done.

Curriculum Delivery

These student teachers, unlike those in the previous category, did reveal an understanding of the purpose of the task beyond simply wanting to get it done. They made more explicit reference to learning, but this was conceived within the restrictions of an externally 'given' curriculum. They talked about learning objectives (which were often provided ultimately by the class teacher or a published or college-derived scheme) as ends within themselves rather than as contributing to a broader framework of concepts and skills associated with the subject. Typical examples include:

We needed to cover the comprehension bit before going on to the next one.

And

> *The school wanted me to do story writing so that's why I was looking at that really.*

Concept/Skill Building

These student teachers were far more focused on the subject and the concepts and skills needed to become proficient within it. The concepts and skills defined the task and the task was seen as important only in so much as it was a vehicle for this. Examples include:

> *They need to consolidate and apply it to their own writing and see how the process works, backwards and forwards. I wanted them to get the information and then convey the information, because so much work they do depends on being able to do that.*

And

> *I wanted them to think about story structures – that would help them with their prediction.*

The teaching strategies and underlying knowledge as demonstrated in the three categories: task manager, curriculum deliverer and concept/skill builder are summarised in table 6 iii below.

Table 6 iii: Student Teachers in Relation to Clusters of Meaning

Student teacher category	Teaching strategies observed and discussed	Types of knowledge viewed as important
Task Manager	management motivation/confidence helping the children to build up ideas (general)	classroom management knowledge of individual children - general/social lesson ideas practical experience
Curriculum Deliverer	motivation/confidence helping the children to build up ideas (general) questioning promoting independence	classroom management knowledge of the curriculum knowledge of individual children - general/social lesson ideas practical experience resources
Concept/skill Builder	motivation/confidence helping the children to build up ideas (general) development of specific literacy <u>skills</u> development of specific literacy <u>knowledge</u> questioning promoting independence assessing demonstrating/modelling	knowledge of individual children - general/social knowledge of individual children - literacy knowledge of the subject lesson ideas practical experience

Question: How does knowledge use vary at different stages of the lesson?

Knowledge Use in Relation to a Sequence of Learning

In explaining the analysis of interview data in relation to this question it is helpful to consider the teaching in question in relation to the neo-Vygotskian model of teaching and learning developed by Edwards in relation to student teacher learning (Edwards, 1995). This is more fully discussed in Chapter Four.

Figure 6 iii A Neo-Vygotskian Model of Learning (after Edwards, 1995)

Stage Four	**Stage One**
Learner practises and performs skill publicly Teacher monitors	Concept/skills introduced Teacher models, explains. Learners begin to participate
Stage Three	**Stage Two**
Learners begin to master concepts/skills Teacher support intermittent Pupils practise language with each other	Learners try out new concepts/skills Teacher support high Pupil/pupil support also important

This model shows how a teacher takes a learner through each quadrant, starting in A, where teacher input is high in order to explicitly introduce, demonstrate and discuss the concepts and skills being developed. In B and C, the teacher role changes as more and more responsibility is handed over to the learner, before proficiency is achieved in Quadrant D. Quadrants B and C require contingent responses from the teacher as s/he gauges the performance of the learner. To take a learner successfully through all these quadrants the expert needs to have a full understanding of the concepts and skills being developed. This enables her/him to provide the appropriate scaffolding at the right time and to move back and forth between the quadrants in response to learner need.

This model can be usefully used to demonstrate some clear differences between the way student teachers in the different categories appeared to be supporting pupil learning.

Figure 6 iv The model applied to Task Managers

Stage Four	Stage One
Concrete product evidence of success	No real concept/skills introduced
	Student merely introduces task
Stage Three	Stage Two

Student teacher manages the task

The data shows that the Task Managers, who showed no understanding of concepts and skills that should be developed by an activity did not really operate in Quadrant A at all. Their introductions were merely task instructions (e.g. 'this is how you play the game, do the writing etc.) with no reference to concepts and skills being evident. They could not explicitly make assessments and interventions to scaffold skills and concepts they did not have a grasp of and so their operations in the other quadrants were reduced to managing the task, which manifested in general encouragement or discouragement ('I just made sure they took it in turns').

Figure 6 v The model applied to Curriculum Deliverers

Stage Four	Stage One
Concepts/ skills performed but not progressed beyond this session	Concept/skills introduced
	Student unconfident – relies on script
Stage Three	Stage Two

Student teacher focuses on DLOs but in closed, limited way

Figure 6v shows that for the Curriculum Deliverers, Quadrant A is used at the start of the teaching session as an introduction to the task. However, the focus very quickly shifts onto monitoring the task and 'elicitation questioning'. 'Elicitation questioning' was a strong feature of the strategies discussed by Curriculum Deliverers. This is used to describe occasions when, to use a typical example, the student teachers were 'trying to get some ideas out of the children'. That is to say the actual objective was imprecise, often using terms like 'help them think about what they are doing'. During the middle, and by far the greatest, part of the lesson these student teachers would mostly give very general support of this nature. A lesson on adjectives gives a good example of this. The lesson began with an explicit introduction to what adjectives were. This involved looking at examples and collecting ideas from the children. One of the follow up tasks involved the children writing sentences that included a lot of

adjectives. At this stage the student teacher gave very little support, other than to give praise to some children. She helped them to an extent by making suggestions but there was no input as to the impact the adjectives should have on the sentences being written or to help those children who were still struggling to see how the adjectives operated within the sentence construction.

Students categorised as Curriculum Deliverers had a planned introduction, with defined and appropriate objectives. However, the 'script' of the curriculum could not sustain them once the children were engaged on the task. At this point their interactions became much less focused. This may well be because their understanding of the learning objectives was limited and therefore difficult to follow through when in active use. Obviously there are many other factors which will restrict effective scaffolding in this part of the learning cycle, not least a lack of knowledge about individual children and their learning context, which will always be a problem for student teachers who are with them for a limited time. However, the interview data also appears to reveal that a number of students have a limited understanding of their learning objectives and that the same students rely on a narrow range of elicitation and management strategies for a significant proportion of their teaching, e.g.

Once they had started their stories I was mainly keeping them going - encouraging them and helping them with words.

Figure 6 vi The model applied to Concept/skill Builders

Stage Four Concepts/ skills performed and picked up effectively in other contexts	Stage One Concept/skills introduced Student confident therefore able to apply widely and flexibly
Stage Three	Stage Two

Student teacher able to respond contingently and effectively to scaffold learning in a transferable way

The student teachers categorised as Concept/Skill Builders demonstrated both in their teaching and in discussion that they had a firm grasp of the relevant literacy concepts and that these were their main focus at every stage of the lesson. They were also able to relate these concepts to learning which went beyond the particular tasks under discussion, e.g.

> *They need to know about story structures to help them to anticipate when they are reading and to help them to develop their own stories when they are playing or writing.*

This underlying understanding was evident at every stage of the lesson. Understanding of literacy concepts and skills appeared also to be combined with an understanding of a cycle of learning in that *how* the concepts and skills are developed changes as learning progresses. So the student teachers in this category talked about the need to model, explain and instruct at the beginning but also saw the need for pupils to quickly become actively involved and to 'have a go', with support on hand from the teacher as and when necessary.

Summary

The relationship between the teaching strategies used by each of the categories of student teacher (Task Manager, Curriculum Deliverer and Concept/Skill Builder) and the stage of the lesson can be summarised as follows:

Task Managers:

♦ Introduction limited to practical instructions

♦ The remaining lesson consists of a narrow range of management strategies

♦ Strategies mainly underpinned by the need to administer the task.

Curriculum Deliverers:

♦ Planned introduction with defined objectives

♦ The remaining lesson involved a high proportion of general elicitation and prompting

♦ Limited concept/skill referenced support for individual pupils

♦ Little use of review

Concept/Skill Builders

♦ Clear introduction with a variety of strategies to help introduce skills and concepts

♦ Gradual reduction of explicit teacher input – pupils actively involved

♦ Clearly concept/skill referenced support for individuals

♦ Learning is reviewed and performed

Question: How does knowledge use vary at different stages of ITE?

Table 6 iv Distribution of Student Teachers between Categories in Student Teacher

Sample in Pilot Study B (1997/8)

Category	Task Manager	Curriculum Deliverer	Concept/Skill Builder
Number of students	7 (5 1st years 1 2nd year 1 3rd year)	7 (3 2nd years 2 3rd years 2 4th years)	6 (2 3rd years 4 4th years)

This distribution shows a predictable relationship between stage of ITE and the likelihood of being in a particular category. Near the beginning of ITE a student teacher is much more likely to be a task manager and towards the end s/he is more likely to be a concept/skill builder. However, there are some note-worthy exceptions to this progression:

Task Managers*:* One third year student teacher (seen near the end of the third year of ITE) is still mainly talking in terms of task management.

Curriculum Deliverers: This is the largest category and includes two fourth year student teachers, seen near the end of ITE.

Concept/Skill Builders: There are two third year student teachers who fall into this category.

Issues Arising as a Result of Pilot Study (B)

Having refined the observation/interview methodology through the pilot studies I now felt ready to use this approach systematically with a new group of student teachers in Stage One of the study. Partly this would be a matter of revisiting the original questions from Pilot Study (B) with increased understanding. This was another example of Spradley's (1980) 'funnel effect', where examination and exploration is focused progressively deeper into the elements of the setting as it becomes more clearly understood. However, there were also two new elements to be considered as I prepared for Stage One of the Study:

1. *The role of school-based mentors.* As the school setting was the main context that was being studied, it seemed appropriate to examine the role of school based mentors in supporting the learning of the student teachers who were placed with them.

2. *The changing national context.* An extremely interesting opportunity for investigating the impact of wider contexts on student teacher learning in local settings presented itself at the time I was ready to begin Stage One of the study. This came in the form of the implementation of the National Literacy Strategy, which was being introduced into most schools in England and Wales in 1998. This initiative involved a detailed and prescriptive curriculum and teaching approaches (see Chapter Two for further discussion of this in relation to literacy teaching and Chapter Three for examination of links with pedagogy). This meant that student teachers (and their class teachers and mentors) observed and interviewed at this stage would be teaching literacy in ways potentially very different from previous samples. This presented an excellent opportunity for comparison, albeit on a small-scale.

At the beginning of Stage One my main research questions were:

♦ *What kinds of literacy teaching strategies do novice teachers use?*

♦ *What are the main types of knowledge that student teachers draw on in using these strategies?*

♦ *How does knowledge use vary at different stages of the teaching session?*

♦ *How does knowledge use vary at different stages of ITE?*

♦ *What impact does the National Literacy Strategy have on student teacher's knowledge and understanding?*

- *What kinds of knowledge do school based mentors view as central to effective literacy teaching?*

- *What criteria do mentors use in making judgements about the literacy teaching ability of student teachers?*

CHAPTER SEVEN

DATA COLLECTION AND ANALYSIS IN STAGE ONE OF THE STUDY
November 1998 – July 1999

Observation in Stage One **November 1998 – July 1999**

Eighteen student teachers - each student teacher was observed once.

Question: What kinds of literacy teaching strategies do novice teachers use?

The methodology described in the previous chapter was applied to subsequent observations as this became established as an effective basis for conducting interviews (see below). As the study progressed particular care was taken to ensure that time samples were taken from both the beginning of the session and a later stage when children were working more individually on task. This was to facilitate analysis of the teaching interventions at different stages of the learning experience in order to track the scaffolding of the pupil learning as it progressed within a session. The categories developed in Pilot Study (A) were used to analyse the observation data. This was taking into account the neo-Vygotskian models of learning (discussed in Chapter Three) that outline ways in which the teacher's role changes as learning progresses.

Interviews With Student Teachers in Stage One **November 1998 – July 1999**

Eighteen student teachers - each student teacher was interviewed once, straight after the observed lesson

Questions: What are the main types of knowledge that student teachers draw on in their teaching strategies?

What are the main roles student teachers identify as central in their teaching of literacy?

How does knowledge use vary at different stages of ITE?

How does knowledge use vary at different stages of the teaching session?

What initial impact does the National Literacy Strategy have on student teachers' knowledge and understanding in its first year of implementation in schools?

The main part of the interviews with student teachers was based on the observed teaching strategies in the teaching session. Particular care was taken to discuss how these strategies varied as the lesson progressed and how these related to pupil learning or performance. See Appendix X for interview schedule.

As this sample of student teachers was observed during the initial implementation of the National Literacy Strategy (NLS), this also became an important focus for discussion. This policy initiative was clearly having a marked impact on both the teaching and thinking of both student teachers and the teachers they were working alongside.

Analysis of Interview Data in Stage 1

Analysis followed the same procedure as in the Pilot Studies. In this case, the previously identified categories and themes could be tested in addition to looking for new ones.

Findings in Relation to Student Teachers in Stage One

Questions: What are the main roles student teachers identify as central in their teaching of literacy?

What are the main types of knowledge that student teachers draw on in their teaching strategies?

The Task Manager, Curriculum Deliverer and Concept/Skill builder categories were reproduced by this sample but with some modifications.

Task Managers: The tendency to simply manage tasks was evidently less strong, with only one student teacher (in contrast to seven in the previous sample) talking about his teaching in mainly these terms. Even student teachers who were near the beginning of ITE made reference to learning and learning objectives. While managing was clearly (and understandably) a priority, this was not exclusively so.

Curriculum Deliverers: While this (the largest group) of student teachers had many similarities with the group categorised this way in the 1997/8 sample, there were some notable differences:

The 1998/9 Curriculum Deliverers' use of terminology: In the 1998/9 sample student teachers used concept and skill referenced terminology more frequently than the Curriculum Deliverer category in 1997/8. The language of the National Literacy Strategy was reflected both in their stated learning objectives and in their discussion of their teaching. This presented a contrast to the 1997/8 Curriculum Deliverers who tended to be more general in discussing learning objectives, e.g.

> *I wanted them to understand about the story* (1997/8).

I was bothered about the verbs (1998/9).

Specificity: In general the student teachers in the 1998/9 group that were categorised as Curriculum Deliverers were quite specific about the curriculum they were delivering. They were able to list without difficulty the particular learning objectives they were following, which were usually very appropriate and in this sense were perhaps more like the Concept/Skill Builders from the 1997/8 sample.

Underlying understanding: The thing that prevented them from falling into the Concept/Skill Builder group was a lack of ability to discuss what *underlay* the curriculum. They were far less likely to offer a rationale for why particular objectives were important, e.g.

> *I was trying to help them (the pupils) to find the verbs. I thought that would be the sentence level bit before doing the word level.*

Fragmentation: The 1998/9 Curriculum Deliverers had limited understanding of how learning objectives related to any other concepts and skills within the subject and how they contributed to children's literacy learning, e.g.

> *I needed to get some 'word level' in because we hadn't done any yet.*

> *To be honest I'm not that sure about nouns and verbs and things myself. I can read and write - I don't know really why children need to know.*

> *It was difficult not getting bogged down in the spelling patterns. It's hard to know the best way to help.*

As such, the Curriculum Deliverers talked about knowledge in terms that could better be described by Shulman's (1987) Curriculum Knowledge category, than Content Knowledge or Pedagogical Content Knowledge. They understood, in substantive terms, the content they were teaching but not its syntactic structure or how to make it accessible to the learner in a way that would lead to a 'generality of knowing' (Greeno, 1997).

Concept/Skill Builders: This was a smaller group in the 1998/9 sample than in 1997/8. Only two student teachers were categorised as falling clearly into this group. These student teachers demonstrated an increased use of subject specific terminology, in a similar way to the Curriculum Deliverers. However, they were more able to support their discussion with underlying reasons why such knowledge is important:

> *In this case it was the adjectives that brought the text to life ... I needed them to see...*

It is interesting to note, though, that even these student teachers admitted that they did not feel they always had time to think about why they were doing what they were doing.

> *It's a case of getting through sometimes. I'm not sure at all if I would have chosen to do all this - I've just got it to do.*

Question: How does knowledge use vary at different stages of ITE?

In 1998/9, the categories were more usefully used as stages on a sliding scale, with Task Management at one end and Concept/Skill Building at the other. This allowed for students who manifested characteristics from more than one category to be placed relative to the strength of their tendencies.

Table 7i Distribution of Student Teachers between Categories in Student Teacher Sample in Pilot Study B (1997/8)

(repeated from Table 6 iv, for clarification)

Category	Task Manager	Curriculum Deliverer	Concept/Skill Builder
Number of students	7 (5 1st years 1 2nd year 1 3rd year)	7 (3 2nd years 2 3rd years 2 4th years)	6 (2 3rd years 4 4th years)

Table 7ii Distribution of Student Teachers between Categories in Stage One Sample (1998/9)

Category	Task Manager	Task Manager/ Curriculum Deliverer	Curriculum Deliverer	Curriculum Deliverer/ Concept/Skill Builder	Concept/Skill Builder
Number of students	1 1 1st year	4 2 1st years 1 2nd year 1 3rd year	9 2 1st years 1 2nd year 2 3rd years 3 4th years	2 1 3rd year 1 4th year	2 1 3rd year 1 4th year

Figure 7ii shows, perhaps predictably, that the greatest distribution of student teachers lies near the middle of the scale around the Curriculum Deliverer category. This distribution does not match that of the earlier sample, in which there was a much more even spread between the groups (see Figure 7i).

Task Management is evidently a less used category, with only one student teacher (in contrast to seven in the previous sample) talking about his teaching in mainly these terms. As has already been noted, the National Literacy Strategy appears to have helped even student teachers near the beginning of ITE to avoid an exclusive focus on tasks.

There are also noticeable differences at the other end of the scale. The 1997/8 Sample showed six student teachers falling into the Concept/Skill Builder category, whereas the in the 1998/9 sample only two student teachers fell clearly into it. This is another example of how the distribution in the 1998/9 sample is not so even and does not reflect progression through ITE in the way that might have been expected and was indeed the case in the 1997/8 sample.

The 1998/9 Sample shows a clustering in the middle, Curriculum Deliverer Category. The majority of student teachers clustered around this category, regardless of their stage of ITE. This is also discussed below.

Question: How does knowledge use vary at different stages of the teaching session?

Broadly, in the 1998/9-sample knowledge use at different stages of the lesson was similar to the 1997/8 sample. As previously, there were clear differences between the categories.

Task Managers revealed limited task introduction strategies, which were supported by knowledge about the task rather than knowledge about the learning. This was followed up by general management, motivation and elicitation strategies with no review of learning. However, the pattern of support *was* strengthened by the way this student teacher had to fit in with the structure of the Literacy Hour. This meant that more time was devoted to a planned introduction and more explicit support was given to pupils when they were on task in the guided session. However, the underlying understanding of learning and literacy concepts and skills was lacking, which resulted in the support being mainly of a managerial or motivational nature, e.g.

> *I wanted them to get on with the sheet.*

and

> *Keeping it neat and between the lines – that's what I was thinking about.*

Curriculum Deliverers: The 1998/9 Curriculum Deliverers could be related to the model shown in Figure 6iii (see Chapter Six) in a slightly different way to the 1997/8 sample.

Figure 7i: The model applied to 1998/9 Curriculum Deliverers

Stage Four	Stage One
Concepts/ skills performed but not progressed beyond this session	Concepts/skills introduced Student has clear introduction Main strategies: Instruction, Modelling, Elicitation questioning
Stage Three	**Stage Two**

Student teacher focuses on a group of children but in limited way

Figure 7i shows how the model can be applied to an analysis of the teaching of the 1998/9 Curriculum Deliverers. In the 1998/9 sample, it was noticeable that these student teachers were more likely than the Curriculum Deliverers from 1997/8 to use specific terminology and refer clearly to literacy concepts. The structure of the Literacy Hour seemed to support the student teachers in ensuring they had a clearer introduction with a wider range of teaching strategies (mainly instruction, modelling and elicitation questioning). The student teachers were noticeably reluctant to deviate from their planned whole class work. In discussing this a number said that they were worried that the children would ask them questions they couldn't answer. To an extent the guided section of the hour also seemed to ensure that the student teachers focused more clearly on learning in quadrants 2 and 3. However, in practice this

appeared to involve monitoring the task and 'eliciting' but with a smaller group of children. The student teachers in this category typically explained their actions in terms like 'help them think about what they are doing'.

Concept/Skill Builders: There were only two student teachers who fell into this category in 1998/9, although one was classified as Curriculum Deliverer/Concept/Skill Builder, as she had some characteristics from each category.

Figure 7 ii: The model applied to 1998/9 Concept/skill Builders

Stage Four	Stage One
Concepts/ skills performed	Concept/skills introduced
	Student teacher uses a range of strategies to introduce and support understanding of task
Stage Three	Stage Two

Student teacher less sure about supporting learning.

The two student teachers who were categorised as Concept/Skill Builders in 1998/9 appeared to have less confidence than the 1997/8 Concept/Skill Builders in discussing their actions at every stage of the lesson. Understandably, they were unsure of the structure and principles of a relatively unfamiliar approach. Their discussion had similarities with the Curriculum Deliverers in that they focused very closely on the planned introduction and were less confident to explain the support given in the

middle, guided section of the lesson. They differed from the Curriculum Deliverers in that they employed a wider range of teaching strategies and demonstrated more varied and sustained introductions, e.g.

I wanted to show them in different ways – help them see what it [phonic pattern] was all about.

And

I knew they had to understand that before we moved on.

Question: What initial impact does the National Literacy Strategy have on student teacher's knowledge and understanding in its first year of implementation in schools?

To an extent the findings at this stage have already shown some consequences that the impact of the National Literacy Strategy may have had on the learning of student teachers. Obviously these need to be treated with caution when such a small sample of student teachers is involved and when one sample is being compared with a different sample at a different time. However, it may still be useful to tentatively summarise them at this point, although they will be more fully discussed in Chapter Nine:

♦ Student teachers appear less likely to focus exclusively on tasks. Even those near the beginning of ITE appear to find enough guidance in the National Literacy Strategy Framework to ensure that they consider learning objectives;

♦ The focus on learning is more likely to be specific and referenced to specialist and appropriate terminology;

- The pattern of teaching support is likely to be sustained for longer, with the use of detailed, planned introduction.

- Student teachers appear to be less able to explain underlying frameworks when discussing learning objectives.

- There is a tendency for learning objectives to be considered in a fragmented way, with student teachers struggling to link them either to each other or to a broader framework.

- Student teachers appear to have less confidence in supporting children's learning beyond the planned introduction.

Interviews With School Based Mentors **November 1998 – July 1999**

Questions: What kinds of knowledge do school based mentors view as central to effective literacy teaching?

School based mentors were interviewed in order to identify:

a) The criteria they were using in judging a student's ability in literacy teaching,

b) The types of support and development offered by the mentors in promoting the students' development as literacy teachers.

The methodology partly used a narrative approach. Interviewees were asked to describe the main characteristics they felt would indicate that a student teacher was doing well in his/her literacy teaching. This then formed a basis for exploring ways in which they had tried to help student teachers develop those characteristics. See Appendix Five for the interview schedule.

Analysis and Findings from Mentor Interview Data in Stage 1

The Hycner method was used as in previous stages. In attempting (as suggested by Hycner) to describe each interviewee in summary, two distinct categories emerged.

Class Management (4 mentors)

This category relates, in many ways, to the Task Manager category in the student teachers. In interview, these mentors expressed their concerns and foci for supporting the student teachers in their literacy teaching in class management terms. Typically they would describe a good student as one who kept the children in order and suitable lessons were those in which the children worked quietly. In discussing the main ways they sought to develop a student's expertise they focused on organisation and control above all else.

Subject Development (3 mentors)

Interviews with these mentors centred much more on the subject and particular concerns or issues related to its teaching. There was a range of views on what constitutes subject knowledge in literacy teaching, with more emphasis on pedagogy by some and more on technical terminology by others. Two out of the three expressed concerns about their own subject knowledge. Despite their more obvious focus on the subject, the mentors in this group tended to direct this onto the didactics of planning and organisation in a general sense and found it difficult to pick out specific instances of teaching or particular strategies they discussed with students. By their own admission, they had insufficient time to look at subject knowledge at a micro-level and were more likely to rely on student teachers' files alongside a general impression of performance in the classroom, in making judgements about them.

Issues Arising as a Result of Stage One

The data from Stage One had helped to verify the validity of the Task Manager, Curriculum Deliverer and Concept/Skill Builder categories and to illuminate in more detail the thinking informing the way the student teachers in each category acted, or sought to act in the classroom. The comparison with the data and findings from the Pilot Studies had helped to reveal the impact that national and local contexts had on this thinking, particularly in the form of the initial impact of the implementation of the National Literacy Strategy. This helped to focus the next and final stage of the study in the following ways:

♦ I wanted to ensure I was able to conduct further and more detailed probing of the multi-layered contexts that were impacting on student teacher thought and action. This required a more in-depth approach with a smaller number of student teachers and a more intense examination of other people directly involved with them.

♦ I wanted to study more closely the range of factors that both student teachers and those involved in supporting their learning in school consider to have an impact on their literacy teaching. Although this had been an ongoing theme from the outset, I wanted to ensure the discussion could be wide ranging enough to include consideration of factors well beyond the immediate context.

♦ I wanted to investigate again the impact of the National Literacy Strategy on student teachers' development as literacy teachers as it had begun to be more familiar to schools and become embedded in their practice.

CHAPTER EIGHT

DATA COLLECTION AND ANALYSIS IN STAGE TWO OF THE STUDY

April 2000 - June 2001

Questions: What are the main types of experience that inform student teachers' knowledge?

How do school based mentors support student teachers as developing literacy teachers?

What is the impact of the National Literacy Strategy on student teachers' knowledge and understanding in its third year of implementation in schools?

Observations in Stage Two (A) **April 2000 -June 2000**

4 student teachers (final placement in 4 year ITE programme)

The observation methodology adopted in Stage Two was the same as in Stage One – the main function was to facilitate 'prompts' for probing student teacher identity and understanding. The purpose at this stage was to attempt to explore in greater depth the relationship between the student teachers' development as literacy teachers and the contexts in which they were operating towards the end of ITE. Observation of teaching was only a small part of the picture – the interviews that followed the observation were more important.

Interviews in Stage Two (A) **April 2000 -June 2000**

Four student teachers

Questions: What are the main roles student teachers identify as central in their teaching of literacy?

What are the main types of experience that inform student teachers' knowledge?

The first half of the interview procedure following observation of the student teachers was very much the same as in previous stages: questions about teaching accompanied by broader questions about literacy teaching in general. The second half of the interview was designed to probe aspects of their experience that the student teachers viewed as being influential on their literacy teaching. This involved showing the interviewee a series of randomly ordered categories of experience (scattered over a page) and asking them to pick out any for further discussion that seemed particularly relevant. See Appendix Seven for an example of this.

The student teachers were also encouraged to add any further areas they considered to be influential. The aim was to try and build up a picture of the various factors that the student teachers saw as having an impact on their development as literacy teachers and to establish how they saw the role of the various contexts in which this development had taken place.

Findings from Student Teachers in Stage Two (A) **April 2000 -June 2000**

Question: What are the main types of experience that inform student teachers' knowledge?

♦ ***Children as the main learning source***. All four of the student teachers felt that the main factor informing their literacy teaching at this stage was their growing knowledge of the children they were teaching on their final school placement, e.g.

> *Knowing what the children are capable of. I wouldn't have done it with children I didn't know.*

And

> *Mainly it's the children. Mrs R who has been here. I've learned a bit from her - but others .... the last one ... no not really.*

♦ ***Contextual knowledge about the children.*** The main type of knowledge the student teachers seemed to value in relation to the children was discussed in terms of social background, learning styles etc. One student teacher discussed the importance of knowing about the pupils' progress in literacy, but all four focused the main part of their discussion about knowledge of children on the need to know about their background, home circumstances etc. e.g.

> *It's given me different experience of different types of children, so I know that whatever school I go into, I mean whatever school I go into it's going to be a new thing, but it's given me more of a wide scope. If I'd only ever had classes of children who were like this, then I got a difficult class then I wouldn't know what to do.*

♦ ***Mentors seen mainly in formal assessment terms.*** All of the student teachers expressed gratitude in general to their school based mentors, but this was couched mainly in terms of the time they gave up to the student teachers. When asked about the role the mentors played in their learning, they felt this was mainly as the person who decided ultimately if they would pass or fail, and determined their progress along the way, e.g.

Interviewer: *What about Associate Tutors? (i.e. named mentors) Have they been an influence?*

Interviewee: *I suppose ... no, no really, they're just there to pass or fail me really.*

The following heading is closely related.

♦ ***Mentors not viewed as central to student teacher learning.*** Three of the student teachers considered that their mentors played a relatively minor role in their literacy learning. The fourth acknowledged that the mentor (who was also an English co-ordinator) had helped her to understand the National Literacy Strategy more fully, but still felt the class teacher had been the main adult source of support.

♦ ***Class teachers seen as main source of support.*** It is important to highlight that the system in operation in both case study schools was one where the mentor was a

different member of the teaching staff to the teacher of the class in which the student teachers were placed. All of the student teachers were clear that their main source of support came from the teacher of the children they were teaching.

My teacher is the one who helps me - the Associate Tutor is there to do the crits, but Mrs X gives me the help.

♦ ***Class teacher support seen mainly in terms of practical resources***. The above mentioned support from class teachers was mainly talked about in terms of practicalities, such as finding texts, preparing worksheets etc.

More guidelines than anything major. Handy hints rather than do it this way rather than that way.

♦ ***The teaching approach of the school conceived in practical terms***. The same practical focus was applied to discussion about the teaching approach taken by the school. There were many statements about the organisation of the guided work, the allocation of texts and the use of exercise books etc. The student teachers found it much less easy to talk about the rationale that had been adopted by the class teacher and school.

♦ ***Schemes a major factor.*** In both of the case study schools schemes to support the National Literacy Strategy had been recently purchased. These seemed to dominate

the student teachers' thinking about how they were teaching literacy. They also claimed that the schemes formed a major part of their discussion with class teachers.

We spend a lot of time thinking about the scheme.

And

That scheme sometimes makes it hard – they really want me to use it, but I don't like it at all.

♦ ***Influence of own schooling***. When presented with the random list of headings and asked to identify which they felt had a particular impact on their teaching of literacy, all of the student teachers directed a large amount of the discussion on 'childhood experiences', and on their own experience as a pupil in particular. One student teacher talked at length about her sister's experience as a dyslexic and the importance of building children's confidence.

... and knowing my sister was slightly dyslexic, I could help her quite a bit… it was just reading and writing, so it's helped me to help the ones that are struggling.

♦ ***Other student teachers seen as a key source of knowledge***. This was discussed mainly in terms of 'ideas'. All of the student teachers talked about the desperation

they sometimes felt in searching for enough ideas to sustain them over a long placement. They discussed exchanging plans and resources as a major source of support.

I couldn't have lasted without my housemates. They've saved me a few times.

♦ ***Other sources of support****.* The other forms of support the student teachers identified were as follows:

- ♦ *University tutors (four student teachers)*

- ♦ *Their own experience from previous placements(four student teachers)*

- ♦ *'Ideas' books(four student teachers)*

- ♦ *Pre-ITE experience in school (one student teacher)*

- ♦ *An enthusiasm for the subject, particularly reading (one student teacher)*

Interviews with School Based Teachers in Stage Two (A)

2 mentors (i.e. Associate Tutors), 1 head teacher April 2000 -June 2000

Questions: How do school based mentors support student teachers as developing literacy teachers?

What is the relationship between the personal, school, local and national contexts and the developing identities of student teachers as literacy teachers?

The interview method for the mentors and head teacher followed a very similar procedure to the second half of the student teacher interview outlined above. Interviewees were shown the same set of randomly placed headings and asked to consider any they felt had a particular impact on the way they supported, directed and assessed the student teachers. They were also encouraged to talk more broadly about the teaching of literacy within the class, school and LEA – in particular to identify factors that had an impact on this. This broader discussion was then related back to the student teachers and how they were supported in their literacy teaching within the school. The aim was to try and build up a picture of the range of factors (at different levels of physical immediacy) that were perceived as having a direct or indirect impact on the development of the student teachers as literacy teachers.

Findings from School Based Teachers in Stage Two (A) **April 2000 -June 2000**

Question: How do school based mentors support student teachers as developing literacy teachers?

Mentors (Two)

♦ ***Mentor role seen in terms of support more than assessment***. In contrast to the student teachers, all of the mentors considered that their main role was to support student teachers and that assessment of the placement was secondary to this.

> *I like to think I'm … an advisor – a sort of more experienced friend … the pass thing, well if there was a problem I'd always ask the college.*

♦ ***Curriculum of school seen as a driving factor in providing literacy teaching advice***. The mentors talked in terms of 'our approach', defined as how the school has chosen to operate literacy teaching in the light of implementing the National Literacy Strategy. They felt that it was helpful to the student teachers that literacy was high on schools' agendas at this time.

> *I always spend time talking it though – schools aren't all the same and sometimes they expect them to be. We need to do it THIS way for OUR children.*

♦ ***Curriculum of school seen as dictated by LEA/DfEE***. There was a strong tendency for both mentors to talk about the school literacy curriculum as something that had been imposed externally. One mentor claimed that the school was still trying to work it all out. The other mentor made reference to conflicting advice that had been given by the LEA and expressed concern that there appeared to be so much confusion. Both

mentors talked about the need for clear advice – 'just tell us what to do and we'll get on with it', and claimed that this made it difficult to advise student teachers.

It's been a hard time – we thought we were OK, doing it right and then this … you wonder what will be next.

♦ ***Accountability to OFSTED, parents and head teacher****.* It is understandable that, in what appeared almost as a climate of fear and confusion, mentors were worried about issues of accountability. While expressing support for the student teachers, both mentors also discussed the fear that if student teachers 'got it wrong' the school would suffer. As one of the mentors put it:

We and they [the children] don't get a second chance.

♦ ***A bridge between children and student teacher.*** One mentor talked at length about her role as helping the student teachers to understand the children in this particular school setting. She thought it was important that someone could explain their needs and talk about how the school attempts to meet them.

Our children are the most important thing… we've got to get it right for them.

♦ ***The importance of student teachers 'fitting in' with the rest of the school.*** This was a strong theme that came from the data from both mentors and from the head teacher.

There were a number of statements about the need to adopt the approaches and resources of the school. It was clear that this was one of the main criteria by which student teachers were judged as successful.

It's marvellous, I've been able to get on like I haven't done for ages.

♦ ***College seen as the main source for acquiring subject knowledge****. Most of the discussion about teaching within school and the types of support given to student teachers was very practical in nature. When asked about subject knowledge and understanding about literacy, all school-based teachers saw the college as the main source. There was actually a tendency to treat the student teachers as a 'conduit' for improving the school-based teachers' subject knowledge. The head teacher talked about asking other members of staff to observe student teachers so that they could see the Literacy Hour in action.

Head Teacher (One)

Many of the same themes that arose from the interviews with the mentors were replicated by the interview with the head teacher. There were also some additions:

♦ ***School placement seen as an introduction to the 'real world'****. The head teacher talked at length about the need for student teachers to 'see life at the chalk face' in order to apply what had been learned at the university.

- ***The 'juggling act' involved in satisfying college needs and curriculum demands etc***. The head teacher discussed the many demands that are on schools and head teachers in particular. He talked about the tensions involved in trying to help the student teachers and ensure they had opportunities to meet demands imposed by the university, while still covering all the curriculum, preparing for OFSTED and satisfying parents. While sympathetic to the needs of the student teachers, he saw these as secondary to the more urgent needs of the school.

- ***Good student teachers seen as a useful asset – 'more hands on the deck'***. The head teacher expressed great appreciation when a student teacher was able to quickly adapt to the systems and approaches of the school and to need little further guidance. Such student teachers were considered as extra members of staff.

- ***Student teachers can be a resource - they know more about NLS***. As mentioned above, the head teacher found it useful to use student teachers to help to develop his own staff's understanding of the National Literacy Strategy.

Stage Two (B) **June 2001**

Questions: What are the main roles student teachers identify as central in their teaching of literacy?

What is the impact of the National Literacy Strategy on student teachers' knowledge and understanding in its third year of implementation in schools?

What is the relationship between the personal, school, local and national contexts and the developing identity of student teachers as teachers of English?

The last stage of data collection involved two main sets of people:

♦ A seminar group (35) of 4th year English specialist student teachers

♦ Two volunteers from within the same seminar group

One of the main purposes of this stage of the study was to re-visit the student teacher questions pursued in Stage Two (A), away from the immediate practical demands of the school setting, with student teachers at the very end of ITE. I particularly chose English specialists, because I wanted to explore further what a student teacher had said at the previous stage about the importance of enthusiasm for the subject.

A second goal was to re-examine the impact of the National Literacy Strategy on student teacher learning long enough after its implementation in schools for it to have started to feel familiar to both student teachers and the people they had been working with in school.

Seminar discussion in Stage 2 (B)

While this was not part of the formal design of the study it needs explanation as part of the process which led to the final set of interviews. This seminar took place in the very last session of the student teachers' ITE. They had all successfully completed their final school placement and were on the brink of gaining QTS. They were taken through a series of activities that required them to reflect back over their ITE, both in immediate terms with reference to the school placement that had just finished, and in broader terms over the whole of their ITE experience. In participating in these activities they were asked to discuss and record the range of factors that they felt had supported or impeded both their development as literacy teachers and their opportunity of being (what they felt to be) effective in their literacy teaching. They were asked to consider this in relation to literacy teaching in general and to teaching the National Literacy Strategy in particular. The written evidence that was the outcome of these exercises was then used as a basis for identifying common themes to be explored more fully in interview.

Interviews in Stage 2 (B)

Two student teachers from the seminar group volunteered to be interviewed in greater depth about some of the areas that had been covered in the seminar. The methodology involved a semi-structured interview where the interviewees were asked the same framework of questions but were allowed to include discussion of other areas as and when they arose. The questions were designed to pick up some of the themes that had emerged from the seminar discussion. These will be discussed in Chapter Nine.

Findings from Stage Two (B) **(July 2001)**

Question: What are the main roles student teachers identify as central in their teaching of literacy?

The interview data from both student teachers indicated many common themes, which were further supported by the written evidence from the seminar discussion. These have been identified as:

♦ ***The importance of developing a child oriented response****. There were a great number of statements about being able to respond to children, e.g.*

> *It all depends on what you're trying to cover and what you want to get out of the children. You have to have that in mind and take an approach which is more effective – not tick boxes all the time.*

And

> *The teacher needs to be on the same level as the children but have the ability to take it somewhere else. So they can be really flexible with the language that they're using and the way they put their ideas across so the children get the feeling that they can communicate with great ease.*

Some of the statements arose from either their own experiences of being ineffective, or from observing others;

... and I went though a phase where I thought 'Oh the literacy hour is terrible because teachers just do that and they're all doing the same thing and no one's got any individual qualities or anything' but I've kind of grown out of that a little bit because you find different ways to do it and it's funny how you see things differently.

And

...because the 15 minutes is over or whatever the teacher stops them and moves on instead of, you know, continuing with it, it's hopeless.

♦ ***The need for flexibility in time, planning and pedagogy***. This links closely with the previous category. All the student teachers seemed to think flexibility was central:

Be flexible in the discussion so you haven't like got a set of questions that you just ... like a script – so be flexible so you can respond ... go with the flow.

And

It's flexibility, so that you need to be able to not just say 'Right kids this is where we're going to take it today.' So that you're not too structured in the way that work, so that the children ... I mean that's the beauty of it really – the literacy hour.

♦ ***Making connections with underlying structures***. This was a particularly strong theme arising from both sets of interview data. Both student teachers made a large number of statements about the need to avoid fragmentation and to help children to make links:

> *They learn a lot in the one hour – different kinds of things – you're not just focusing on one thing. You're combining and they can see the links and they can see how everything is important. Things like punctuation, grammar, reading, writing – all of it, it's inter-linked.*

And

> *With the NLS – they can see how everything is important if we want our English to be good and it's helped me to see it that way too. Before we just used to see it all separately. This way is much better.*

And

> *I've seen it in some schools now where it's 15 minutes of horrible stuff and then we'll get on to the nice bits. But it should be 'well we have to do this in order for the next bit to make sense. So it's cyclical – it goes from one place to another and it all connects.*

And

> *One bit fits with another rather than a little bit here and a little bit there so it never quite means anything.*

♦ ***The importance of subject knowledge and thinking about the subject in a holistic way.*** Both interview data and written evidence from the seminar was very clear on the importance of understanding the subject:

> *When teachers don't understand …when it comes down to it they've probably covered the objectives but not as wonderfully as another school. Not as deeply and in a way that is as grounded. I think it would be a lot easier for children to forget those lessons that have been done with old texts and the teacher has been a little bit 'oh well, it'll do'.*

And

> *We've had to do a lot of things – my English degree – it's a very strong point – understanding texts – finding ways to talk about them.*

And

I can pick a really good book and make it come alive. I think I've got a better ability to do that than someone who isn't an English specialist. I feel confident that if some one came to me and said 'I need a book for that' I probably could find a good one.

And

Verbally, to get children to give you what you want, you need to be clear what you're asking them and use the kind of language that they are familiar with but also be able to take it that step further or bring it back if necessary.

♦ **The role of values and beliefs about the subject.** As might have been predicted all the student teachers were passionate about the importance of English and the need to convey enthusiasm to the children.

I live with 3 girls that aren't specialists and they amaze me sometimes because I do really strongly believe in English and its importance and I could fight for it and everything and be really enthusiastic. And I think that's probably what really comes across in the classroom and I feel more kind of able to say 'YES this is good!'

You've got to feel enthusiastic and confident and BELIEVE in what you're doing. That's where my housemates sometimes annoy me. You can tell they just go through the motions and that's bound to be boring for the children.

And

It's certainly important to be enthusiastic. Some teachers don't like English as much as I do and it's like a vicious circle. They don't like it so the lesson doesn't go very well and they don't like it even more. Sometimes they say they can't see the point ... I think that's really a shame ... it's so important – but if they can't see that then the children won't either.

♦ ***The need to avoid an emphasis on content at the expense of learning***. This links with what has already been said about understanding. The student teachers were keen to stress the importance of not 'going through the motions' in order to cover objectives without reflecting on why objectives are important.

I've seen some teaching where the teachers just let the kids get on and they're not really focusing on any of the objectives. It just a system – practising what they already know. That's probably because, I don't know, they don't like it or whatever. I don't know. I don't know why they do that – they perhaps don't understand what it is they're trying to teach so they just end up doing whatever

they want to do how ever they want to do and that way I don't feel the children

are ever getting anything out of it at all because it's just aimless and pointless.

And

I said 'well if you do this lesson and you cover this, you'll also be covering that

and that' and it was more sort of 'well, just match them up because just because

you've got to meet them, you don't have to do them all separately or one in one

hour. You can kind of have 3 in one hour and it be really successful' She hadn't

realised that you can combine the two together and actually make a really good

lesson.

And

The confidence to be able to say 'OK we're not quite going down the strict lesson

plan that I'd written out word for word – it's kind of gone to what I was going to

do tomorrow or the next week.'

♦ ***The value of combining a structured approach with responsive and open-ended***

teaching*.* All the student teachers welcomed the structure and rigour provided by the

National Literacy Strategy framework:

You've got this systematic structure of objectives and they know as well, because that's the good thing about having your objectives and thinking about making the children aware of what it is they're going to be doing. They're already much more clear and open minded about what it is they're trying to get out of the lesson so they're already working towards a goal. Before they would never have been doing that, so that's a lot more precise.

And

Without it I think there'd be big gaps. I think probably you'd cover – whatever – in the curriculum, and you'd do your best to do that. You'd spread it out. I think your lessons wouldn't be as full – they wouldn't be as rounded, because you wouldn't get everything. All the bits that kind of inter-link. So I think you'd be … you'd have a lot more of a bitty curriculum.

And

I feel as if they enjoy all the different little things they're looking at. They find it interesting – all of it coming together, say in the 1st half hour they've been looking at the text and then looking at word and sentence level … yeah … they do enjoy it.

Question: What is the impact of the National Literacy Strategy on student teacher's knowledge and understanding in its third year of implementation in schools?

To an extent it could be argued that this question has been addressed already under the headings above. The statements made by student teachers in both the seminar discussion and the interviews were overwhelmingly positive in relation to the National Literacy Strategy. Any negative statements that were made about it were in the context of other people's (both fellow student teachers and teachers in school) misconceptions about it or misinterpretation of how it should be taught. In analysing the interview data, further conclusions can be drawn:

♦ Both student teachers could clearly be classified as Concept/Skill Builders, using the categories that had been found useful in earlier stages. They were very focused on the subject and the frameworks of understanding that underlie the National Literacy Strategy:

> *I think English NOW with the NLS has become a kind of ... before I remember when I was at school it was kind of like grammar, punctuation, comprehension – all the horrible stuff and then the nice stuff. But now it's kind of – although I know – I've seen it in some schools now where it's 15 minutes of horrible stuff and then we'll get on to the nice bits. But it should be 'well we have to do this in order for the next bit to make sense. So it's cyclical – it goes from one place to another and it all connects.*

♦ Both student teachers believed that the National Literacy Strategy had helped them to understand these underlying structures:

This way – with the NLS – they can see how everything is important if we want our English to be good and it's helped me to see it that way too.

♦ Both student teachers (and this is also clearly supported by written evidence from the seminar discussion) had had experience of the National Literacy Strategy being misused:

I've seen some teaching where the teachers just let the kids get on and they're not really focusing on any of the objectives. It's just a system – practising what they already know.

So they end up using old texts and slipping back to what they were doing before, I think.

CHAPTER NINE

DISCUSSION OF THE FINDINGS

The central area to be addressed in this study is the relationship between the personal, school, local and national contexts and the developing knowledge and identity of student teachers as teachers of English.

INTRODUCTION

The Developing Knowledge and Identity of Student Teachers as Teachers of English

Knowledge and identity are at the heart of this study. Questions about the nature of the knowledge student teachers draw on as they interact with children have been inextricably bound up with their views of themselves as teachers and what they consider their main roles to be in the teaching of literacy. Knowledge is a dynamic entity that cannot be fully separated from its use. As I discussed in Chapter Three, our knowledge of the world cannot be described merely in terms of given or assumed reality, but needs reference to the mental processes we bring to our understanding of it. I have argued that knowledge construction involves the identification of patterns and regularities and the ability to relate ideas to each other in a way that helps give meaning to new experience. The student teachers in this study appeared to be drawing on patterns of understanding that related as much to their mental image of what it is to be a teacher as to their understanding of what was being taught.

The Student Teachers in Relation to Shulman's Analysis of Teacher Knowledge

To some extent the mental images of teaching held by the different categories of student teacher identified in this study can be equated to Shulman's definitions of teacher knowledge outlined in Chapter Four. It can be argued that each category (Task Managers, Curriculum Deliverers and Concept/Skill Builders) represents a distinctly different notion of what it is to be a teacher, which in turn draw on particular versions of some of the types of knowledge in Shulman's classification.

Task Managers

Those student teachers I have categorised as Task Managers appear to be mainly relying on a limited version of one type of knowledge – *knowledge of educational contexts*. Their version of what should happen in educational contexts is seemingly strongly influenced by images of teaching from their own experience as pupils. As they begin their ITE, student teachers have what are often superficial models of what it is to be a teacher, involving authority, order and 'busyness'. The data collected in Stage Two of the study shows that, in fact, pre-ITE influences remain an important factor throughout (and no doubt beyond) ITE, but that these usually become refined by other experiences as student teachers progress. Some student teachers near the beginning of this period appear to cling to this strong mental image of a teacher as their main source of reference. They know classrooms should look busy and that the children should complete tasks so that is their focus. In a context where public performance is a major part of the experience, it is important for student teachers to 'look the part'. This has parallels with the work on the nature of classroom tasks by Doyle (1986) and Clayden *et al.* (1994) that was discussed

in Chapter Four. Doyle found that there was a tendency for pupils to 'bid down' the demands of tasks and for teachers to accede to this in the interest of sustaining an orderly and smoothly running environment. Clayden *et al.* (1994) found that there was a danger that pupils focus on the culture of classrooms (keeping the work neat, finishing on time, staying between the lines when colouring) instead of the culture of the subject being learned. It could be argued that the Task Managers were also focusing on a similar classroom culture, and that this attention to educational contexts was the main factor driving their self-identity as teachers.

The tendency for Task Managers to see the role of teachers and schooling in this way also resonates with Wray's (1994) discussion of awareness and literacy in young children. He draws on studies that find that as children move through primary school they develop a narrower concept of literacy based on surface features like spelling and handwriting at the expense of meaning and purpose. Wray suggests that this awareness stems from what the children have picked up as being important – the messages they have received from what seems to have been the main focus for teachers. It could be argued that the Task Managers have picked up similarly narrow messages about teachers and teaching and that this influences the way they think and act in the classroom.

Cole's (1996) model of 'scripts' is useful here. He describes scripts as event schema that specify the people who appropriately participate in an event, the roles they play, the objects they use and the sequence of causal relations that applies. In determining how information originating from the physical, objective world is processed into a subjective

construction (which may have cultural 'inter-subjectivity'), the scripts used by the Task Managers were based on a cultural understanding of teaching that originated from their experiences as pupils. As D'Andrade (1995) claimed, once a person has a crude script he or she can enter the flow of a particular event with partial knowledge. This is what appeared to be happening with Task Managers. In order to participate in a context in which they needed almost immediately to perform and prove themselves to both children and adults they required a framework for understanding the processes and functions they were involved in. The obvious one to hand involved their interpretation of classrooms from being pupils themselves. This crude and simplistic script allowed them to participate in the practices of teaching very early in their ITE. The hope is that as they participated in more and varied teaching situations and learnt to interpret educational contexts in increasingly informed ways, deepening understanding would constantly enrich the crude scripts they started with.

Curriculum Deliverers

It could be argued that the Curriculum Deliverers demonstrated a richer understanding, in that the schema through which they operated appeared to involve a broader knowledge base than the one drawn on by the Task Managers. As the name suggests, Curriculum Deliverers appeared to focus a great deal on *curriculum knowledge*. This necessarily became an emphasised area for all student teachers after the implementation of the National Literacy Strategy and the ITT National Curriculum. This emphasis possibly explains why there was a clustering of student teachers in this category soon afterwards. In many ways, the National Literacy Strategy framework is a clear example of curriculum

knowledge, which Shulman defines as a grasp of the materials and programmes that serve as 'tools of the trade'. These tools have now been presented for student teachers in such detail that they can be very clear about the content of their lessons. This possibly also explains why the number of student teachers in the Task Manager category was reduced after the implementation of the National Literacy Strategy. Since the implementation of the National Literacy Strategy even student teachers near the beginning of their training have a prop that provides a script that is not focused merely on keeping the children busy.

However, as discussed in Chapter Four, it is clear that the given curriculum cannot fully define the knowledge base required in being an effective teacher. It is illuminating to consider two of Shulman's other categories in relation to the Curriculum Deliverers, and what they appear to lack. These are *content knowledge*, and *pedagogical content knowledge.*

Shulman claims that the *content knowledge* of the teacher should *go* well beyond what is to be taught. That is to say that in order to teach the subject effectively, the teacher must have knowledge of its underlying structures and organising principles. This knowledge will enable him/her to structure learning experiences so that they will be revealed, in a more basic way, to the learner. As discussed in Chapter Four, a number of studies (e.g. Chi *et al.*, 1982, Larkin *et al.*, 1980) show that it is not mainly the amount of knowledge that the expert possesses that is important but how it is organised in the memory. Sternberg and Horvath (1995) suggest that expert teachers possess knowledge that is thoroughly integrated in the form of propositional structures and schemata. This

definitely did not appear to be the case with the Curriculum Deliverers. Curriculum Deliverer X taught about verbs and followed a clear lesson structure, but his main concern was not focused on the applications of this knowledge, but merely on 'ticking off' the objectives listed in his lesson plan.

As McGinn (1982) points out, in so far as knowledge can be objective at all, the objectivity comes not just from the physical world from which it is partly derived, but also from the shared associations the knowledge embodies. These associations – the conceptual connections we make between pieces of information – are what help us to transfer what we have learned from one situation to another (Clayden *et al.,* 1994). Those student teachers who were 'delivering the curriculum,' without fully understanding what underlay it, were less likely to be helping children to make these connections because they had not done so themselves. Shulman's use of Schwab's (1964) characterisation of knowledge structures as either 'substantive' or 'syntactic' clearly links with Bruner's views on the importance of structure and an understanding of the 'fundamentals' - the ways of knowing in a subject. It could be argued that the knowledge of the curriculum focused on by the Curriculum Deliverers operates effectively at the substantive level but less so at the syntactic level. These student teachers appeared to have a grasp of the content but not of how the content connected within the subject and the ways of knowing that are intrinsic to the subject. Consequently the literacy knowledge that the Curriculum Deliverers were operating with (and seeking to develop in children) was a narrow, restricted version. This resonates with the literacy awareness Wray (1994) claims children often pick up after several years of primary education. Literacy learning is seen by the children as a closed process, existing in the culture of the classroom and of

schooling in general, but with little or no relationship with the world beyond. It appeared that the Curriculum Deliverers were operating with a similar awareness of literacy, referenced to the curriculum but not beyond it.

It can be claimed that *pedagogical content knowledge* is very closely related to the syntactic level of knowledge, seemingly lacking in the Curriculum Deliverers. Teachers' pedagogical content knowledge represents a blend of knowledge of subject and pedagogical knowledge and is evident in the distinctive practices for the effective teaching of particular subjects. To operate responsively within the subject and to engage learners within the content student teachers need to develop a command of how the subject is structured and how an expert in the subject thinks and uses it. This specialised use of language and understanding, the discourse of the subject, described by Clayden *et al.* (1994) as a set of shared understandings held by experts, is crucial to teaching and learning within the subject. Clayden argues that learners need to be brought in as participants in the real discourses of the subjects. In failing to identify the broader frameworks to which learning objectives relate, it could be argued that the Curriculum Deliverers were neither *themselves* genuinely participating in the discourse of the subject nor were they structuring learning experiences so as to help *pupils* to participate. This contrasts with the expert literacy teachers studied by Medwell, Wray, Poulson and Fox (1998) who embedded their teaching in wider, meaningful contexts and made explicit and implicit links between concepts and contexts. Curriculum Deliverers, conversely, were conceiving of the concepts and skills they were teaching as isolated and atomised pieces of content. The 'scripts' through which Curriculum Deliverers were processing their experiences, and the experiences of their pupils, were limited by the closed boundaries of

a curriculum that was given and therefore not conceived in terms of the broader subject framework from which it originated.

Concept/Skill Builders

It could be argued that the Concept/Skill Builders were beginning to demonstrate understanding that was broader and deeper than the knowledge revealed by the Curriculum Deliverers. Concept/Skill Builder X's teaching had moved beyond the 'script' to a position where she understood what she was doing so well that she could scaffold the children's learning on a moment-by-moment basis. She could demonstrate the 'contingent interventions' that Wood (1988) found to be central to scaffolding children's learning, because she had a sufficiently broad knowledge base on which to draw. A script in the form of a lesson plan could not sustain teaching of this nature as such teaching is defined by its responsiveness. Teaching like this requires an ability to read the situation and develop a course of action based on that reading. This links with the 'insight' Sternberg and Horvath (1995) associate with expert teaching and with Davidson and Sternberg's (1984) use of the notion of 'selective encoding'. This involves distinguishing information that is relevant to the problem solution from that which is irrelevant. This fits well with the data from Concept/Skill Builders that suggested that they saw the task as important only in so much as it contributed to the ultimate goal of an increased understanding related to the broader framework of the subject. Where (as novice teachers often find) the task was seen to be unsuitable in some way the Concept/Skill Builders were willing (if not always able) to abandon or drastically change

it. The data suggests that this would have been unthinkable for the Task Managers and very difficult for the Curriculum Deliverers.

Insight allows the expert teacher to see deeply into a problem in order to seek the most effective solution. Selective encoding helps in selecting the relevant information to do this. This obviously provides the expert with an insight into the situation, which will: a) enable her/him to make the most efficient use of the time available and b) draw on the most useful areas of knowledge. This is what the Concept/Skill Builders appeared to be beginning to be able to do. They had not yet necessarily reached a stage where they were able to act within the teaching situation as effectively and effortlessly as the experienced teacher in Pilot Study (A). However, in reflecting on their teaching afterwards, they were more able than the other types of student teacher to read the situation retrospectively and draw on the relevant types of knowledge at that stage.
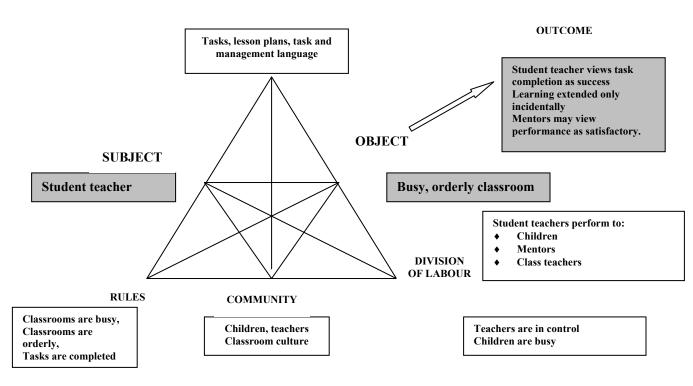
Student Teachers in Relation to Activity Theory

The differing ways in which the categories of student teachers appear to conceive their role in the teaching of literacy can be explored here (in a crude and simplified way) in the Activity Theory framework represented by Cole and Engeström (1993) and discussed in Chapter Three (Figure 3 iii). To some extent the framework is helpful with each category of student teacher in representing the complexity of the training context and the way the knowledge and self-identity of the student teachers leads them to different ways of interpreting this. The main foci that the data suggests the student teachers in each category were concerned with have been placed in the relevant place on the model. By

using the frameworks to compare each category of student teachers, clear differences in their terms of reference and ultimate goals are illuminated. In each case teacher identity can be viewed as a central, dynamic force that drives the way the student teachers interpret classrooms and leads them to manage and shape the activity systems in which they operate. In this sense the identity of the student teachers, and the way this impacts on their reading of the teaching situation, structures their interpretation of the activity system and how they work within it.

Figure 9i Task Managers' Conception of Teaching Using Activity Theory as an Explanatory Heuristic

MEDIATING ARTIFACTS

OUTCOME

Tasks, lesson plans, task and management language

Student teacher views task completion as success
Learning extended only incidentally
Mentors may view performance as satisfactory.

OBJECT

SUBJECT

Student teacher

Busy, orderly classroom

Student teachers perform to:
♦ Children
♦ Mentors
♦ Class teachers

DIVISION OF LABOUR

RULES

COMMUNITY

Classrooms are busy,
Classrooms are orderly,
Tasks are completed

Children, teachers
Classroom culture

Teachers are in control
Children are busy

In Figure 9i the Task Managers' main object – to maintain an orderly and busy classroom – defines the operational relationships and confines the student teachers' thinking within the limits of that particular classroom on a particular occasion. If a lesson comes to an

end and these roles and relationships have been maintained, the experience is judged by the student teacher as successful. The outcome is that the student teachers have not focused on learning in either their actions or thinking. The lesson plans mediate the activity in as much as they dictate the sequences and structures through which order will be maintained and tasks will be completed. The classroom, the children and the other adults in it define the community. The culture is defined by schools and schooling and does not extend beyond these boundaries. The 'habitus' (Bourdieu, 1977 – see Chapter Five for further discussion) – the learned way of being, is formed from this limited and closed understanding of the 'field' of schooling as a set of practices involving order and tasks. This way of being for student teachers is both constructed and constructing in such experiences.

This analysis allows linkage with a further complicating factor, which is the extra 'performance role' student teachers undertake when teaching children. In addition to the primary object, there is the secondary need to demonstrate their competence to various audiences, including mentors, class teachers and children. This need would appear to increase the potential for conflict and confusion. There is a real danger that student teachers who are successful in achieving their goals in their own terms of ensuring order and task completion may also be perceived as successful by mentors. These findings from Stages One and Two of the present study suggest that student teachers who maintain an orderly class may be seen as doing well by some mentors. These findings point to a two-fold problem. Firstly the feedback from the mentor is unlikely to challenge student teachers to extend their thinking beyond the limited model just outlined. Secondly the

focus on tasks and order will help to develop a 'shared communicative environment' (Kraus and Fuller, 1991, P.171) from which the knowledge that can be inferred is itself based on managing tasks. In such instances student teachers are likely to have prior beliefs about their role in the classroom reinforced rather than challenged.

Figure 9ii Curriculum Deliverers' Conception of Teaching Using Activity Theory as an Explanatory Heuristic

In Figure 9ii the main object is replaced, for the Curriculum Deliverers, by the need to cover the curriculum. This focus involves a community and time framework that goes beyond the individual lesson event. The curriculum (and those who present it to the student teacher) is represented as standing behind individual lessons and provides the frame of reference. It is delivered over time and if it is covered the teaching is seen as

successful – coverage is seen as an end in itself, rather than as a means to something beyond it. Mentors may also judge teaching as successful using similar criteria. It is still a closed framework in the sense that its limits are defined by what is stated in the curriculum. This means that literacy learning is still conceived within the confines of the classroom and schooling and does not relate to the authentic discourse of the subject as it exists beyond schools and classrooms. The lesson plan still provides a crucial 'script', but this is supported by the curriculum that underpins it. The potential conflict of objects and roles inherent in the 'performativity' model is still, necessarily, present.

Figure 9iii Concept/Skill Builders' Conception of Teaching Using Activity Theory as an Explanatory Heuristic

MEDIATING ARTIFACTS

OUTCOME

Discourse of the subject

Curriculum, lesson plan

Focus on learner and subject
Learning is defined by authentic
activity within the subject
Learning is transferable beyond
classrooms and schools

SUBJECT

OBJECT

Student teacher

Increased understanding of subject
Ability to apply skills and concepts in a range
of contexts

RULES

Student teachers perform to:
♦ Children
♦ Mentors
♦ Class teachers

COMMUNITY

DIVISION OF LABOUR

Children

Concepts and skills must
be linked
Understanding must be
embedded
Understanding must be
transferable

The curriculum makers

Teachers help pupils to participate
in the discourse of the subject

Broader context of the subject and
participants in it

Figure 9iii shows that the Concept/Skill Builders' model has added a crucial extra level in the form of the broader context of the subject. This dictates both the object of teaching and the means by which it is mediated. Although the lesson plan and curriculum are still there, they are vehicles for authentic participation in the subject rather than as ends in themselves. The outcome is that learning is conceived in terms that go beyond the limits of a lesson plan or wider curriculum. Frames of reference that relate to contexts beyond classrooms and schooling are consequently revealed. This in turn increases the potential for children to be able to transfer learning and develop a 'generality of knowing' that extends beyond individual lessons and the boundaries of an awareness of literacy that is confined only to school. However, once again the dual role of teacher and learner/performer is a potentially complicating factor.

When the three analytic models are compared the contrast in the scope of the frames of reference between each of the student teacher categories becomes clear. Task Managers see themselves as working within a very limited set of boundaries, in terms of time (a lesson), community (that classroom on that occasion) and the goals, rules and division of labour. There is no reference to the subject being taught at all. Curriculum Deliverers extend these boundaries to include the curriculum in a sense that is broader than an individual lesson and the community, rules and division of labour extends to the wider educational context of curriculum givers and receivers. But this is still a closed frame, with limits clearly defined by the scope of the curriculum. The Concept/Skill Builders have a greatly extended frame of reference, which has the next level of the authentic discourse of the subject as the ultimate goal. This opens up the frame of reference in a

way that has no limits, as authentic activity within the subject is infinitely possible. It is only in this model that the subject as a set of specialised understandings has a genuine place.

Knowledge as Process-Driven and Dynamic

One of the distinguishing factors that separates the Task Managers and Curriculum Deliverers from the Concept/Skill Builders and experienced teachers could be described as the static nature of the model of knowledge held by the former group. The Curriculum Deliverers appeared unable to link concepts and skills. Instead, as I have argued, they appeared to treat knowledge as isolated and atomised pieces of understanding. In this learning can be represented as a series of 'products' that are seen as ends in themselves rather than as concepts that link to the world beyond the classroom. This is a danger in any model of knowledge that does not fully take account of the processes involved in helping children to develop skills and concepts within a subject. This leads to a danger of overlooking the syntactic aspects of the subject.

It can be argued that process is at the core of genuine literacy knowledge construction. Adams (1990) would seem to agree. She bases the work on reading acquisition (that I discussed in Chapter Two) on a connectionist understanding of learning, in which process is fundamental. Her analysis relates very closely to the models of knowledge and learning I argue for in Chapter Three. Adams states:

The central assumption of connectionist theories is that knowledge is not just built upon the elements, pieces of our experiences but that it consists of learned relations among them

(P.196)

She goes on to claim:

It is by virtue of their tenet that an object's sensed features as well as our responses to it become tied together in the same associated bundle, that connectionist theories are potentially able to capture the compelling aspects of many of their rivalling theoretical predecessors.

(P.201)

It is useful to examine how Adams relates connectionist theory to learning to read:

A major goal in learning to read is to inter-link the printed appearance of words with one's knowledge of their sounds, contexts, functions and meanings such that all will be evoked together.

(P.206)

The inter-linking and evoking are seen as crucial by Adams (1990, P.206). This proposal is a development of the interactive, parallel processing model of reading put forward by Rumelhart and McClelland, (1986) discussed in Chapter Two and closely related to the

Searchlights model (DfEE, 1998). The emphasis on connectionist learning is of interest at this point for two reasons because a direct link can be made between connectionism as it applies to learning to read and the connections needed to be made by teachers in order to be effective. Medwell *et al.* (1998) found that effective teachers of literacy connected learner, curriculum and context. Askew *et al.* (1997) found that effective teachers of numeracy were essentially connectionist in their thinking. I have cited Tochon and Munby (1993) and Sternberg and Horvath (1995) to argue that effective teachers connect a wide range of knowledge bases with learners and contexts in a synchronised teaching act. Connectionism as outlined here then, would seem to be very relevant to student teachers who are learning to teach literacy. They need both to be able to view the subject in this way, help children to do the same and to be able to connect this understanding with all the other types of knowledge needed to create an effective learning experience.

An important aspect of a connectionist view of knowledge is the process dimension it implies. This emphasis is in contrast to the static model of knowledge that appeared to be held by Task Managers and Curriculum Deliverers. This static model of knowledge can also, to an extent, be associated with Shulman's categories of teacher knowledge, which have also tended to be represented as a series of products, which between them constitute an ideal 'recipe' for effective teaching. Turner-Bisset's (1999) introduction of the notion of pedagogical content knowledge as the universal 'set' to which all other types of knowledge belonged helps to avoid this. This conception of a type of knowledge that underpins all the others takes us in a process-driven direction that seems to fit most usefully with the findings from this study.

The findings from both the student teacher and experienced teacher data in this study suggest that the notion of process in teacher knowledge needs further attention. I argue in Chapter Four that pedagogical content knowledge can be viewed as the ability to interpret a learning situation and bring into play knowledge that is embedded in a sophisticated set of practices. This involves viewing knowledge as process (i.e. evident and generated in action) as well as content. The model of learning that has been a central tenet of this study involves viewing the development of understanding and enhancement of schema as occurring through engagement in sets of social practices that are situated within complex cultural contexts. Such a model must take account of the bringing together of understandings. This is not a question of serially accumulating chunks of knowledge, but of synchronising understandings in an interactive process. The knowledge bases used by the experienced teacher and Concept/Skill Builders in particular cannot be most usefully viewed as a series of items to be accounted for and 'ticked off'. It is the 'bringing together' of types of knowledge that seems to be crucial. However, this is not to argue that learning occurs through socialisation. In Initial Teacher Education these practices need to be contrived to enrich student teachers' schema.

While Turner-Bisset's model takes us in this direction it could be argued that the distinction between process and product has not been made sufficiently explicit in her analysis. The frameworks of understanding that underpin the type of teaching that helps pupils to participate authentically in the subject cannot be captured by a static model. The *processes* underpinning these frameworks – the systems by which they are utilised,
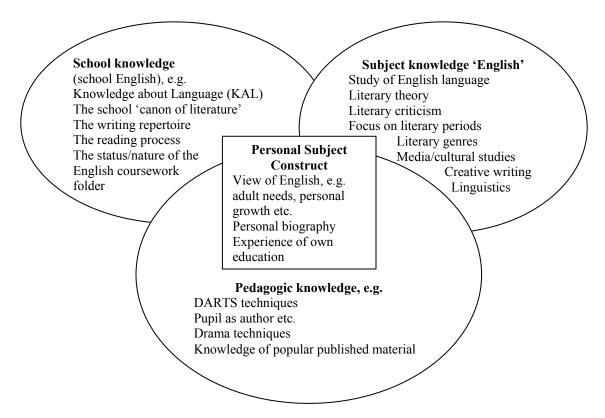
connected and distributed – are as important as the component parts from which they are constituted.

It may be useful to recall the distinction between 'didactics' and 'pedagogy' made by Tochon and Munby (1993), discussed in Chapter Four. They use the term 'didactics' to denote the planned linear curriculum. This could clearly be related to the kind of knowledge demonstrated by the Curriculum Deliverers. However, it could also be related to any model of knowledge that attempts to capture how the knowledge is constituted by constructing a list, however detailed. Tochon and Munby's use of the term 'pedagogy' to describe the interactive management of time around and within the teaching act brings in another important dimension than can be overlooked by a 'list' approach. Tochon (2000) further strengthens the case for the importance of the extra dimension afforded by the notion of pedagogy with his use of the notion of axes. He claims that the intersection of two axes (the axis that represents didactic biographical knowledge and the axis that represents the features of the current situation) represents the point at which didactics become operational. In particular the notion of expert teachers operating within a 'synchronic' time epistemology (Tochon and Munby, (1993) is important here. The process through which knowledge from a range of sources is invoked and synthesised to produce the teaching act involves both verbs related to perceiving, processing and combining and nouns related to the conceptual frameworks that are drawn upon. This could be related to Schwab's distinction between substantive and syntactic knowledge. The range of understandings describe the substantive content and the processes by which they are evoked, combined and applied describe the syntactic element of knowledge

construction. Shulman's categories may have been strengthened if more had been made of these two distinct ways of thinking about knowledge and they had been more broadly applied to the other forms of knowledge he outlined, rather than being restricted to content knowledge.

The model of teachers' professional knowledge developed by Banks *et al.* (1999) (see Chapter Four for further discussion) fits more closely with the findings in this study. This is because it explicitly brings in the process-driven nature of such knowledge and shows how different types of knowledge intersect and combine in this process. However, it could be argued that the diagrammatic representation of this model does not fully capture the relationship between curriculum knowledge (subsumed into school knowledge in the Banks *et al.* model) and subject and pedagogic knowledge as exemplified by the experienced teacher and Concept/Skill Builders in this study. This weakness becomes particularly apparent when the figure Banks *et al.* use to exemplify the model (see Figure 9iv below) is examined.

Figure 9iv English Teachers' Professional Knowledge (after Banks et al., 1999)

School knowledge
(school English), e.g.
Knowledge about Language (KAL)
The school 'canon of literature'
The writing repertoire
The reading process
The status/nature of the
English coursework
folder

Subject knowledge 'English'
Study of English language
Literary theory
Literary criticism
Focus on literary periods
Literary genres
Media/cultural studies
Creative writing
Linguistics

Personal Subject Construct
View of English, e.g.
adult needs, personal
growth etc.
Personal biography
Experience of own
education

Pedagogic knowledge, e.g.
DARTS techniques
Pupil as author etc.
Drama techniques
Knowledge of popular published material

The representation in Figure 9iv fails to fully capture the dynamic nature of the relationship that the types of knowledge have with each other, and the process through which this is combined and connected with the present moment. To be fair to Banks *et al.*, their stated aim is to capture this relationship, but it can be argued that their representation fails to do this in several areas.

The first failing is that in this diagram it could be argued that teachers' knowledge still appears as static. Although the intersections are there, the understanding outlined is still essentially a set of 'bodies of knowledge'. This is particularly apparent in the exemplification (it must be noted that this particular exemplification was developed by a group of English teachers) and especially in the subject knowledge category. The

examples given (e.g. literary theory, focus on literary periods) appear to be just another, wider form of curriculum knowledge – 'university' or 'academic' knowledge that is as codified and didactic as the examples for school knowledge. It could be argued that these are as 'given' as school curricula and as such represent something that is closed, albeit subject to change and reinterpretation. The subject knowledge of the experienced teacher and the Concept/Skill Builders in this study did not appear to be closed in this way. They linked concepts and skills to frameworks that involved a generality of knowing that was infinitely transferable to situations that were outside a prescribed curriculum (whether it belonged to school or higher education) as well as contexts that were essentially educational in nature.

To a certain extent the potentially static nature of Figure 9iv would be overcome by transforming it into a three-dimensional model (a possibility mentioned by Banks *et al.* themselves). This would allow process and the making of connections to be represented by a different dimension. This development would help to capture the nature of the types of knowledge and self-identity that appear to be the centre of how the experienced teacher and Concept/Skill Builders think and act in the classroom. It is in the combining, connecting and distributing of understandings to help children to develop concepts and skills that contribute to a 'generality of knowing' that these teachers were distinct from the others.

A second area of the model developed by Banks *et al.* that does not seem to fully capture the way the experienced teacher and the Concept/Skill Builders think and act in the

classroom is the way it represents subject knowledge and the relationship between subject knowledge and school knowledge. The Medwell *et al.* (1998) study found that the knowledge of the effective literacy teachers was embedded in their teaching and could not be readily separated from its use. While they struggled to demonstrate subject knowledge when it was separated from its teaching application, these teachers were able to articulate a coherent set of beliefs and values about English that was also validated by their observed teaching.

The 'Core' of English

The beliefs and values held by the effective literacy teachers in the Medwell *et al.* study centred on the importance of meaning and communication being seen as at the heart of English. This resonates with Bruner's (1960) notion of being 'honest' to a subject by linking with what is at its core. It also resonates with Clayden *et al.'s* (1994) notions of authentic activity. If subject knowledge is represented as inextricably bound up with notions about the core of authentic activity within that subject, the focus shifts from content to structures, principles and organising schemata. It could be argued that what was significant about the knowledge of the effective teachers of literacy was not just the amount of measurable knowledge they had, so much as how it was known (their synchronic grasp). The fact that they could link their teaching to these important principles concerning meaning and communication must be seen as crucial.

This seemed to be also the case for the experienced teacher and the Concept/Skill Builders. What was particularly distinctive about these teachers was their ability to link

concepts and skills to broader frameworks that could in turn be linked to notions of meaning and communication. Thus their subject knowledge was not so much a linked set on a Venn Diagram, but a dynamic (and potentially all-encompassing) process of structuring ideas in a way that linked them up with what was at the core of the subject. The core of the subject was such that it provided a nub of understanding that could be linked to infinite contexts outside educational contexts as well as within them.

Like the Medwell *et al.* study, this core of understanding in the Concept/Skill Builders could be related to beliefs about meaning and communication. Possibly this definition could be further elaborated by relating these beliefs to concepts and skills that centre on notions about '*how* you say what you say'. This refers to the *crafting* of words, phrases, sentences, paragraphs and texts. Depending on the audience (which may be oneself) and purpose, this crafting may occur with reference to a range of different types of criteria. These might include the clearest communication, the most aesthetically pleasing or the emotionally expressive version of the language. *Form* is possibly the most obvious shorthand term to denote this area. It may be as basic as the best rhyme to continue a pleasing language pattern or be as sophisticated as Jane Austen's ability to craft a literary masterpiece from a plot structure that could be found in a 'Mills and Boon' novel. It is worth noting that one of the difficulties with this notion of craft is that there is often no clear consensus about such criteria and no definitive right way of meeting them. This is possibly why so many non-specialist student teachers appeared to fear the subject. Where there is uncertainty there is likely to be insecurity. Anything that has an aesthetic and emotional dimension will be subjective and open to opposing opinions. It could possibly

be this very aspect of the subject that made the Curriculum Deliverers sometimes prefer to follow a script that could be perceived as bringing with it the certainties not offered by the subject on its own.

Progression in Knowledge Development and Use

When the findings from this study are considered in terms of the processes through which the student teachers were acting and thinking, the picture becomes both clearer and more complex. If teacher development is considered as a sliding scale, with novices who merely manage the task at one end and expert teachers who synchronise knowledge from the broadest and deepest frameworks in their teaching acts at the other end, the extremes are the most straight forward to conceive. As is shown by Figure 9v, the experts synthesise knowledge from all sources and make constant connections between the learner, the subject and the context.

Figure 9v The Process Of Accessing Knowledge Bases to Produce an Effective Teaching Act
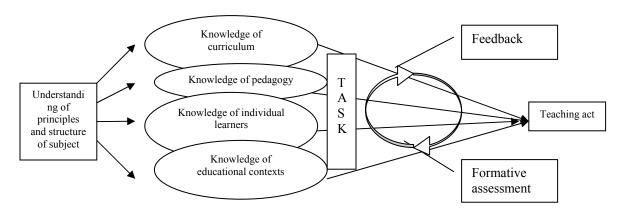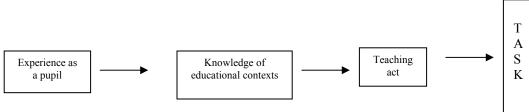
Figure 9v represents a dynamic process, which would ideally be shown in three dimensions to show how the processes involve synchronising knowledge simultaneously. For the sake of clarity the knowledge bases have been summarised into five main inter-linking categories. Curriculum, pedagogy, learners and educational contexts (which includes teacher identity) are put alongside each other as parallel inter-related sources. Knowledge of subject is represented as lying behind the other four types of knowledge. This is because it is seen as a framework that needs to be connected to all the others. The arrows leading to the teaching act represent the process of synchronising these types of knowledge. This process is shown as occurring through the task, but the task is represented as a vehicle for this - a means to an end, not an end in itself.

The Task Managers operate in Tochon and Munby's diachronic, linear epistemology and draw on limited knowledge bases and superficial understandings of the role of the teacher in doing so. They sequence their actions, following a plan that is underpinned by the need to keep order and complete tasks. This involves operating within a limited, diachronic epistemology and utilises a limited knowledge base.
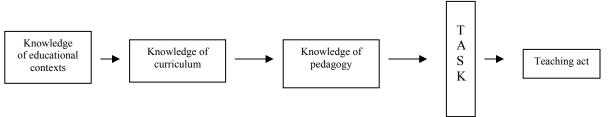
Figure 9vi The Process of Accessing Knowledge Bases by Task Managers

The completion of the task and the need to keep busy is the ultimate goal of teaching. The task is therefore represented after the teaching act as the teaching actions are seen as vehicles for achieving this goal.

As student teachers progress in their understanding there are developments in both the process and product dimensions of teacher knowledge. As conceptual frameworks broaden, the processes by which they are utilised also expand.
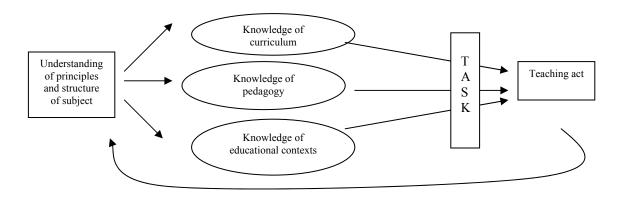
Figure 9vii The Process of Accessing Knowledge Bases by Curriculum Deliverers

The Curriculum Deliverers have expanded their knowledge bases to include a curriculum base (that is often very detailed) and often an increased understanding of pedagogy has also developed. This also informs the epistemology within which they operate, which is still largely linear but goes beyond reference only to the task. The task has become a vehicle but this is for the curriculum rather than learning within the subject in a broader sense. The teaching is still conceived within the closed context of classrooms and schools, so this still provides the ultimate reference, albeit that this may be a more sophisticated version of knowledge of educational contexts than the one held by Task Managers.

Concept/Skill Builders have expanded their knowledge base to include the subject framework and this has the potential to help them to work within a synchronic epistemology, as knowledge is no longer conceived in a one-dimensional linear way.

Figure 9viii The Process of Accessing Knowledge Bases by Concept/Skill Builders

The understanding of the subject that Concept/Skill Builders are beginning to develop involves seeing the connections and relationships, which brings in the process and the making of connections dimension of knowledge application. The task is a vehicle for the understanding of subject that lies behind the other types of knowledge. There may also be points at which the conceptual frameworks exceed the processes required to utilise them fully. So for example, Concept/Skill Builders may be able to talk about what they were aiming for conceptually, while admitting they were unable to find the strategies to achieve their aim. This is why their model is represented with a link back to the subject after the teaching act. The processes through which they act in the classroom may also be less dynamically interactive than an expert teacher's, as many of the processes that Sternberg and Horvath (1995) suggest may become automatic with experience have not

yet reached this stage. Knowledge of individual learners has also been omitted from the representation, as the data suggests this is still an area all student teachers feel they need to develop by spending time with children that is longer than a placement allows. Yet this was a key factor with the experienced teacher. The omission of formative assessment and feedback is also closely related to this. Assessment and feedback was a prominent feature of the findings from the data relating to the experienced teacher, but much less obvious with the Concept/Skill Builders.

These diagrams are crude, simplistic and as open to criticism as any attempt to represent simply something as complex as teacher behaviour and thought. The crucial aspects of effective teacher knowledge that they attempt to represent can be summarised as:

♦ Effective teaching involves combining several types of knowledge in synchrony;

♦ Effective teaching involves synchronising knowledge in a way that directly connects the learner with what is being learned through a continuous process of assessment and feedback;

♦ The processes of combining, connecting and distributing concepts and skills are as important as the concepts and skills themselves;

♦ While an understanding of the subject involves a grasp of many concepts and skills, these are situated in a context where the relationships and structures that link and organise them are as important as the skills and concepts themselves;

♦ An understanding of the subject involves an ability to link the teaching and learning of sub-skills and concepts to ideas that are at its core. In the case of English these centre on notions of meaning and communication.

♦ An understanding of the subject involves a framework of reference that extends beyond schools and schooling.

The Role of Values and Beliefs

McGinn's conception of the mind not as a 'passive mirror of the world' but as a 'force that shapes the way the world presents itself to us' (McGinn, 1982 P127) helps to explain the role that values and beliefs might have in processing externally derived experience. Organising schemata and the use of events scripts have proved to be useful in helping to represent the way the student teachers appeared to be acting and thinking in the classroom. I have also argued for the importance of the processes of evoking responses and shared associations. It seems logical to expect that the values and beliefs held by teachers will be central in determining how the event schema are constructed and responses and associations created. Values held by the individual lie at the interface between social and individual consciousness. Bakhurst (2001) claims:

> We can only appreciate the extent to which the community influences, for good or ill, if we preserve a robust sense of how things are. For among the things that participation in the practices of our community empowers us to do is navigate an independent course through life, responding in our distinctive way to reasons that have a force independent of communal assent.
>
> (P.194)

So, although the social contexts and cultural values of the settings in which we operate necessarily shape us, we still steer our own course through them. We make our own sense of the experiences we encounter and in doing this our values and beliefs will play a leading role. Studies of teachers' beliefs show that there is a close (but complex) relationship between the teaching approaches and strategies they adopt and their personal beliefs and underlying assumptions (e.g. Munby, 1984, Richardson, 1994). This is particularly true when measuring the extent to which new initiatives and practices are adopted. Teacher identity and belief systems are inevitably bound up together. It could be argued that how teachers conceive their role is synonymous with why they believe they are there in the classroom.

The Medwell *et al.* (1999) study of effective literacy teachers found that beliefs played a central role in the practices of the effective teachers of literacy. They state:

> Evidence from the projects supports our hypothesis: that effective teachers of literacy have developed a coherent set of beliefs about the teaching and learning of literacy which influence their selection of teaching approaches. The findings indicate that effective teachers of literacy are likely to believe that reading and writing are principally concerned with the communication of meaning and that technical features of language are taught as a means to an end.
>
> (P.45)

Stage Two (B) of the study produced findings that appear to support this. The specialist student teachers were very sure that their beliefs about the importance of English and its value beyond the classroom were fundamental to their teaching. They compared themselves to fellow student teachers who were specialists in other areas of the curriculum and other teachers who did not feel the same commitment to English and expressed dismay at the effect that this had on their teaching. This anecdotal evidence does not have any validity in the sense that there are no other types of data (e.g. observation) to confirm it – unlike the Medwell *et al.* study. However, it is also supported by other data taken from student teachers who I classified as Concept/Skill Builders.

As has been discussed, the data from both observations and interviews suggested a notion of English that went beyond the curriculum and involved a coherent framework of understanding. Implicit in this was the valuing of English as essentially about meaning and communication – the 'core' of the subject (Bruner, 1960). The evoking of responses drives the process dimension of knowledge in which connections are made to broader frameworks. In the Adams (1990) connectionist model used to represent the reading process (see earlier discussion) the nature of response - the learned associations we make between experiences - is a central factor. Beliefs and values shape the responses that teachers try to evoke in the process dimension of knowledge construction. In the case of Concept/Skill Builders, these beliefs centred on core values relating to meaning and communication. The actions of these student teachers were driven by the desire to help children to make meaning and to communicate effectively. This is particularly clear with the English specialist student teachers interviewed in 2001. In their discussion they link

most topics being covered back to the central importance of making connections with the subject. This is driven by the need to help children to 'see the point' and *'combining, see the links and they can see how everything is important' (student teacher interview, 2001)*

For the Task Managers and Curriculum Deliverers, beliefs and values of this nature did not appear to be such a driving presence. It could be argued that the absence of such a force, leaves a vacuum in terms of synthesising knowledge to make connections for the learner. For the Task Managers this vacuum is filled by a desire to keep children busy and for the Curriculum Deliverers to cover prescribed content.

The Impact of Contexts

One of the central beliefs underpinning the policy-making that placed an increased emphasis on school-based training in ITE involved notions of novices being able to learn from practitioners in the real world at the chalk face. The findings from this study seem to show that learning to teach in context is indeed crucial (nowhere else could the knowledge be synchronised and the processes enacted that have been seen to be so critical in effective teaching). However, it would also seem that the relationship between contexts (both local and national), learners and learning is not so straightforward as might be imagined.

The Role of Other Teachers

The findings show that student teachers on the whole do not consider that mentors have a central role in their developing knowledge of how to teach literacy. This, of course, is not to say that that this is true. However, it is interesting to note that most student teachers felt that it was their developing knowledge of children as individuals, combined with a growing bank of ideas gleaned from resource books, fellow student teachers and college tutors that were the main factors in helping them to become more effective.

Where does this leave the role of the mentor? The importance of school based learning is clear. The processes and making of connections that this study reveals to be so important in effective literacy teaching cannot be fully understood away from the contextual characteristics that give rise to them. The Concept/Skill Builders have developed beyond solely managing tasks or delivering the curriculum. They have begun to demonstrate a capacity to interpret the needs of the learner with reference to the curriculum and the wider frameworks it services to make appropriate pedagogic decisions and actions. These processes can only take place within an authentic pupil learning context. The difficulty in terms of supporting the development of this capacity (and the reason student teachers do not consider that mentors have a significant impact on their learning) may partly lie with problems associated with doing this through traditional post-observation feedback. The potential pedagogic acts in a single lesson are numerous and may well be fleeting and difficult to discern and recall. This makes it difficult for both participants and observers to 'capture' the essence of such teaching retrospectively.

It is therefore understandable that the findings from Stages One and Two suggest that there is a tendency for school based mentors to focus on management aspects of teaching in their support and assessment of student teachers. It could be argued that these features of the lesson may be the most visible and obvious to recall in post observation feedback. With the implementation of the National Literacy Strategy and the clear framework of objectives and teaching structure, the visibility of the curriculum was also increased. This would explain why discussion of the school curriculum is a more prominent feature of the later data from mentors. However, this focus on curriculum is still, in Tochon and Munby's (1993) terms, essentially linear and didactic in nature. It does not capture the synchronic nature of the pedagogic actions taken by expert teachers.

Tensions in Roles

The findings show a clear tension for mentors between the roles of assessment and supporting learning. Interestingly this was more clearly perceived by the student teachers, who felt that the mentors' main role was to pass/fail, whereas the mentors themselves saw their main role as supporting learning. The student teachers' perception highlights their need to focus on the performance element of their role in the classroom. I have discussed this as being a complicating factor in a context where they also need to see themselves as learners. It could be argued that this focus on performance has the potential to lead both student teachers and mentors to focus on the more obvious, superficial aspects of teacher behaviour – the maintenance of order etc. This reinforces notions that bind up the identity of the teacher with the management of learners rather than the management of learning.

There are additional problems for mentors who do try and focus on the underlying knowledge bases that student teachers need to develop and draw on in the classroom. I have argued that the processes involved in knowledge transformation are as important as the concepts and skills themselves. These processes are complex and difficult to discern as an observer, particularly when they often are enacted in moments of teaching. It is also difficult also both for the observer/learner to know what lies behind the actions of an expert teacher and for the expert teacher to be able to articulate this to a third party.

Tensions in Goals and Outcomes

There is an inevitable disparity between the major aims of ITE – to develop the expertise of student teachers - and the major aims of schools – to develop the learning of children. This is illustrated by the findings from Stage 2(A) of the study and articulated particularly clearly by the head teacher (see chapter eight, P. 275). The translation of these aims into goals has the potential to lead to more conflict, when this is mediated through the different parties' perceptions of the nature of the expertise needed by student teachers and differing notions of what is involved in developing children's learning.

Figure 9ix Conflicts in roles, goals and relationships

Figure 9ix shows that there are at least two different activity systems in operation as student teachers think and act in the classroom. There are tensions both within and between these systems. Within the system in which the learning of student teachers can be considered as the main object, there are potential differences of interpretations and priorities. For University Institutions, in addition to imposed demands such as the TTA curriculum, there may be an increased emphasis on subject knowledge and decreased emphasis on educational contexts and learners. For school based mentors there is

likelihood that more practical aspects will dominate and in particular a strong need for the student teachers to fit in with the existing practices.

The potential conflict between the system that holds student teachers' learning as the main object and that which has the school's goals in that position is even more obvious. In this figure the activity system relating to student teacher learning is represented on the left and the one relating to schools' goals is on the right. The right hand (school) model has been flipped over so that the subject (teacher or student teacher) of the activity system is placed on the right. This allows the objects and outcomes of both systems to be placed next to each other and aids immediate comparison of common ground and potential areas of conflict. Where pupil learning is the priority there will be times when student teachers' learning cannot be maximised. When this is added to the other school goals concerning accountability to a range of stakeholders, it is unsurprising that student teachers are often judged more on their ability to fit in than on the breadth and depth of their understanding. These conflicts have the potential to leave student teachers with discordant roles to perform and with diverging goals, demands and expectations to meet.

Policy Changes as Context

In addition to the obvious physical contexts that have been examined as part of this study, there have been other more abstract contexts that have played an important role. The longitudinal nature of the design has allowed for the exploration of the shifts in the political/policy contexts in which student teachers have been learning. These changes have been considerable and have had an impact on the main activity systems for both Initial Teacher Education and schools. A political context of increased public

accountability has led to a sharpening awareness of the demands of different stakeholders in both systems. It could also be argued that it has led to an increased emphasis on performance in terms that are measurable and immediate. In Initial Teacher Education the introduction of the standards for the award of Qualified Teacher Status as stipulated in great detail by the Teacher Training Agency (and accompanied by a continuous regime of OFSTED inspections) has led to an increased need for clear assessment evidence. While this has strengthened the need to focus on subject knowledge, it has also emphasised the performance element of student teachers' work in school. It could be argued that there may be times when this has been at the expense of the need to see the school context as a learning environment for student teachers. In schools a closely monitored, government initiated system of target setting at school, class and individual level (also accompanied by an inspection regime) has led to a similar emphasis on performance for both pupils and teachers. Once again, while this may have strengthened the emphasis on subject knowledge and led to a more analytic teaching approach this may have also complicated further the roles and expectations associated with student teachers.

The Impact of the National Literacy Strategy

We can use Shulman's (1987) categories of teacher knowledge to explain the initial impact of the National Literacy Strategy for student teachers. The use of Curriculum Knowledge was greatly enhanced by the Literacy Strategy, but this was possibly at the expense of Content Knowledge and Pedagogical Content Knowledge. The contrast between the 1997/8 (Pilot Study B) and 1998/9 (Stage One) samples showed that the

NLS seemed to have helped student teachers avoid the trap of exclusively managing tasks at the expense of promoting learning. As such the Curriculum has helped them to formulate appropriate learning objectives. However, it is also possible that to an extent the very prescriptive, detailed curriculum limited their ability, or decreased their rate of development, in constructing fuller frameworks for understanding the structures of subjects. The need to focus on covering all the detail supplied by the framework of objectives appeared to result in a reduced understanding in the category Shulman termed Content Knowledge. The findings showed that the majority of student teachers could not explain the underlying frameworks of understanding that underpinned their learning objectives. This had direct consequences for the student teachers' development of Pedagogical Content Knowledge. A restricted or tentative understanding of the subject is likely to limit student teachers' ability to scaffold children in the middle stages of learning, when they should be being inducted into using skills and concepts as participants in the discourse of the subject.

The findings suggest that, for some student teachers, their own use of these types of knowledge may be restricted rather than enhanced (at least initially) when operating within the NLS. The comments made by many of the student teachers suggest that they were so overwhelmed by the detail and range of both the NLS and ITT National Curriculum that they failed to comprehend the underlying frameworks which provide their rationale.

> *I just find there is so much to get through.*

It's like a train – you don't have time to think about it – you just go to the next thing.

This is in contrast to the 1997/8 sample, who were operating solely within the National Curriculum Programmes of Study. For the less experienced or least able student teachers, this did not appear to provide enough guidance and so they resorted to thinking about tasks rather more than learning. For the more able and experienced student teachers, the process of constructing their own learning objectives from the looser framework of the Programmes of Study seemed to have given them ownership and understanding that went beyond 'ticking off' the objectives.

Student teachers in the Curriculum Deliverer category in the 1998/9 sample demonstrated that near the end of training it is possible to be proficient on paper without being as effective in implementing the plans. Although learning was clearly focused in their plans and interviews, and the skills and concepts mentioned were appropriate, these student teachers had less confidence in explaining the underpinning framework to the tasks being taught ('It's in the Literacy Strategy, that's why I did it - I probably wouldn't have otherwise'). This was reflected in their teaching strategies: they had a limited role in helping children in specific ways once they were on task, and were more likely to give general encouragement than support that was focused on specific concepts or skills.

The findings from the last stage of the study in 2001 seem to indicate that this initial phenomenon, in which student teachers appeared to feel so overwhelmed by the amount

of content to be delivered that there was no time or space to consider underlying frameworks, has begun to decrease. Unfortunately, the design of the study did not allow for a comparison to be made between similarly composed groups of student teachers from just after the implementation of the National Literacy Strategy and three years afterwards (I discuss this more fully under critique of design and methodology in Chapter Ten). However, the findings from the interviews with specialist 4th year student teachers in Stage Two (B) of the study in 2001, did produce grounds for some speculation on this question.

These student teachers had developed an understanding of the National Literacy Strategy that appeared to be much more flexible and dynamic than the one held by the majority of student teachers in the 1998 sample. They frequently talked about the necessity to help pupils to make connections, to see the purpose and value of what they were doing in literacy and to be enthused and interested. They focused on the importance of teachers being driven by the underlying goals of the National Literacy Strategy, rather than being solely driven by the need to 'tick off' objectives. That these student teachers value the National Literacy Strategy, as a means of ensuring that teaching is systematic and focused, comes consistently and strongly through the data. Other themes that are prominent include the importance of flexibility and responsiveness. All of these findings with fourth year English specialists at the end of ITE in 2001 present a marked contrast to what appeared to be the initial impact of the National Literacy Strategy on student teachers' understanding. It could be argued that with time, student teachers and experienced teachers alike have learned to relax more and take time to reflect on the

underlying rationale behind the National Literacy Strategy and to use this reflection to guide them in a more rational, grounded approach.

However, a note of caution also needs to be added. There is anecdotal evidence to suggest that this approach is by no means universal, either amongst student teachers or experienced teachers. The student teachers in Stage Two (B) of the study all mentioned fellow student teachers and teachers they had worked with in school who had very different notions about the National Literacy Strategy and how it should be approached. Problems encountered by student teachers in this area included a lack of flexibility or responsiveness to the needs of the children, an insufficient underlying understanding of the learning objectives and a general fear or deficiency in enthusiasm. The challenge for ITE is to ensure that all student teachers develop underlying frameworks of understanding that ensure they do not merely deliver the curriculum. Integral to this is the need to ensure that student teachers hold values and beliefs centred on meaning and communication and that this is developed alongside thorough and detailed knowledge of the skills and concepts necessary to sustain such aspirations effectively for children.

CHAPTER TEN

CRITIQUE OF THE DESIGN AND METHODOLOGY

CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS FOR FURTHER

STUDY

Critique of the Design and Methodology

The strength of this study has emanated from an approach that has combined case study with the examination of larger samples that are still small enough to be studied in some depth. The case studies have enabled contexts to be explored and the layers and levels of understanding held by a number of parties to be probed in some depth. This has been worked alongside the investigation of the larger samples. Themes raised in one type of sample have been explored in the other and visa versa. The study has thus involved a continuing interaction between the two types of sample. However, this approach has also brought disadvantages; some of these could have been foreseen at the time the study was begun and others could not.

The part-time, small-scale nature of the enquiry meant that some concessions had to be made from the beginning. The reality that I was working alone with very limited resources available could not be ignored. If this were the not the case I would have liked to extend the design and methodology to allow for exploration of my categories in relation to other criteria. These could have included all the formal judgements that had been made on the student teachers in a range of contexts – qualifications, assignment grades, placement records etc., but could also have examined their behaviour and how

they were perceived in other ways. An example of this would have been to interview pupils, examine pupils' work and to track pupils' performance in other ways.

Another limitation that was necessarily dictated by the scale of the study centres on its restriction to one type of organisational framework for Initial Teacher Education. The relationship between understandings within school settings and those that related to contexts outside of it has been shown to be interesting and important. It would have been useful to be able to study how such relationships work in different forms of Initial Teacher Education (e.g. school-centred programmes or ones that are modular or involve distance learning). It could be argued that knowledge is likely to be developed in very different ways in programmes that are organised differently (see suggestions for further study).

If my time had been available on a full-time basis I would have planned to systematically follow the development of a group of student teachers from the beginning of Initial Teacher Education to the end. This would have perhaps allowed me to make more certain judgements about the nature of progression in relation to developing knowledge bases. An ideal group for this purpose would have been those student teachers who began their course in the year before the implementation of the National Literacy Strategy (1997/8) and finished it at a point when it had been in most schools for three years (2000/1). This would have had the added benefit of allowing me to investigate the impact of the National Literacy Strategy on the same group of student teachers over time.

However, the importance of designing the study with reference to the implementation of the National Literacy Strategy was not known at the very initial stages, which took place before such an initiative was certain. This lead on to a weakness in the design that could not have initially been foreseen. At the point where the study was first conceived, the importance of being able to make direct comparisons between similar groups of student teachers before and after the implementation of the National Literacy Strategy could not have been understood. Making such comparisons proved to be of great interest. Clearer findings would have been available if the design of the study had ensured that groups that were being compared were as similar as possible. The variables that could have been controlled in this way would have included ensuring the groups included student teachers who were at exactly the same stage of their course, were placed in the same schools with the same mentors and had the same subject specialisms. As it was, the groups that were studied in different years did have sufficient similarity for some comparisons to be made but the validity of these would have been strengthened if the design had allowed for this.

Conclusions

The aim of this study has never been to uncover universal truths. In Chapter Five, when I discussed the approach I have taken I explained that my intention was to examine the relationship between teacher behaviour and the rationale that underpins it. I also stated that I wanted to attempt to study this in depth and analyse it in detail in order potentially to alter how it is perceived. Above all I was seeking to illuminate a situation in a way that would help me, and others, to see it with greater clarity and in more depth. In this I feel I have been successful, at least on a personal, individual level, but I hope, also in a way

that others will share. By using the findings to represent new ways of seeing how student teachers learn to teach literacy and making them public I hope to open up the possibility of new ways of thinking about student teachers and the teaching of literacy in general.

Of all possible conclusions to this study, the firmest is this. Learning to teach primary literacy is enormously complex. It involves many factors, some of which are impossible to control and many of which will never be fully understood. All of this was undoubtedly known already. What I hope has become clearer is the centrality of the role of teacher identity (viewed as the organising principles for action that are held by the teacher) and its relationship to how literacy teaching and learning is understood. It has long been recognised that there is a huge framework of specialised knowledge that teachers need to have developed in order to teach literacy effectively. However, the findings from this study suggest that the processes through which such knowledge is accessed, channelled and shaped are as important as the concepts and skills themselves. Children need to be helped to generate a generality of knowing that will help them to use literacy skills and concepts in all contexts to access the fullest meanings and communicate in the most effective ways. To do this, teachers need to be able to channel pupils' thinking in ways that relate to contexts beyond schools and schooling, classrooms and classroom culture. They need not only to understand the concepts and skills they are trying to develop, but also how they relate to broader inter-connected frameworks that are not limited by the boundaries of the curriculum or school. This understanding is inextricably bound up with teacher identity. The ability to see these connections and to help pupils to make them centres on how teachers see their primary role in the classroom and how this influences

the actions they take. If their main principles for action are bound up with notions of task management and keeping children busy, these connections that link pupils to learning and classroom learning to knowledge that relates to the world beyond it will not be made. Teachers need to see their primary role in the classroom as a catalyst for learning - the link between pupil, curriculum and subject, task and learning, classroom and the world beyond it.

Implications

An enormously complicated problem will not lead to a simple solution. However, there are some practical implications that seem to follow clearly from this study:

The Role of Teacher Identity in Initial Teacher Education

The consideration of teacher identity needs to be a central factor in Initial Teacher Education. All parties involved in the training partnership need to be involved in asking questions about the role of the teacher in ways that include but go beyond the practicalities of how to behave in the classroom. Student teacher educators need to be themselves considering the ultimate goals of education, and the role of the teacher in achieving them, in order to help student teachers extend their thinking and challenge their preconceptions. This is a sizeable task, when the often-overwhelming external demands lead us in a direction that is mainly concerned with performance and accountability and leave us very little time for philosophical analysis.

The Importance of the School Context for Student Teachers' Learning

The school context is very important for student teachers' learning. Only within this context can the essential connections be made between learner, curriculum, subject and context. The findings from the study have clearly demonstrated the importance of context in learning and de-contextualised experience can have limited value in helping student teachers to fully understand the complex processes involved in scaffolding children's learning in literacy. However, it is worth remembering the previously mentioned limitation of the study in relation to different contextual settings for Initial Teacher Education. It may be that there are other ways of organising Initial Teacher Education that make the contextually derived connections for student teachers in other ways.

Support for Student Teachers' Learning in School

It is not enough, however, to place student teachers in school and expect the learning to happen without the right kind of support. Mentors who know the school context better than external supervisors are better placed to help student teachers to make the necessary connections. However, traditional methods of supervision (e.g. observation and feedback), even when conducted by a school based mentor may not be adequate to ensure this happens effectively. Ways need to be found to help student teachers to get on the inside of teachable moments that cannot be fully captured in plans or evaluations or even through uninvolved observation. It is very difficult to understand why and how a range of different types of knowledge are accessed, synchronised and utilised unless one is

involved in the context surrounding it. Possibly team teaching, with student teachers actively involved in working alongside experienced teachers is one way forward. This is probably more demanding on mentors than simply observing student teachers. This poses a great difficulty when teachers in school are already so stretched in terms of time and effort and when they have other competing priorities.

The Need to Help Student Teachers to Make Connections

School based mentors also need to be helped to see the importance of making these connections explicit to student teachers. This means ensuring that they themselves can make such connections between learner, subject and curriculum. This is difficult for one person, when there are so many subjects to consider. There may well be an important role for subject co-ordinators to help in rationalising time and expertise.

Practical Strategies

School based mentors need to be helped to develop practical strategies for ensuring student teachers have the opportunity to focus their thinking on these connections. In addition to teaching alongside student teachers, pre and post teaching analysis is crucial. It is important not to rely too heavily on lesson plans and lesson evaluations in doing this (important though these are). It may be enough to agree that the supporting of particular concepts and skills with particular children will be a focus beforehand. Alternatively, documentation that is designed to direct student teachers' and mentors thinking in this direction may also be helpful. Profiles that capture concepts, skills and teaching strategies can help in focusing reflection. These need to be treated with caution, however, as there

is a very real danger that they become another exercise in paperwork that is an end in itself rather than a means to the broader learning it is supposed to support.

Student Teachers' Learning Away from School

The importance of school based learning does not mean that there is no place for learning away from school. The findings suggest that student teachers need time and space to be able to distance themselves from the practicalities of the school setting, which can be overwhelming in the immediacy of their demands. Connections need to be made with the subject beyond the curriculum and the world beyond the classroom. Time and effort needs to be given to developing beliefs and values about the subject that will help give validity to the importance of these connections. In Bruner's (1966) terms, the core of the subject needs to be explored and valued. There is a case to be made for doing this in intense, focused episodes away from school, before using these ideas back within the school context. Taking the socio-cultural approach that has underpinned the study, this needs to happen in a continuous, iterative process, so that connections can be constantly made, strengthened and reinforced in both places.

The Impact of the Curriculum

All those involved in supporting the learning of student teachers need to be aware of the potential impact of detailed curricula on their thinking and learning. Both in school and in university settings we need to be wary that we do not ourselves become so involved in meeting the demands of the curriculum that we loose sight of the broader purposes it is supposed to serve. As I have already suggested, this is an enormously demanding

expectation for one school mentor, who has to do this with all subjects of the curriculum. Specialised use of subject leaders in supporting student teachers in the relevant area seems a logical way ahead.

Shared Understandings

ITE training partnerships need to find ways of developing a shared understanding of the processes they are involved with when supporting student teachers. The potential conflicts and tensions in roles, responsibilities and priorities may not be fully resolvable. However, it may be an extremely useful step forward simply to examine these activity systems together to reach informed decisions about the best way forward, taking into consideration the needs of all stakeholders.

Shared Language

ITE training partnerships also need to ensure they develop a shared language and frameworks for understanding how student teachers develop and the forms of support and types of understanding that are needed. Language is one of the main tools for mediating learning in the Activity Theory framework. However, if the language that is used to support student teachers' learning in different contexts is not common and shared between all parties there is more potential for conflict and confusion. Developing a shared language must be a two-way process, evolving over time and with a commitment of effort, time and resources from both University Institutions and schools. In practical terms this is likely to involve systematic opportunities for sharing of expertise in the form

of mentor training (for both ITE tutors and school based mentors, with input from both sides of the partnership) and other channels of genuine communication.

Suggestions for Further Study

The National Literacy Strategy and Initial Teacher Education

The impact of the National Literacy Strategy (and other imposed curricula) on student teachers' learning needs further investigation. This needs to continue over a long period of time as the strategy becomes embedded in the practice of schools. Ideally this should be conducted in a way that tracks student teachers as they progress through ITE and has scope for comparing student teachers in places where the National Literacy Strategy has been interpreted in a range of different ways.

Other ITE Contexts

I have already suggested that this study has been limited by its restriction to the examination of student teacher learning in only one way of organising ITE. A logical next step would be to investigate the relationship between student teacher behaviour and the knowledge bases that underpin it as this develops in other organisational contexts. It would be of particular interest to do this in contexts where this is an even more increased emphasis on school based learning, for example School Centred Initial Teacher Training or the Graduate Teacher Programme.

The Transition from ITE to NQT

The development of teacher knowledge could be usefully studied as student teachers make the transition from ITE to being a Newly Qualified Teacher and beyond. Many of the factors that distinguished the experienced teacher in Pilot Study (A) concerning the moment by moment assessment and feedback given to individual pupils could only realistically be developed over a period of time with the same class. As Newly Qualified Teachers develop the depth of knowledge of individual pupils that is possible with their own class, it would be interesting to explore the impact this had on their thoughts and actions within the classroom.

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APPENDIX ONE

OUTLINE OF FOUR YEAR DEGREE PROGRAMME

YEAR/ TERM OF STUDY	TAUGHT PRIMARY ENGLISH COURSE	SCHOOL EXPERIENCE
Y1 TERM 1	15 hours	8 days serial placement
Y1 TERM2	none	8 days serial placement
Y1 TERM 3	none	4 week block placement
Y2 TERM 1	none	1 week block placement
Y2 TERM 2	15 hours	5 week block placement
Y2 TERM 3	none	1 week block placement
Y3 TERM 1	10 hours	5 week block placement
Y3 TERM 2	none	None
Y3 TERM 3	5 hours	1 week block placement
Y4 TERM 1	10 hours	1 week in final placement school
Y4 TERM 2	5 hours	8 week final block placement
Y4 TERM 3	none	Action research project in school as subject co-ordinator

Each school placement includes the use of trained school based mentors (Associate Tutors) who have responsibility for the support and assessment of the student teachers while they are in school. These will not usually be the teachers of the classes in which the student teachers are placed.

APPENDIX TWO

QUESTIONNAIRE USED WITH LARGE SAMPLE (96) OF STUDENT TEACHERS IN PILOT STUDY (A)

The first question asked them to identify and list lessons or parts of lessons they remembered as being particularly successful in promoting literacy learning. For each item on the list they were asked to outline the main roles played by a teacher in the learning.

LIST OF LESSONS OR PARTS OF LESSONS	MAIN ROLE(S) OF THE TEACHER (either yourself or the class teacher)

APPENDIX THREE

INTERVIEW SCHEDULE FOR USE WITH STUDENT TEACHERS IN PILOT STUDY (B) (April 1997 – June 1998)

NAME OF STUDENT TEACHER
SPECIALISM   SCHOOL   DATE
YEAR ON COURSE

- Lets talk about the lesson. Can you explain what your main aims were? What did you really want the children to get from this lesson?

- Where did these aims come from? How did you decide on them?

- Why do you think it is important for children to be learning this?

- Let us go through the lesson in detail. Can you explain what your thinking was?

Go through observation notes chronologically, picking out actions and asking for explanations. Include literacy concepts and skills focused, teaching strategies, assessment strategies, control, organisation, relationship with children, knowledge of individuals, knowledge of context.

- What are the main qualities and types of knowledge you need to be a good literacy teacher?

- What are the main ways someone else could tell? What would they look for?

- How would a good literacy teacher decide which tasks to set?

- What are the main roles of a good teacher in helping children with their literacy?

- What do you need most to become a better literacy teacher?

APPENDIX FOUR

**INTERVIEW SCHEDULE FOR USE WITH STUDENT TEACHERS IN STAGE
ONE (Nov 1998 – July 1999)**

NAME OF STUDENT TEACHER
SPECIALISM   SCHOOL   DATE
YEAR ON COURSE

- Let us talk about the lesson. Can you explain what your main aims were? What did
  you really want the children to get from this lesson?

- Where did these aims come from? How did you decide on them?

- Why do you think it is important for children to be learning this?

- Let us go through the lesson in detail. Can you explain what your thinking was?

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*Go through observation notes chronologically, picking out actions and asking for
explanations. Include literacy concepts and skills focused, teaching strategies,
assessment strategies, control, organisation, relationship with children, knowledge of
individuals, knowledge of context.*

- What are the main qualities and types of knowledge you need to be a good literacy
  teacher?

- What are the main ways someone else could tell? What would they look for?

- How would a good literacy teacher decide which tasks to set?

- What are the main roles of a good teacher in helping children with their literacy?

- How helpful have you found the National Literacy Strategy?

- Have there been any problems?

- What do you need most to become a better literacy teacher?

APPENDIX FIVE

INTERVIEW SCHEDULE FOR ASSOCIATE TUTORS IN STAGE ONE (Nov 1998 – July 1999)

NAME   SCHOOL   DATE

- How would you normally know if a student was a competent literacy teacher?

- What would be the main sources of evidence?

- What are the main roles of a good teacher in helping children with their literacy?

- What kind of strategies would you expect to see being used?

- Discuss observations of teaching session - prioritise elements observed (include literacy concepts and skills focused, teaching strategies, assessment strategies, control, organisation, relationship with children, knowledge of individuals, knowledge of context)

- How do you see your role in helping to develop student's ability to teach English?

APPENDIX SIX

INTERVIEW SCHEDULE FOR STUDENT TEACHERS IN STAGE TWO (A)
(April 2000 -June 2000)

NAME   SCHOOL   DATE

- Let us talk about the lesson. Can you explain what your main aims were? What did you really want the children to get from this lesson?

- Where did these aims come from? How did you decide on them?

- Why do you think it is important for children to be learning this?

- Let us go through the lesson in detail. Can you explain what your thinking was?

Go through observation notes chronologically, picking out actions and asking for explanations. Include literacy concepts and skills focused, teaching strategies, assessment strategies, control, organisation, relationship with children, knowledge of individuals, knowledge of context.

- How would you normally know if someone was a competent literacy teacher?

- What are the main roles of a good teacher in helping children with their literacy?

- What kind of strategies would you expect to see being used?
  How do you see the Associate Tutor's role in helping to develop your ability to teach English?

- Who/what else helps with your learning in this area?

Use prompt boxes in Appendix X to discuss sources of support and learning

PROMPT BOXES FOR STUDENT TEACHER INTERVIEWS IN STAGE TWO
(A)

SCHOOL PLANS

COLLEGE COURSE

THE LITERACY STRATEGY

PERSONAL INTEREST

TEACHING EXPERIENCE

THE NATIONAL CURRICULUM

PUBLISHED SCHEMES

DISCUSSIONS WITH COLLEAGUES IN SCHOOL

DISCUSSIONS WITH OTHER STUDENTS

DISCUSSIONS WITH TUTORS

OWN SCHOOL EXPERIENCE

PERSONAL BELIEFS AND VALUES (GENERAL)

DISCUSSIONS WITH AT

READING: THEORY/ RESEARCH

KNOWLEDGE OF CHILDREN

WHAT TO TEACH

HOW TO TEACH

PARENTS

READING: 'IDEAS' BOOKS

PERSONAL BELIEFS AND VALUES ABOUT ENGLISH

MEDIA

SCHOOL POLICY

CHILDHOOD EXPERIENCES

ADULT EXPERIENCE OF ENGLISH

INFLUENTIAL PEOPLE

INTERVIEW SCHEDULE
PROMPTS FOR ENGLISH SPECIALIST 4TH YEAR STUDENT TEACHERS IN
STAGE 2 (B) (June 2001)

NAME OF STUDENT TEACHER   DATE

- Can you give me some idea about what you think makes a good primary English teacher or good primary English lesson or both - what are the main ingredients?

- What sorts of knowledge do you as the teacher need to do be able to do this? (put into an example)

- Do you think being a specialist helps with having this kind of all-round knowledge?

- Do values and beliefs about English play a role?

- Thinking about the structure of the literacy hour and the strategy framework itself, how much does it help or hinder this?

- Putting your English co-ordinator hat on now. Thinking back over all your experience of working with colleagues in school. Can you think of e.g.s where if you were the co-ordinator you would be concerned about the way the NLS is being interpreted? Can there be pitfalls if you're a non-specialist?

- If there hadn't been an NLS – remember before it was implemented in your 1st year – how do you think your teaching might have been different?

- Do you think the NLS has helped you in terms of assessment? Do you think you can have a clearer picture of their abilities in this way?

- Are there any things that have stopped you as a student from teaching in the way that you've wanted to teach?

APPENDIX NINE

**OBSERVATION SCHEDULE USED TO OBSERVE STUDENT TEACHERS IN
ALL STAGES OF THE STUDY**

NAME OF STUDENT TEACHER
SPECIALISM   SCHOOL   DATE
YEAR ON COURSE

CONTEXTUAL INFORMATION			
LITERACY CONCEPTS/SKILLS	TIME	OBSERVATION NOTES	TEACHING STRATEGIES