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THE TEACHER EDUCATOR'S EXPERIENCE

Case Studies of Practical Professional Knowledge

Peter David John

**A dissertation submitted to the University of Bristol in accordance with the requirements
of the degree of doctor of Philosophy in the Faculty of Social Science**

Graduate School of Education

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ABSTRACT

This exploratory study is an attempt to provide some evidence relating to the experiences, assumptions, practical knowledge and expertise that teacher educators hold and use. It aspires to present an illuminative view of some of the roles they fulfil, and tries to capture the sorts of knowledge and understandings that underpins their work with student teachers.

Five PGCE tutors from the School of Education at the University of Bristol were the key units of analysis. The investigation harnessed a qualitative methodology in order to answer four key research questions: to what extent has the teacher educator's past experience shaped their practical professional knowledge? How and in what ways do they describe their experiences in teacher education? What is the nature and character of the knowledge they hold and use? How do they use their knowledge in the context of their subject work? The five detailed person-in-context case studies and the resulting cross-case thematic analysis reveal the tutors' knowledge to be characterised by seven key themes: intentionality; practicality; subject specificity; ethicality; generativity; efficacy and ambiguity. Furthermore, the investigation shows the knowledge of tutors to be deeply biographical, intensely practical and distinctive in a number of ways. Initially, they bring to their work considerable craft wisdom derived from their time as school teachers; this knowledge is added to by the experience of working in higher education thus creating new forms of knowledge, in particular, knowledge of student teachers as professional learners, knowledge of teacher education pedagogy and knowledge of a wide range of professional contexts.

This practical professional knowledge is put to use in the training of teachers in a number of ways: first, they select and provide a range of purposeful activities that enable students to focus on various aspects of practice. Second, these activities are carried out in an environment which is flexible, independent, safe and comfortable. Third, they engage their students in collaborative, carefully focussed, inquiry-oriented tasks aimed at reconceptualising their implicit theories about their subjects, teaching and learning to teach. Fourth, they offer their students the modelling of reasoned practice, substantively in terms of suggestions for practice, and stylistically through their own engagement with the teaching process. Finally, the tutors engage their students in tasks that attempt to transform their knowledge and understanding as well as inculcating professional reflection, practical inquiry and a professional vocabulary.

The investigation ends with an analytical account of the distinctive contribution teacher educators make to the process of formal teacher preparation, particularly in relation to the institutional locales in which they operate. The final section offers some recommendations for practice in terms of the professional development of teacher educators and mentors as well as offering guidance in terms of further research.

To
Rhiannon, Eleri and Ffion

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Author's note

A number of the chapters in this study are based on previously published work but significantly revised in the light of the writing of this dissertation. They also represent the progressive development of my thinking over a number of years. The introduction and conclusion are partly based on Teacher education: the prime suspect, in *The Oxford Review of Education*, 24, 1, 1998; Experience, efficacy and expertise: Defining the distinctive contribution of subject teacher educators. In R. Gyver and R. Phillips (Eds), *Research and Practice in History Teacher Education*, St. Martin's College, Papers in Education. Particular aspects of the case studies and components of chapters nine and ten can be found in the following publications: The teacher educator's experience: a study in ambiguity, *Journal of Education for Teaching*, 6, 3, 1997; The subject method seminar and the role of the teacher educator. In J. Furlong and R. Smith (Eds) *The Role of Higher Education in Initial Teacher Training*, Kogan Page: London, 1996; Maxims, practical knowledge and the language of practice: validating the authority of experience in initial teacher education, *British Journal of Educational Studies* (forthcoming, 1999); Making the link: teaching, research and reflective practice in initial teacher education. In D. Kerr (Ed) *Teacher Education: past, present and future*, University of Leicester, School of Education: Papers in Education, 1995; Understanding the apprenticeship of observation in initial teacher training: exploring student teachers' implicit theories of teaching. In G. Claxton, T. Atkinson & M. Osborn (Eds) *Liberating the Learner: Lessons for Professional Development*. Routledge: London, 1996. Finally, elements of the first three chapters are to be found in *Professional Knowledge and Professional Practice* (with Eric Hoyle) Cassell: London, 1995; Assuring Quality: the monitoring and evaluation of partnership. In A. Rosie and M. Fuller (Eds) *Partnership and School Based Teacher Education: Current Issues*, Mellun Press: London, 1995; and Routines, recipes and reflection: how student teachers read their own lessons. In G. Claxton and T. Atkinson (Eds) *The Intuitive Practitioner*. Open University Press: Milton Keynes, 1999

Numerous papers at various national and international conferences have also been delivered whose origins lie in the study reported. Additionally, the data has formed the backcloth for a number of presentations at SCAA/QCA, TTA and UCET symposia as well as being part of many workshops and reset seminars at a number of institutions.

Author's Declaration

I declare that the work in this dissertation was carried out in accordance with the Regulations of the University of Bristol. The work is original except where indicated by special reference in the text and no part of the dissertation has been submitted for any other degree.

Any views expressed in the dissertation are those of the author and in no way represent those of the University of Bristol.

The dissertation has not been presented to any other University for examination either in the United Kingdom or overseas.

SIGNED:..... ..... DATE: .....

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INTRODUCTION

Preamble

The first part of this introduction outlines briefly, the rationale for the investigation and the research aims. The second section highlights some definitional problems within the literature while the third traces the origins of the study through a brief autobiographical anecdote. The final section gives a brief summary of the dissertation in terms of its chapters, the purpose being to provide specific markers for the reader.

The significance of the study and the research aims

The oldest question of political science is *quis custodiet ipsos custodes* - who should guard the guardians? So, too, one of the oldest questions of education is - who should teach the teachers? Philosophically and conceptually the answer, as Aristotle would have put it, is straightforward - men and women of virtue should teach the teachers, for only then might they become virtuous themselves. However, as Diogenes knew, it is one thing to posit virtue and truth, another to find it.

So how should our future teachers be educated? And what contribution should Higher Education tutors make to that process? Answers to these questions are vital because the teacher education community has neglected the task of making its work available to the public at large. Perhaps this is because the tutors themselves have been too busy responding to the plethora of circulars and demands issued by central government as well as re-organising courses and teaching on them. Whatever the reason, the study reported in this dissertation is not only an attempt to gain public approval for the work of teacher educators, but also aims to provide detailed accounts of their practical professional knowledge and its use in subject based seminars

From such an investigation many benefits may accrue: first, teacher education may become demythologised and as a result, the charge that tutors are 'barmy theorists' (Clarke, 1991) or 'ivory towered academics' (Philips, 1997) will be challenged; second, the climate of vilification that has accompanied the recent structural changes to courses may be dispelled - a necessary condition for the restoration of public and professional confidence; third, and as a consequence

of the previous two, teacher educators themselves might proceed with less trepidation in their work, a benefit which is crucial as partnership begins to become embedded within institutions.

This exploratory study then is an attempt to provide some evidence relating to the experiences, assumptions, implicit theories, practical knowledge and expertise that subject teacher educators hold and use. It aspires to present an illuminative view of some of the roles they fulfil, and tries to capture the sorts of knowledge and understandings that underpins their work with student teachers. In so doing it draws on Dewey's (1902/1964, p.87) definition of knowledge as being 'the reconstruction or reorganisation of experience which adds to the meaning of experience and increases its ability to direct the course of subsequent knowledge and expertise,' and Elbaz's (1983, p. 7) elucidation of knowledge as being 'experiential, practical and above all shaped by the teacher's (tutor's) purposes, values and beliefs.' The research reported therefore leans heavily on conceptual frameworks that see professional thought and action as being heavily imbued with experience, however, it should be emphasised that the overarching purpose is to give an account of the practical knowledge held and used by teacher educators and to use experience as an explanatory device.

The study has at its core three broad aims:

1. To document the sorts of knowledge and expertise that teacher educators hold and use in the course of their work

While there is a variety of accounts of teacher education courses and programmes, there appear to be few detailed statements of the knowledge and expertise held and used by subject tutors in education departments. The absence of such portrayals is a serious concern for all those interested in the improvement of teacher education. Such a gap also allows critics to render the role of higher education based Initial Teacher Education (ITE) redundant and advocate wholly school based courses of training.

Thus in opening a small window on the thinking and action of tutors in initial teacher training as well as calling for a future research agenda, it is hoped that the study will begin to influence some of the important decisions that still have to be made over the future direction of partnerships between schools and higher education institutions. It may also offer food for thought for those who either work or are considering working in a purely school centred scheme to re-

think their position and thereby see the valuable contribution Higher Education (HE) based tutors make to the education of teachers.

2. To reclaim the voice of teacher educators in the debate surrounding the future direction of teacher preparation

While historically the study of teacher education has been a significant research area, the omission of the teacher educator's voice in the dominant research paradigms has been overlooked. The idea of voice as a central construct in educational research is a recent phenomenon and is part of the general attempt to remedy the traditionally imposed silences of research subjects as primarily spoken about but rarely speaking for themselves. This is of course related to important issues of political power and the marginalisation of particular groups of education professionals. In terms of teacher education, this has become particularly noticeable during the last decade but it has a long pedigree in education circles.

3. To demonstrate the distinctive contribution teacher educators make and can continue to make to Initial Teacher Education (ITE)

This is perhaps the most ambitious aim of all coming at a time when the tutors' contribution is coming under increasing scrutiny through the Office For Standards in Education (OFSTED) inspections and further central control through the implementation of the Teacher Training Agency's (TTA) standards and guidelines. Unless this distinctive contribution is articulated clearly and unequivocally, then tutors in both universities and colleges face an uncertain future. The key issue as Pring (1994, p.174) put it is 'how can tutors remain academically respectable and professionally relevant in the face of such turbulent change.'

The urgency of the enterprise

The urgency of the research is due in part to the threat to the very existence of formal teacher preparation posed by recent government reforms, and as Judge (1993, p.vii) aptly put it, 'We need to understand a great deal more about the lives of teacher educators if only to avoid the pain of having to read about their collective death.' All of this has not taken place in a political vacuum. Conservative administrations from 1979 onwards, had a long standing preoccupation with standards in schools, a position which led the finger to be pointed at teacher preparation and supply. How did this state of affairs come about?

It is beyond the scope of this introduction, and indeed the dissertation, to delve into detail regarding the political and ideological origins and development of these changes (there are a number of studies that have attempted such an enterprise, see Wilkin (1996); Furlong and Smith (1996), nonetheless, a limited overview will now be presented.

The process of tightening the control on the education and training of teachers began under Sir Keith Joseph's reign as Secretary of State in the early 1980s. He used existing regulations to lay down criteria which teacher training institutions should meet and set up the Council for the Accreditation of Teacher Education (CATE) to oversee their imposition. This type of intervention gave the Secretary of State indirect powers over the structure of courses in higher education. However, in the wake of the changes initiated in 1988, Keith Joseph's response could be considered gentle, as successive Conservative ministers turned their fire on who they regarded as the real enemy within - 'trendy teacher educators'. At first they tried to open up school based avenues of training with the intention of by-passing accepted routes, they then began to push more school centred approaches such as the licensed teacher scheme. The final assault came in early 1991 with the then Secretary of State, Kenneth Clarke's speech to delegates at the North of England Education Conference. His outpourings eventually found their way into a series of circulars, the most important being 9/92 and 14/93, and a White Paper, *the Reform of Teacher Training* (HMSO, 1993, which was to become the blueprint for the re-modelling of teacher training.

Meanwhile, within 'the secret garden' of initial training establishments, significant developments had also changed the nature and character of courses. The Oxford Internship scheme and its progenitor at the University of Sussex, pointed the way to school - university partnerships and the development of mentorship roles for practising teachers. These moves were, however, based firmly within a tradition of professional reform and were welcomed as progressive answers to some intractable questions (Hoyle and John, 1995). The politicians, on the other hand, saw in these schemes a way of cutting back the university contribution particularly once they were tied to funding.

In recent years the creation of the Teacher Training Agency (TTA), a body similar to OFSTED in that it is external to the Department for Education (DFE) but still an instrument of its policy, brought together responsibility for teacher recruitment and staffing, the content and practice of

training, and funding for courses of initial and further professional development. In consequence, university departments and colleges of higher education are increasingly becoming the agents of this organisation, employed to carry out specified functions linked to the creation of a National Curriculum for teacher preparation based on minimum standards and policed by OFSTED inspectors. The final irony is that these policies have been maintained and extended despite a change of government.

It would be *parti pris* to suppose that teacher education prior to these changes was in perfect working order and that there was no room for improvement. However, the way in which ITE has been subjected to such tight supervision is indicative of both the ruthlessness by which central control has been extended as well as the continued suspicion in which teacher educators are held. The debate surrounding these changes has been carried on two levels. Superficially it is about the technical aspects of teaching and teacher training; in other words, how to give teachers the best technical preparation for life in modern day classrooms, with the emphasis being on the practical rather than the theoretical. At a deeper level, however, the questions are more fundamental: they concern the culture of teaching and the effect of the unconscious and conscious attitudes which new teachers pick up from their training. The sub-plot (and this has again survived a change of government) is to change the culture of teaching, and to break free from the poison of progressive pedagogy which it is believed has had a deleterious effect on new recruits and has served to undermine the effectiveness of teaching and the quality of learning in our schools.

The origins of this distrust lie in the New Right (Hall and Jaques, 1983) attack on the apparent excesses of progressive education and its effect on the educational standards. Teacher educators were seen to be (and still are seen in many quarters) beguiling students with 'child-centred' philosophies and practices reminiscent of John Dewey and latter day progressive voices enshrined in the Plowden Report of 1967. Caricature or no caricature, these views are still prevalent in the corridors of power and no current or future Minister is going to leave ITE (particularly those who work within it) to the untrammelled discretion of the universities and colleges.

Teacher Educators: a problem of definition

Teacher educators are much talked about but rarely studied. Fewer than 2% of the entries on the ERIC database deals directly with them and it is paradoxical that those who purport to study others are they themselves so seldom the subjects of study. There have been some notable exceptions. In North America Carter (1984), Ducharme (1986; 1993), Weber (1988) and Grossman (1990; 1991), Fieman-Nemser and Featherstone (1993); Clandinin et al. (1992), Zeichner (1992) and Russell and Korthagen (1995) have all carried out fruitful inquiries into the lives and work of teacher educators. While in the United Kingdom, Taylor (1968), Furlong, Hirst, Pocklington and Miles (1988), Furlong and Smith (1996), John (1993; 1996; 1997), McGuire (1995) and Fish (1995) have tried to redress the imbalance.

Nonetheless, too few researchers have heeded Zeichner and Liston's (1987) call to extend the arena of inquiry to include the training establishments and those who work within them. One reason for this apparent lacuna may well be due to the fact that teacher educators are difficult to pin down both institutionally and conceptually. Ducharme (1985) has outlined five issues that make definition and study problematic: their low institutional status; their lack of academic legitimacy; their vague *raison d'être*; an absence of a central organising body and their tentative scholarship and research.

It is small wonder then that the public world of teacher education has largely been viewed through the lens of programmatic structures and prescribed content. However there is much more to teaching teachers than can be gleaned from the surface of the overt curriculum. Beneath lies a complex and often intricate web of public and private theories, individual and institutional influences as well as a diverse range of knowledge and skills.

Before any study can proceed beyond the introductory stage, foundational problems relating to definition need to be solved. It is truism to claim that teacher educators are enigmatic individuals even when members of a clearly defined department or school of education. For many colleagues, in other more established departments in the university, education can appear a hybrid subject dependent on other disciplines for its concepts and methodologies. Subject tutors are viewed even more sceptically and are often described as either 'uppity' teachers or *manque*

academics. As a result of these perceptions, subject tutors remain an ill-defended and poorly understood segment of the higher education community.

Even within departments or schools of education, there is no agreed definition. This is partly due to the wide variation in the size and type of institution in which they operate, but it is also related to a range of historical antecedents as well as enculturated work patterns. In some institutions the cleavage is so prevalent that the separation within departments is almost as wide as those divisions which differentiate them from their colleagues in the wider context of the university. The configuration of the staff in institutions of teacher education and the divisions therein continue to be the objects of reflection and analysis (Borrowman, 1975; Jackson, 1975; Judge, 1989).

In the literature on teacher educators a number of definitions have emerged. Ducharme and Agne(1982, p.35) classified teacher educators into ‘school persons, scholars, researchers and methodologists’ and conjectured ‘where they place themselves on this list is dependent upon their proximity to either a school or academic culture’. Others have attempted similar classifications. Jackson (1975, p.78) tried with ‘professional disciplinists, generalists and pedagogists’ while Roemer and Martinello (1982, p.34) took a more cautious line categorising teacher educators as ‘disciplinists, technologists, and those who apply the work of both.’ Finkelstein (1984, p.95), on the other hand, preferred the terms ‘technicians, mandarins and witnesses.’ Borrowman (1975, p.86) suggested the distinction between the critic and actor; for him, school personnel are the doers, the actors on the stage, while the teacher educators are the critics who explain, mediate, evaluate and offer advice. Ducharme (1987, p.156) used a more straightforward, and perhaps to some, a more recognisable classification, when they talked of ‘beasts of burden, facilitators and academicians.’

Debates of this type can, as Lanier and Little (1985, p76) point out, come across as futile and circular. Instead they point to the denotative meaning of the term teacher educator as referring to ‘those who provide college and university course work for prospective teachers.’ The connotative meaning, on the other hand, sees teacher educators as those who take a wider role in the education of teachers at both in-service and higher degree level (including doctoral studies). Lanier and Little (1985, p.77) ultimately conclude that ‘it those whose main responsibility it is for the delivery of subject methods courses and professional studies inputs and supervising the

practicum, who most readily identify themselves as teacher educators.’ This definition, although arbitrary and pragmatic, is adopted throughout this study. To avoid endless repetition the term teacher educator is used interchangeably with the term subject tutor or tutor.

Autobiographical anecdote and the genesis of the study

This section will outline the origins of the study in the form of a brief autobiographical anecdote. The account will be written in the first person in order to give the reader a flavour of the personal derivation of the research questions as well as to clarify the researcher’s position in relation to the investigation.

The study began in many senses serendipitously. I had moved from school teaching to higher education in the Autumn of 1989 as a tutor at the University of Reading, Faculty of Education. For nearly ten years up to that moment, I thought of myself only as a teacher and even then I rarely felt it necessary to define my own pedagogy - it was rooted in my practice and in my classroom. I entered the university then as a stranger; my briefcase and mind filled with materials and ideas culled from various sources. During almost a decade of classroom teaching, I had accumulated some practical wisdom, some classroom tricks as well as some deeply held positions on the nature of good practice. I had innumerable images of lessons, of classes, of pupils, and of learning; I could even call upon my mentoring, personal research and evaluation experience which I had undertaken for the Oxford internship scheme three years earlier. And yet it was all fragmented, tacit and unconnected, for here I was faced with groups of students who expected me to construct, guide and facilitate their early professional learning.

My pupils almost overnight had become student teachers - adults - who had come to me expecting to be taught how to teach. In common, no doubt with numerous other colleagues, it was my aim to prepare them or help them prepare themselves for teaching history in secondary schools. I hoped to inspire them, challenge them and at times chastise them, and yet despite being clear about my intentions I was still uncertain as to the best method of realising my goals.

I entered teacher education then with only my craft knowledge and wisdom to guide me. Very soon I began asking myself questions about not only the efficacy of my practice but about the sorts of knowledge and expertise that made me the right person for the job. As a teacher, it is your pupils who define you and as such I had no real problem in accepting the responsibility

bestowed on me by the adult world for the good of the child; but as a teacher educator I found, initially, I could not assume the same sense of responsibility.

I began to see that the term teacher educator as almost a misnomer and a paradox so I started to ask myself questions: how can I best help my students? What kinds of experiences, knowledge and inspiration can I provide? Should I even aspire to making a difference? If so what kind of effect should I or even could I have?

Within the first week, however, I was engulfed with questions - theirs! How do you teach the Normans to year seven? How do you control classes? Do I know enough history? Such questions suggested a set of deep and abiding concerns with technique and subject - with the how and the what rather than the why of teaching. I began to realise my own fallibility. I had only my craft understandings and some broad reading to guide me and yet here I was given the responsibility of training the next generation history teachers - the same teachers who might one day teach my own children.

My reflections led me to interrogate my position further: what was I doing here at a university teaching teachers? What should I be doing with them? What does it mean to be a teacher educator? How can I use my experience to help them? What in fact did I know about teaching and learning? How could I best communicate my knowledge and understandings? In essence what was teacher education all about?

At base the final question appeared slightly rhetorical. I saw it initially as a philosophical conundrum to which an answer might be linked to the very meanings of the word 'teacher' and 'education'. As such it could have been an invitation for me to articulate my ideals, intentions and aspirations or it might even be a call for greater commitment. Or such a question may have even involved political and historical perspectives and the laying down of particular moral positions.

Frustrated I asked the question another way: what was teacher education for? This led me to further political, administrative or economic questions and sometimes a mixture of all three, however, when I interpreted the question on a personal basis it became one about meaning and therefore inevitably more ambiguous. Meaning for whom? In what context? In the personal

context of my life as a teacher educator? In the wider societal context? Or in the context of the phenomenon itself?

This led me to speculate about the wider purposes of teacher education and how my growing knowledge and expertise might be articulated. This made me realise that a different answer would be needed. An appeal would have to be made to the lived experiences of those involved directly with the enterprise - with the focus on what they know, do and think. In essence to a consideration of the emic point of view; a view of teacher education from the inside. Here then was the genesis of the study.

As I considered these issues a broader set of questions emerged, some are listed below.

What is it like to be a teacher educator? What do teacher educators think, feel and believe about the enterprise in which they are engaged? What constraints, frustrations and satisfactions do they encounter? How do they manage their roles and responsibilities? To what extent have institutional, professional and personal experiences played a role in the creation of their practical professional knowledge? What personal and professional interactions continue to be problematic? How does the tutor deal with these?

Do teacher educators have a distinctive knowledge and expertise that sets them apart from others in the field of teacher preparation? If so, what is the nature of that knowledge and expertise and how did it come into being? What forces, experiences, events and characters influenced its development? And in what ways is that expertise used during the process of teacher preparation? Essentially in the words of Zeichner (1992) what do teacher educators do and why they do it?

The above questions were therefore grounded in my early experiences of being a teacher educator, and despite the passing of the years and the gaining of confidence, experience and some expertise, the questions remain as strong and as intractable as ever. The very fact that such questions recurred, illustrated to me not only their importance, but also their persistence and intransigence; eventually forcing me to try to find some tentative answers.

Although I had strong views about the importance of working with student teachers it wasn't until I had read Elbaz's (1983) book on practical knowledge that my ideas began to crystallize.

Her conception of practical knowledge appeared to reflect the sorts of understanding I had as a teacher and now a tutor. She pointed to the importance of intuitive knowledge and the need to articulate its nature and structure. The work of Donald Schon (1983; 1987) was also seminal in my quest to make sense of my work, as was the phenomenology of Alfred Schutz (1970). All helped me realise that knowledge and expertise are embedded phenomena tied to a variety of contexts and biographical experiences.

I moved from the University of Reading to my current post at the School of Education in Bristol in the Autumn of 1990. Since then teacher education has been well and truly shaken up. Course structures have changed, partnership is now a reality while mentors and school based training have transformed the whole enterprise. And yet there are still a number of constants amidst the sea of change. The students who join my seminars year in year out, are basically the same, and I still find myself trying explain to them that teaching is complex and uncertain, requiring not only a set of techniques but a mindset that involves reflection on one's own knowledge and beliefs. I try to show them that the profession needs people who are creative, thoughtful intellectuals who deliberate not only on their practice but also on the wider consequences of those actions.

Perhaps one of the most significant and enduring personal developments has been the realisation that my students learned as much from how I acted as they did from the content of the course. If I wanted them to understand how to get children to interrogate an historical source, for instance, then I not only had to describe the engagement but I also had to construct settings in which they could engage in such processes for themselves. Furthermore, I have learned not only of the need to consider my own beliefs about teaching and learning but also the need to look into my own reflective mirror in such a way that my students could see and then gaze into it for themselves. In retrospect, my success was and remains sporadic.

Nonetheless, despite the march of time, I am still fascinated by the process by which students move from being novices to, in most cases, competent and confident teachers of history. And yet I am still unsure of my role in this enterprise and despite a growing body of knowledge on learning to teach, the literature is still relatively silent on the role people like myself play in that process.

The structure of the dissertation

The first part of the dissertation attempts to establish the logical and compelling connections - the epistemological integrity - between the literature, the research questions, the design and the methods of data collection and analysis. The first three chapters therefore progressively elucidate a tapestry of issues concerning the theoretical and methodological rationale for the study.

Chapter one is a traditional literature review structured around Cruickshank's (1984) framework and ends with a detailed outline of the research questions which guide the study. Chapter two considers the theoretical orientation of the study focusing particularly on the phenomenological idea of lived experience and the construct of practical knowledge. This chapter also includes a conceptual framework which not only characterises the key assumptions behind the investigation, but also serves as a heuristic for the collection and analysis of the data. Chapter three introduces the methodology of the study and describes in detail the research design, the choice of participants, the methods of data collection and analysis as well as the verification methods used to ensure validity and reliability.

Part two of the study focusses on the presentation of the data in terms of five detailed case studies. Chapters four, five, six, seven and eight form the core of the dissertation and are set out as person-in-context studies.

The third part of the dissertation is entitled: Analysis, interpretation and discussion. Here chapter nine comprises a cross-case analysis and is structured around six key themes. Chapter ten discusses the findings in terms of the research questions and the concluding section examines the significance of the study both in terms of the future role of tutors in ITE and a range of professional development issues attendant upon it.

PART ONE

The methodological foundations

CHAPTER ONE

A REVIEW OF THE LITERATURE

Preamble

Although teacher educators have not been the focus of extensive research efforts, a body of knowledge about them is beginning to emerge. This review summarises the research conducted during the past two decades that focuses on teacher educators and suggests areas in need of additional study.

Introduction

The quality of any teacher education programme is at least partially dependent on the quality of its tutors - the men and women who develop, implement, and evaluate courses of teacher education. For a variety of reasons, however, teacher educators have not been the focus of a great deal of research and scholarship. Perhaps we are fearful that common criticisms of teacher educators will be substantiated, or that additional criticism will be forthcoming as a result of new findings. Perhaps we are hesitant to consign a complex and divergent population with whom we identify so closely, to the few lines of simplistic findings that may result from some research efforts or, perhaps we perceive research on teacher educators as less salient than other lines of educational inquiry.

Cruickshank (1984) articulated reasons for the dearth of research on teacher education in general. These reasons would seem to apply to the lack of research on teacher educators as well.

The importunate state of inquiry can be attributed to a number of causes including: the culture of teacher education that, to a large extent, is based upon professional wisdom, common sense, and commitments; lack of aptitude for or training in inquiry by teacher educators; absence of time, support, and reward for inquiry; the promotion of inquirers into unrelated positions; the near absence of vehicles that encourage and transmit scholarly knowledge; the commonly held belief that teacher education is too complex a phenomenon to be successfully studied; and perhaps most notably the absence of paradigmatic communities of teacher education researchers. (p.45)

Whatever the reasons, research on teacher educators appears limited not only in comparison to other lines of inquiry in teacher education, but also in comparison to research on the academics in general. Finkelstein (1984), for example, identified over 300 systematic, explanatory, empirical studies of college and university staff since 1942, in addition to hundreds of purely descriptive and demographic studies. The far more limited number of studies on teacher educators may be due in part to the relatively recent emergence of teacher preparation as a function of colleges and universities.

The purpose of this chapter is to summarise what has been learned about teacher educators through research and to suggest areas in need of further study. Relevant research was identified through a comprehensive review of the teacher education literature published since 1979. In addition, bibliographies and reference lists from these sources were reviewed for earlier empirical studies on teacher educators. Because much of the research on teacher educators has focused on those working in schools, colleges, and departments of education, the use of the term 'teacher educator' follows the definition outlined in the opening chapter to this dissertation, in short, he or she is an individual whose prime responsibility is to carry out the professional education of student teachers in either a college, or department of education in a university.

In proposing a model to guide inquiry in teacher education, Cruickshank (1984) identified teacher educators as one of five primary explanatory variables extant in the field of Initial Teacher Education (ITE) and developed a taxonomy of attendant characteristics for each of the five variables. This taxonomy will serve as the framework for this literature review.

Family and socio-economic background.

Research on the social class origins of teacher educators reveals that the typical teacher educator is from a middle class or lower middle class home (Carter, 1981; Prichard, Fen, and Buxton, 1971). In a survey of 238 teacher educators in the USA, Prichard et al. found that over half were from homes in which the father was an unskilled or skilled labourer, a much larger number than is typical of staff in other academic areas. Over half of the fathers and 43 percent of the mothers of the teacher educators in the same sample had not completed their high school education. Additionally, teacher educators were also more likely to come from smaller cities and rural areas. Yarger, Howey, and Joyce (1977) reported that 75 percent of the 420 teacher educators in their sample were from population centres of 100,000 or less, with 40 percent of that 75 percent from rural backgrounds.

Education

In investigating the education of teacher educators, Carter (1981) found that the majority of the teacher educators surveyed attended state elementary/primary and secondary schools. The teacher educators in Carter's study generally conveyed either positive or neutral reactions to their formal education, favourable overall impressions of school, and high levels of parental support throughout the school years. Carter also reported that, for the most part, teacher educators followed the expected pattern of undergraduate degree followed by post-graduate certification and then a masters degree, usually while teaching. Given the limited sample size of Carter's study and its limitation to a number of areas in the

United States, caution must be used in generalising these findings to the population of teacher educators world-wide.

In looking at data from the 1950s and 1960s, Cornelius (1969) found that proportionately fewer teacher educators held doctoral degrees than did academics in other departments in the university. More recently, Clark and Guba (1977, p.89) similarly found that education tutors held doctorates 'in a smaller proportion than did faculty from other departments.' Watts (1984) points out that because a substantial number of teacher education courses within institutions are taught by temporary tutors and because such tutors and assistants were not included in the studies of teacher educators, the results reported by Clark and Guba (1977) and others may present an inaccurate picture of the educational attainment of the individuals who are actually teaching ITE courses within institutions.

Personal Characteristics and Abilities

Activity and Energy Level. While none of the research on teacher educators specifically investigated their activity and energy levels, some insight can be gained by considering research on teacher educator' work load and the way teacher educators spend their time. Mager and Myers (1983), for instance, found that new tutors spend an average of 40 to 70 hours per week on work. Other research results concur with Mager and Myers' finding that many teacher educators spend considerably more than 40 hours a week working with student teachers. Ducharme and Agne (1982) reported that 87 percent of the teacher educators in their study devoted more than 41 hours per week to professional work. Metzler and Freedman (1985) similarly found that of the physical education teacher educators surveyed, 81 % averaged over 40 hours per week on professional work.

Teaching-related activities and student-related activities appear to occupy the greatest proportion of any tutor's time (Carter, 1981; Myers and Mager, 1983; Yarger et al., 1977). The typical course load for teacher educators is much higher than their academic counterparts both within institutions and elsewhere in the university, (Barrow, 1984; Clark and Guba, 1977), with 56% of teacher educators spending from four to nine hours per week in the classroom, and 259 spending from ten to fifteen hours in the classroom per week. (Ducharme and Agne, 1982). In addition to a heavy teaching load, teacher educators also spend considerable time helping and advising students outside the classroom. Schwebel (1982), for instance, found that teacher educators carry a substantially heavier load of students than do other members of the same department.

While the teaching and support loads of teacher educators have been variously reported as being heavy compared to other members of their department (Ducharme and Agne, 1982), they are considerably

heavier than many of their colleagues in other parts of the university (Schwebel, 1982). It is apparent that many teacher educators devote substantially more than 40 hours per week to their professional work. Gideonese (1987) in a study of teacher educators' uses of time found that teaching time and the variety of tasks involved in the role, affects energy levels thus inhibiting their academic performance in terms of writing and publishing and in turn levels and regularity of promotion.

Physical and mental status. The physical and mental status of teacher educators has been the focus of very little research and as a result no studies within this category were located, and only one study contained information regarding their intellectual status. Cornelius (1969) reported that holders of education doctorates tended to have lower intelligence scores than the mean intelligence score for all doctorate fields. Whether this finding can be generalised to teacher educators is a moot point and such research remains of questionable value.

Self-confidence and academic success. Little research yielding information on the self-confidence, academic success, or social success of teacher educators is available. Carter (1981) reported that the teacher educators in her sample felt they had lower mean school class ranking than those in other more academic departments might have. Furthermore, Cornelius (1969) showed that teacher educators had a lower success rate in terms of gaining promotion than colleagues in other university departments. Ducharme (1993) in his study of teacher educators' lives, found that many expressed a dissatisfaction with their academic performance and there also appeared to be a gender divide when it came to issues of self-confidence and perceptions of academic success.

Values and attitudes. Lanier and Little (1985) hypothesised that because a disproportionately large number of teacher educators come from lower middle-class backgrounds, they tended to be characterised by conformist values, cognitive passivity, and lower analytical intellectual propensities than are typical of other university members. To support these speculations, Lanier and Little (1985) cite psychological and sociological research indicating that the lower social classes stress more conformist values in child rearing and that schools serving working-class children emphasise moralistic and utilitarian views of knowledge. These family-nurtured and school-reinforced tendencies toward conservatism and conformity are then further reinforced by the conservative nature of the work setting for teachers. The researchers concluded that because of teacher educators' childhood experiences at home, their educational opportunities in school, and the restrictive conditions of their work as teachers before coming into higher education, teacher educators automatically hold conformist orientations, utilitarian views of knowledge, and intellectual propensities that are less analytical than those traditionally held in high esteem at the university. Whether these conclusions can be confirmed through direct research on the

values teacher educators hold and the effects this may have on their intellectual functioning remains a vexed question.

Raths, Katz and McAninch (1989) found that teacher educators far from being attuned to academia were still harnessed to the ethos of school teaching both in their value orientation and in their attitudes. This rather grim picture is related to the feelings of being outsiders within the university which is in turn linked to the low status of tutors within departments and throughout the university. In a study in the United Kingdom by McGuire (1995), tutors expressed the feeling that their position within departments and their close relationship to schools forced them to navigate their way through a number of intra- and inter-institutional dilemmas, such as the long running theory - practice issue, dilemmas related to the content and process of teaching and learning, and the relationship between various professional contexts; many of the dilemmas it must be added, had been heightened by the raft of new government initiatives and state legislation.

Professional Characteristics and Abilities

Ability to bring about student teacher achievement and satisfaction. Most studies focusing on student satisfaction have investigated the concept within teacher education programmes as a whole, rather than studying the nature of student satisfaction with their teacher educators. Although limited, research in this area does indicate that the majority of student teachers perceive their tutors to be experienced, able to offer practical help, and just as school-wise as co-operating teachers or mentors (Yarger and Joyce, 1977). 67 percent of the students surveyed in the same study said they were 'very satisfied with their tutors and their professional courses.' Kremer-Hayon and Zuzovsky (1995) in a study of the themes, processes and trends in the professional development of teacher educators, found that concerns about their professional knowledge base, continuing dilemmas, a growing focus on moral and ideological issues combined with an early lack of self-confidence in their knowledge and expertise created a profession that lacked guidance, support and any form of observable professional identity. Similarly, Munby and Russell (1995), basing their work on the ideas of Donald Schon and Gary Fenstermacher, challenged teacher educators to examine the roots of their knowledge and the claims upon which their 'know how' rests. They conclude that teacher educators should invoke the notion of functional validity to underpin their work with student teachers. This is based on the authority of experience and is aimed at creating learning situations which develop a rigorous approach to the acquisition of practical knowledge in student teachers.

The ability to establish mutually satisfactory relationships with professional colleagues. Establishing professional collegiality appears to be a problem for teacher educators, especially for new tutors.

Beginning teacher educators engage in relatively little interaction with colleagues on either a peer or mentor level, and they participate very little in professional organisations (Mage and Myers, 1982, p.104). One new lecturer in education in Mager and Myers' (1982) study stated that 'there is little opportunity to talk with other people about my work: people who are really interested, or who seem at least like they are interested in my professional interests, someone who will talk an idea out with me. That I find frustrating.' In an unusual study based on a series of personal letters between two novice tutors in two separate institutions, Cole and Knowles (1995 p 137) felt they 'were just like the beginning teachers they taught and studied' in that they encountered similar feelings of confusion, disempowerment, frustration and a lack of identity. Much of this was related to feelings of isolation and poor interaction with colleagues.

The teacher educators surveyed by Carter (1981) also reported limited collegial interaction and the limited interaction that did occur, normally did not concern professional activities. Some teacher educators reported collegial patterns that were actually counterproductive and reported that they found a greater amount of collegial support and professional information from professional sources such as subject organisations and teacher support groups (Carter, 1981). Several reasons have been suggested for this lack of professional collegiality, including the considerable competition among departmental members and the fact that a single university is likely to be limited in the number of people having the same specialise interests in research and practice.

Level of Interest in Teaching Teachers. Teacher educators have a strong interest in and commitment to teaching. Most view teaching as their primary mission and spend a high percentage of their time doing it. (Joyce, Howey, Harbeck, and Kluwin, 1977). In addition to seeing themselves primarily as teachers, teacher educators prefer teaching and working with students rather than doing research (Isham, Carter, and Stribling, 1981) and other professional responsibilities (Mager and Myers, 1983). In a survey of physical education teacher educators, Metzler and Freedman (1985) found that teaching is the most highly preferred professional responsibility and that 70 percent of the typical physical education teacher educators time is spent teaching. Teaching, it appears, is the unchallenged priority for individual tutors in schools, colleges, and departments of education (Nystrom, King and Wimpelberg, 1984). When asked to rank order five activities that were most important to them as professional educators, and also to rank order the five that their institutions considered most important, 82 percent ranked teaching-related activities as the first priority in their personal responses, and 60 percent as the first priority for the institution.

Less than 1 percent of the teacher educators surveyed by Joyce, Yarger, Howey, Harbeck and Kluwin (1977) indicated that they were primarily interested in empirical work, and 75 percent reported that they spent no time at all on research during the week of the study. Very few of the teacher educators sought grants or engaged in private consulting, and most of them reported that the major source of job pressure was the demand that they reach growing accountability targets in terms of student achievement rather than research and publication. Joyce et al. (1977) also reported that only one third of the teacher educators had ever authored, co-authored, or edited a book; less than half had written an article during the previous three years, and only 20 percent had written three or more articles during that period.

Clark and Guba's (1977) investigation into the levels of research productivity of teacher educators in schools, departments, and colleges of education in the USA, revealed that less than 20 percent of the 1,367 higher education organisations had tutors involved in education research and development. Ducharme and Agne (1982) found a somewhat higher level of publication for the teacher educators in their survey. Fifty-two percent reported an article accepted in the previous year, 45 percent reported six or more in their careers, and 76 percent published at least one article in their professional lifetimes, a publication rate non fully comparable to that of higher education lecturers in general. In addition, 41 percent had published at least one book in their professional lifetimes, and 12 percent had published one in the past year, however, this was in a more prestigious institution and even then the output was below that found in other departments in institutions.

On the basis of these studies, one may conclude that while many do publish, most teacher educators are primarily interested in teaching and devote most of their time and energy that process.

Ducharme (1993) found that a major source of job satisfaction came from working with students and seeing them succeed. Likewise Weber (1988) in a phenomenological study of six teacher educators discovered that their commitment to students and their joy and satisfaction in teaching was a major factor in determining their own conceptions of their success and satisfaction. Ducharme (1993) also found an ambiguous attitude to research. His respondents claimed that not only was time an inhibiting factor in their ability to engage in research, but many were dissatisfied with the type of research they were required to undertake. This led Adler (1993) and John (1995) to request that something akin to a 'scholarship of practice' should guide much of the research carried out by tutors in departments or schools of education. This would involve research of various types which all aimed at improving practice and based on a close liaison with the teacher educator's subject and professional constituency.

Professional knowledge. School teaching experience is generally accepted as an important source of knowledge for those who would teach others how to teach. Research has shown that, contrary to the ivory tower myth, the typical teacher educator has had extensive involvement with a variety of schools. Joyce, Howey, Yarger, Harbeck, and Kluwin (1977) reported that 90 percent of the teacher educators in their survey had elementary or secondary teaching experience and that the average amount of public school experience was about ten years. Ducharme and Agne (1982) found similar results: teacher educators in their survey had extensive experience in the schools prior to their appointments in higher education: 71 percent of those surveyed had taught in schools; of that group, 87 percent had three or more years; 57 percent more than five; and 31 percent more than nine. According to Carter (1981), all of the teacher educators in her survey had public school teaching experience of reasonable length and at levels appropriate for their subsequent teaching assignments as teacher educators. On the basis of these studies, it seems reasonable to conclude that most teacher educators have an adequate amount of school teaching experience. The knowledge and skills gained as a practitioner in the schools provide a rich background and a valuable knowledge source for teacher educators.

Other sources of knowledge for teacher educators include post-graduate studies and teaching experience within the context of higher education. The vast majority of teacher educators, as defined, held a higher degree although not always to doctoral level (Clark and Guba, 1977), and many appeared to be well prepared in terms of their subject matter. Barrow (1984), however, found a lack of correlation between the post-graduate courses completed by science teacher educators and the pre-service education courses they subsequently taught. Less than 40 percent of the elementary science teacher educators in New England had a degree in science education, and more than one third had taken less than ten termly hours of science education since they received their first degree. Barrow (1984, p.46) concluded that ‘future elementary (primary) science teachers are not being prepared to teach science education by qualified faculty (tutors).’

On the other hand, teacher educators may become knowledgeable about the subjects they teach and other areas of the curriculum through individual studies pursued outside the framework of formal graduate studies, or through in-service training. But only about half of the teacher educators in one survey had the opportunity to participate in institution-sponsored inservice activities (Rush and Wood, 1982). Seventy-five percent of the teacher educators in the same study indicated a personal desire for inservice training in order to update knowledge and skills or to gain additional knowledge. Faculty or department members, however, found several limitations to involvement with inservice training, including lack of available time, excessive work load, inadequate finances, inconvenient dates, and

inappropriate content. On the basis of this study, it appears that many teacher educators would like to expand their knowledge and expertise, but may not have the time or opportunity to do so.

Grossman (1991) in a case study of an English method tutor's pedagogical content knowledge, found high levels of subject understanding and professional knowledge. Whilst admitting that her case study was of an 'exceptional teacher educator,' she felt that most method tutors were likely to be excellent repositories of subject specific pedagogical knowledge; that is the sorts of knowledge most useful for teaching.

In the United Kingdom, Fish (1995) has shown in a series of case studies of primary teacher educators, that tutors have a wide subject knowledge but not in the conventional academic sense, rather their professional knowledge is more oriented toward teaching and has been transformed by the act of making the content of the school curriculum accessible to student teachers and children. On a broader, but nevertheless related issue, Popokewitz, Tabachnik and Zeichner (1979) and Taylor (1978) argue that the knowledge and theoretical base for teacher educators is very limited and that the demands of the job disable them in some way from developing the appropriate professional knowledge to become accepted in academia as well as improving the quality of education programmes themselves.

As expected, no research actually tested teacher educators for knowledge of the subject matter. In the absence of such studies one may conclude that teacher educators have considerable school teaching experience which gives them high levels of practical professional knowledge - including pedagogical content knowledge, extensive post-graduate qualifications (which may or may not correspond to the courses they are teaching), and little time or opportunity to gain additional knowledge or skills once they become teacher educators. The question remains whether one can assume that this provides an adequate knowledge base for the wide range of courses now being taught by teacher educators.

Teaching Behaviours and Style

While it seems reasonable to suppose that teacher educators should be authorities in the art and science of teaching, research indicates that teacher educators frequently do not always use research based techniques themselves, relying instead on personal style and strategies related to experiential effectiveness. Yarger et al. (1977) found that teacher educators reported only very limited use of modern technologies such as micro-teaching and simulations, with no programmes reporting a level of use that would indicate an intensive commitment. Even conceptual advancements such as interaction analysis and the taxonomy of educational objectives were found to be implemented only on a very limited basis. Competency based teacher education courses (CBTE) fared similarly: The language of

CBTE was common in teacher education in the USA in the 1970s, but the actual implementation of such components as initial student assessment, close tracking of student progress, use of criterion-referenced measures, and monitoring of students through modules, occurred only sporadically and in relatively few institutions (Yarger and Joyce, 1978).

Rather than implementing these and other technological advancements, 'teacher educators still employ small and large group lectures as the primary mode of teaching and learning, followed by seminars, group projects, and independent study' (Yarger et al., 1977 p. 197-1). In a study of social studies teacher educators, Katz and Raths (1982) found a limited range of instructional strategies used: discussion, observation, lecture, and student reports were the most frequently used teaching methods whereas field and laboratory experiences were rarely utilised. Champion (1984) in an investigation into the teaching and learning strategies used by teacher educators, found that a majority of tutors rarely mentioned research (both their own and others) in their lectures or seminars. However, the study did find that teacher educators did raise research based issues in class discussions and sometimes even assigned reading based on research. Nonetheless, very few modelled the research process and rarely encouraged their students to engage in small scale projects.

Grossman's (1990) intriguing study of a single teacher educator charts the influence that tutors can have on the practice and thinking of student teachers. She describes in some detail the students' emerging understandings and saw the tutor as a major source of pedagogical content knowledge. In her conclusion she outlines five general features that can contribute to the success of a teacher education course: a coherent vision of teaching organised around the subject matter to be taught; a collaborative relationship among the tutor, mentors and students; a shared sense of ownership, the existence of the appropriate scaffolding for learning, and lastly, a reflective stance taken by the teacher educator towards both his/her own practice and towards the learning of student teachers.

A number of recent publications have dealt directly with what Tamir (1990, p. 307) has termed 'the pedagogy of teacher education,' however, many of these have been constructed from an action research perspective. Clandinin et al. (1992) in a series of edited chapters covered a number of issues in some detail. Using narrative inquiry she and her co-authors examined a number of aspects of teacher education from the point of view of the tutor. The themes that emerged point to the rejection of the theory-practice dichotomy, the importance of collaboration and the way in which it re-defines teachers' roles, the importance of a shared professional vocabulary and the need to develop improvisation and spontaneity in new teachers. Likewise, Suzanne Wilson (1992) in her paper entitled *The Secret Garden of Teacher Education*, outlined a number of problems encountered when trying to encourage student

teachers to think about teaching and learning from a new, alternative, and often challenging perspective. She documents her own feelings and anxieties as she tried to challenge students with new ideas. Similarly, Zeichner (1992) has also written of the dilemmas involved in trying to teach teachers to consider the wider social and political contexts of their work in schools.

Conclusions and recommendations

Clearly research on teacher educators has dispelled some myths but reinforced others. The studies cited in this chapter have presented evidence to showing the scholarly ethos of tutors, their commitment to teaching, the extent and limitations of their professional knowledge and expertise, and some of the frustrations and satisfactions they gain from the job. Further research is clearly needed thereby illuminating areas in need of professional improvement. Studies suggest that subject based teacher educators are in need of greater staff development, however, at present we have only an embryonic understanding of their knowledge and expertise, the ways in which this develops, and how it is put to use in the complex process of educating student teachers.

Additional studies of the abilities, characteristics, expectations, and work activities of teacher educators would therefore expand our understanding of the current state of teacher education while simultaneously helping to clarify the desired outcomes of teacher education courses. As we enhance our understanding of the current state of teacher education, we might also increase our ability to address more complex questions and issues, for example, what might an appropriate staff development programme for teacher educators actually look like? And in what ways might their knowledge and expertise be used to improve the training and practice of school based mentors?.

Knowledge gained through further research might also elucidate such issues as the influence of their involvement in research, their perceptions of power and authority both within departments and throughout the wider university structure. This may in turn shed some light on the nature of their career paths and some of the obstacles to change and reform of the university hierarchy, and the relationship tutors have with staff in other departments and faculties of the university - process that will inevitable lead broader questions regarding status and position.

Popokewitz, Tabachnik and Zeichner (1979) have for a long while recognised the need for such questions and issues to be addressed and have suggested four types of investigations:

1. Studies should attend to the quality of academic life within institutions.

2. Studies should link teacher education to the assumptions and implications of the on-going patterns of schooling.
3. Studies should pay close attention to the university context.
4. Studies should engage in theoretical, empirical, historical and philosophical analyses of the customs, traditions, knowledge and practices of the professional lives of teacher educators.

Other complex topics in need of research are identified in Cruickshank's (1984) taxonomy of characteristics associated with the five explanatory variables in teacher education. We need studies that explore teacher educators' values and attitudes, their ability to bring about student achievement, and their ability to teach students the appropriate knowledge, skills and understandings requisite to bringing about pupil achievement and satisfaction in classroom settings. Additionally, issues regarding the sorts of professional knowledge teacher educators hold and use in their day to day and the sorts of beliefs and implicit theories they hold in relation to the professional learning of student teachers in a variety of settings, also remains unaddressed. The latter poses an interesting question: now that we have some knowledge of the way student teachers' learn and some of the obstacles and encouragements to their professional growth, to what extent can the effectiveness of teacher educators and their courses be further clarified or even measured?

Research questions

Below are the main research questions that shape this study. They have emerged from a dialectical relationship between a critical reading of the literature and reflections on personal experience (see the introductory chapter). However, as in most research projects, questions evolve and change as the study develops, the following are therefore used to guide methodological choice, to help data collection, analysis and interpretation as well as to frame the ensuing discussion of the findings.

- 1. To what extent has the teacher educator's past experiences shaped their practical professional knowledge?**
 - Why and by what processes did they become teacher educators?
 - In what ways have their career, educational and personal histories affected their knowledge and understandings?
 - What particular educational experiences are deemed important to them?
 - How did the institutional transition affect them ?
 - How do they claim to draw upon this past experience in their work with student teachers?

2. How and in what terms do they describe their experiences in teacher education?

- What is it like to be a teacher educator?
- What frustrations, satisfactions and problems become apparent in their work?
- How do they cope with the demands made upon them?
- How and in what ways do they legitimise their role?

3. What is the nature and character of the practical professional knowledge they hold and use?

- How and in what terms do they describe their knowledge?
- Do they feel they have a distinctive form of knowledge and expertise?
- What beliefs, principles and theories underpin that knowledge?
- What are their views about how and what students should learn?

4. How do teacher educators use their practical professional knowledge in the context of their subject work?

- In what ways do they draw on their classroom knowledge in their work?
- How is teaching and learning organised in subject sessions?
- What are the tutors trying to achieve with the students?
- What sort of activities do the tutors engage the students in?
- What skills, strategies and processes are at work in seminars?
- What assumptions, beliefs, values and theories (personal or otherwise) underlie their practice?

CHAPTER TWO

THEORETICAL PERSPECTIVES

Preamble

This chapter provides both the philosophical rationale and conceptual framework for the study. The first section is concerned with foundational issues and examines, briefly, the on-going conflict between the objectivist and interpretive views of knowledge; the second, draws out the implications of this philosophical analysis for the framing of the study and examines in some detail the phenomenological concept of lived experience. The following section introduces the construct of the practical knowledge as the foundational unit of analysis; the chapter ends with a heuristic which guides the research techniques and analysis procedures used in the investigation.

Introduction

Conventionally knowledge is usually considered and referred to as a set of abstract, cold structures which are classified into problems, data and verification procedures usually conforming to accepted patterns of investigation and validation. This knowledge is usually categorized in terms of subjects or disciplines which represent certain ontologies and essences of human experience. In other words, it is assumed that zones of knowledge are objects that have meaning outside the minds of the individuals who create and use them. This is the objectivist view of knowledge.

It is a view represented in traditional epistemology and analytic philosophy and often called positivism or scientism. It is knowledge of the conceived reality of everyday existence where the taken-for-grantedness of an external reality is never questioned. Knowledge in this sense is seen as detached from human subjectivity and presents humans as passive receivers of external information.

This objectivism became embedded in the norms and rituals of academia through the procedures of reliable testing and validation. This tradition can be located on a historical continuum carrying on into the 19th and 20th centuries through utilitarianism and positivism; one which has, in one form or another, become the dominant social and political concept of western liberalism. One of

the foundational assumptions of this tradition is that objectivity resides in the cognitive acts of individuals. Thus for Kant, the conditions of thought were *a priori*; and could not be derived from social process or experience. Similarly, according to Cartesian thinking, man would eventually grow out of institutions as a child would out of infancy and eventually achieve complete autonomy.

This epistemological sufficiency is directly challenged by the interpretive paradigm, which insists that individuals are existentially related to their social structure. Here the interpretive architecture of the mind is at once an active creator of meaning and significance through the sedimentation of experience in the memory. As Berger and Kellner (1964, p.11) put it ‘the reconstructed presence and reinterpreted past are perceived as a continuum extending forwards into a projected future.’ In this sense the individual biography is both a subjective and institutionalized history of the self, with one continually acting and interacting with the other.

This alternative epistemology sees knowledge as problematic and subject to the interpretive frameworks of individuals. The focus in this tradition is not on how individuals absorb knowledge so it can be replicated but on how the individual creates and synthesizes their own knowledge so it becomes meaningful for them.

Often these two epistemological traditions have been associated with quantitative and qualitative research and it is expected that in every study the researcher they should outline their allegiance. However, in social science research projects, the choice of one paradigm over another is a complex mixture of personal preference, pragmatism and common sense. A key factor in this process relates to the purposes of the investigation, the envisaged nature of the study (whether exploratory, hypothesis testing etc.), and the type of research question asked. Since the purpose and nature of this study are exploratory, the purpose being to investigate little known and relatively poorly understood phenomena, the most appropriate research strategy suggested by Marshall and Rossman (1995) is a qualitative case study using participant observation and a mixture of in-depth and semi-structured interviews.

The centrality of lived experience

The basic proposition underpinning this study is that the enterprise of teacher education and the assumptions surrounding its worthwhileness need to be considered in terms of their

phenomenological realizations. What is being constructed then, is a conception of teacher education as part of the experience of those who live it.

Since the overarching intention of this investigation is to uncover the practical professional knowledge of the teacher educator it is assumed that many of the professional perspectives and experiences of those who work most closely with student teachers, derive much of their legitimacy from biographical and socialized patterns of experience. From this perspective, as Nias (1989, p.63) points out, the self or image of the self is all important particularly in occupations where the self cannot be divorced from the craft. In her investigations she found that when talking about their job teachers continually talked about themselves as people. This 'persistent self-referentialism' was a central aspect of her study.

From this perspective the teacher educator's experience can be viewed as a part of a dynamic interplay between the self and professional action. Embedded within this experience will be a series of implicit educational theories about education, their subjects, teaching, learning, schools, research, student teachers, the academic institution within which they operate and what constitutes knowledge in terms of its application to teacher education. They will also have an etiology that they activate to explore problematic situations, to guide behavior and justify their positions. This constitutes a central part of their practical knowledge and occupational understanding.

This stock of knowledge (Schutz, 1970) it is deemed, is not uniform or one dimensional, but a composite of different forms of knowledge corresponding to particular experiences and levels of consciousness. This biographical stock then becomes the filter through which their current experiences and actions are conducted; it is the conduit along which their beliefs and personal ideologies are transformed from the past to the present and projected into the future. This intentionality contains both tacit and explicit referential structures which the teacher educator inter-subjectively constructs within his/her levels of consciousness.

Shutz (1964) is again helpful here in his critique of consciousness and action. In this sense the individual act is seen as a visible manifestation of a complex hermeneutic process within the constituted biography. Intentionality is embedded in the person's experience and in their commitment to action orientated behaviour, a process which covers 'the inner dialectic between

‘because of’ and ‘in order to’ motives which occur and recur within these ‘tensions of consciousness.’ Hence, both retrospection and intention are confronted in the ‘vivid present.’ Choices of action and justifications for those actions are therefore taken with reference to this inter-personal system of relations and biographically constituted knowledge.

A central element in the lived experience of teacher educators will therefore be the raft of pedagogical and subject beliefs, all of which will be held with varying degrees of intensity and clarity. These, it is posited, will manifest themselves within the individual’s sedimented career and life history and will be an integral part of their experiential images (Connelly and Clandinin, 1988). These images will have helped create the explanations they offer for the efficacy of the teaching and learning processes they espouse and practice. We therefore need to know not only how teacher educators came to hold such images but also the ways in which they are made sense of and used in the vivid present of subject work in courses of initial training. Here their diachronic identities and professional career paths can be used to help focus the personal, professional and institutional contexts which give rise to key aspects of their practical professional knowledge.

It is therefore assumed that many aspects of the professional practice of teacher educators will carry within them certain processes, often visible in the form of typifications, or a sets of systems which, in Shutz’s (1970, p.256) characterization, help people bring about ‘solutions for practical and theoretical problems, and of typical precepts for typical behaviours.’ Such knowledge, understandings and beliefs it is proposed, form a central aspect of the teacher educator’s practical knowledge (Elbaz, 1983).

It is also important to consider these experiences in terms of the institutional locales within which teacher educators operate. Essentially, the subject seminar room in the university is the arena in which they articulate, activate and legitimate their beliefs and actions. The world of the teacher educator is therefore seen as presentational and the immediacy of the present is expressed through the evocation of particular associations of the past, present and future.

In another sense, the teacher education curriculum can be seen as part of the transmission of values based on particular epistemological assumptions. Here, although teacher educators modify both the content and process of professional education, it is the spirit of the classroom which

underpins its operation. That collective heritage is often transformed within the teacher educator's consciousness and traditions are kept alive and meanings continued and developed. This situation is, however, complicated by the plurality of beliefs which surround the construction and delivery of that knowledge in teacher education programmes. Understanding the ways teacher educators inter-subjectively mediate the curriculum, interpret the demands made on them and create meaningful professional learning experiences for their students is likewise of central importance.

Furthermore, in university based teacher education, the distinction between the knowledge producing and knowledge using arms of the profession are significantly problematic. One tradition, stemming from the traditional university environment, emphasizes the world improving, technical view of knowledge. This objectivism has become firmly embedded in the norms and rituals of academic culture and its transmission. The other sees it less in terms of its objectivity and more in terms of a lived entity which is always changeable, complex, practice oriented and related essentially to the individual's interaction with his/her professional community. This distinction is important in diverting attention away from seeing knowledge in the teacher education curriculum less as an external force related to some kind of objective reality but rather as part of what the teacher educator thinks, believes and realizes. In this sense teacher educators are dependent on their horizons of experiences for the creation of their knowledge. The nature of these experiences and the way that their jobs are lived are therefore central to this research.

Another vital element in the teacher educator's experience will be the interpretation of problematic situations through reflective understanding and activity. Tensions of consciousness in this sense are felt dialectically and reflected in Berger's (1966, p.24) conceptualization of the continuum between 'poles of reality and models of reality'. Here, action induces regulation and justification for behaviour through an interpretive conferral of meaning. In other words, the acts which take place in the process of educating new teachers represent sites for appraisal in which certain meanings are attributed within the stream of consciousness of the teaching act. This reflective analysis then becomes a reference point not only for the individual's understanding of experience but also as an indication of future teaching actions.

In this way certain situations develop a familiarity, which allows them to be typified. Thus each act can be perceived in different ways according to the actor's purpose and motives. In these situations the teacher educator may rely on what Shutz (1970, p.64) called 'reciped patterns of behaviour and thinking' which are handed down through experience and socialization within a variety of contexts. Understanding and explicating the origin and use of these patterns is central if we are to fully understand the practical professional knowledge of the teacher educator.

The construct of practical knowledge

Attempts to characterize professional knowledge in all its dimensions has always been an attractive proposition. Of late there has been a growing interest in the ways in which knowledge is held and used by professionals in a variety of fields. Such an enterprise has recently begun to attract widespread attention and as a result important epistemological issues have come to the fore. One of the singularly most important has hinged on the distinction between practical and technical knowledge first outlined by Aristotle but further developed by Oakeshott (1962). Space does not permit a detailed discussion of these distinctions but the debates surrounding them provide an important undercurrent to this study. All we need note here is that conventional forms of professional knowledge, as expressed in academic or research validated knowledge, cannot any more hold sway over more personal and implicit forms of professional knowledge.

Donald Schon (1983; 1987) has done much in raising awareness about the weaknesses and false assumptions upon which much of the conventional forms of professional knowledge have been built. In particular, he has highlighted the importance of reflection in raising awareness of tacit knowledge and its ability to transform knowing-in-action into knowledge-in-action. Such a debate, however, has been dogged by the multiple definitions accorded to the term knowledge. The frequently mentioned knowledge, skills and attitudes cluster, has reverberated around every staffroom and classroom for decades. The problem is that skills are frequently seen as being separate from knowledge, despite Ryle's (1949) emphasis on procedural knowledge. Without embracing this type of 'know how' into the realm of knowledge, we will be stuck with propositional knowledge, which despite including propositions about skills and procedures, still excludes the practical know how needed to perform particular professional tasks.

Narrower still is the taxonomic approach epitomized in the work of Bloom (1956) and others which splits knowledge up into various categories and different levels of thought through use of

objectives. The shorter English Dictionary gives a range of meanings to the verb 'to know'. It says it is 'to be cognizant of' and 'to understand' or 'to have personal experience of' and to be 'conversant with'. The broadest definition it offers is 'theoretical and practical understanding', which goes beyond propositional knowledge but still excludes knowing-how in the sense of being able to do something; a process which many will recognize as being central to many aspects of professional work (Eraut, 1994).

Research on teachers' knowledge has likewise been plagued by conceptual and methodological inconsistencies. A number of reviews of the literature have emerged in recent years the most important being Tom and Valli (1993) Carter (1993) Calderhead (1991) and Hoyle and John, 1995). Carter (1993), in her review noted three overlapping categories used to discuss the field: teachers' information processing, including decision making and expert novice studies; teachers' pedagogical content and subject specific knowledge and finally teachers' practical knowledge, a rubric which includes such diverse entities as personal knowledge, personal practical knowledge, craft knowledge and classroom knowledge.

In terms of the last two categories, researchers working in this tradition seek to portray the knowledge teachers have of the complexities of classroom life in a more holistic way. Their aim is not to produce a highly specific codified body of knowledge but instead to illustrate the characteristics of that knowledge by staying close to the particulars of the teacher's experience and practice. The findings are often presented richly textured, fine grained portraits of the knowledge teachers use in the complex professional worlds they inhabit. Using variants on a phenomenological epistemology, researchers in this area have done much to re-orientate the methodological and conceptual underpinnings to numerous studies.

As has been shown, this approach has been helped by the pioneering work of Donald Schon; his writing has given an impetus to researchers searching for ways to understand the practice of teaching and to use the findings to improve practice. Schon (1983) uses the term knowing-in-action to describe the intelligence inherent in any professional activity, but a variety of terms have entered the common parlance of researchers and practitioners in this area, for instance, personal practical knowledge (Clandinin and Connelly, 1986); practical knowledge (Elbaz, 1983); the wisdom of practice (Shulman, 1987) and the folkways of teaching (Buchmann, 1989).

So how might the ideas and concepts discussed in this chapter be harnessed to provide a model that will serve to guide both the collection of data and its analysis and interpretation. The framework outlined below, despite being a hybrid, represents an attempt to develop a feasible conceptual framework. It draws heavily on the literature generated within the teacher thinking paradigm, especially that which deals with various aspects of teachers' practical knowledge. The diagrammatic representation provides the skeleton while the explanation which follows provides the flesh and muscle. Again it must be stressed that the importance of the model is to be found in its value as a heuristic.

Conceptual framework (Figure 1)

Overview

The heuristic described below represents a holistic, interpretive and organic set of ideas rooted in the literature and philosophy outlined earlier. The key is the relationship between the tutor's past experience, his/her current teaching situation and the how this relates to their vision of teaching and teacher education. The arrows represent a pervasive flow of influence amongst the elements of the heuristic. The central circle suggests that the tutors' practical professional knowledge interacts with the three syntheses of experience - the past and present and finds its ultimate expression in a vision of how teaching, learning and teacher education should be. The circle shows this knowledge to be made up of three key elements - images, practical principles and rules of practice.

The framework explained

Past experience

The idea that teacher educators respond, in part, to their current teaching situations by drawing on their past experiences was posited earlier in this chapter. These experiences include amongst others, their own formal education, aspects of their teaching career, and other personal and professional encounters. These in turn form an encyclopedia of positions, beliefs, principles, practices and values. By reflecting on their formal education, for instance, it is posited that they learn about good bad ways of teaching; likewise their experiences as teachers, it is hypothesized will create numerous understandings, beliefs, subjective educational theories and practices which when aggregated will have a powerful impact on their current teaching situation. Furthermore, this biographical swathe will contain a variety of critical or watershed moments which will in turn influence their career paths, their thinking about their subjects and a whole raft of ideas and principles about teaching and learning within their subjects. Additionally, the time spent in teacher education will also influence their current principles and practice. In summary, this past experience is the dynamic base which interacts with their current situation thus producing the process by which their practical professional knowledge is constructed.

Current situation

The teacher educator's current situation, highlights not only the locale in which they operate but also serves to indicate many of the restraints and expectations that influence their thinking and practice. Many of these may be internally structured and relate to institutionally focussed reasons; alternatively, they may have their origins within the wider external political and

educational community. This notion of current situation also includes the purposes or intentions of the tutors in terms of their subject work with student teachers as well as homing in on their underlying principles and practice, their understandings of the relationship between theory and practice and their reflection on both. By conceptualizing the tutor's practical professional knowledge on temporal grounds, the heuristic attempts to accommodate paradigm shifts in practice due to internal and external pressures.

Levels

It is intended that the practical professional knowledge of the tutors will be explored on three non-hierarchical levels of abstraction. In so doing the purpose was not to create artificial and rigid limitations on the collection and analysis of data but instead to bound the unit of analysis within manageable proportions. The three levels (in the central circle) correspond to Elbaz's (1983) concepts: images, practical principles and rules of practice. The latter are defined as clearly observed and formulated statements of action carried out in specific learning situations; they are, in essence, the rules of pedagogy that are learned from experience but activated in a variety of forms within the teacher education seminar. Practical principles, on the other hand, can be thought of as a rationale for the actions taken and a set of beliefs and values that underpin the choice of action. Used together both concepts are not only useful in structuring the collection of data but also serve as useful analytical tools for ordering and shaping the various stages of the analysis, including the writing of the descriptive case studies, the search for themes and the interpretive survey.

Images, on the other hand, are less easy to conceptualize. Image making is an essential characteristic of teaching and learning, and indeed all sense making. Einstein once said that we all seek to form for ourselves, in whatever manner is suitable, a simplified and lucid image of the world. In so doing, we overcome the world of experience, striving to replace it to some extent by this image (Wilson and Wilson, 1979, p. 7).

In the literature on teaching and teacher education, the term image has frequently been used to describe teachers' practical knowledge. According to Calderhead (1989), images can be defined at three different levels of abstraction: as powerful metaphors with both affective and moral associations (Clandinin, 1986), as models of teaching (Calderhead and Robson, 1991, Calderhead and Shorrock, 1997), and as mental pictures of lessons, for example, pictures of what an

arithmetic, spelling or practical science lesson typically involves (Morine-Dershimer, 1991) Eruat (1985; 1995) also uses the term image, to refer to the many visual memories or snapshots of children and situations that enter teachers' minds in the course of everyday teaching.

Johnston (1992) also sees images as a way of conceptualising and understanding the practical knowledge of teachers, both novice and experienced. She reports that although student teachers are not always able to consciously articulate images without some assistance, once expressed, they do provide a language of practice which makes explicit many of the semi-conscious assumptions upon which that practice is based. Calderhead and Robson (1990) also note that images can likewise serve to represent and synthesise quite large amounts of knowledge about teaching, learning, subject matter, children and teaching methods. In this sense they possess a useful heuristic value and can help researchers focus on and pull together central aspects of the experiential knowledge of education professionals.

The definition followed in this study draws on the work of Clandinin (1986) and Connelly and Clandinin (1988; 1990), Elbaz (1983) Calderhead (1989) and Calderhead and Shorrock (1997). In this sense images are more than just passive, visual recordings of past experiences rather they are means of representing how tutors view themselves in various personal and professional contexts. These images are not always consciously articulated and often remain at the semi-conscious level of assumption, but still represent the foundation upon which much of their practice is built. Clandinin (1986) defines an image in the following way:

a personal meta-level organizing construct in personal practical knowledge in that it embodies a person's experience, finds expression in practice and is the perspective from which new experiences are taken. (p.166)

Connelly and Clandinin (1988) further explain how such images are related to particular experiences, become embodied in teachers as persons, and are expressed in language and action:

An image reaches into the past, gathering up experiential threads meaningfully connected to the present. And it reaches intentionally into the future and centres on connected threads as situations are experienced and new situations anticipated from the perspective of the image. (p.168)

More recently, Calderhead and Shorrock (1987, p. 180-1) have classified these experiential images into three distinct types: the moral, the sense making and the existential claiming that

‘they (images) represent for the student how teaching ought to be and, as such, held out a desirable generalized model of teaching.’

These three levels then interact with the tutor’s past experiences and current situation to create a vision of how teaching, learning and teacher education should be.

Summary

Since the purpose of the heuristic is only to steer the research it does not preclude changes that may occur during conduct of the study. However, as a conceptual model it is probably more fluid and biographical than Shulman’s (1987) pedagogical content knowledge and more structured than the teacher narrative approach favoured and championed by Connelly and Clandinin (1986). The heuristic also attempts to clarify a researchable paradigm in a way that encompasses a wide range of elements and processes. At best the heuristic is a clue structure for gathering, ordering and analyzing of the qualitative data (Roberts and Russell, 1975).

CHAPTER THREE

METHODOLOGY

Preamble

This chapter elucidates a number of issues relating to the methodology of the study, the purpose being to clarify and justify the positions taken. The first part revisits the research questions and the philosophical rationale for the investigation. The second section focuses on the research design, in particular the choice of a qualitative case study approach as the main determinant. This is followed by two sections which deal with the data collection and analysis methods used. The chapter ends with a discussion of a series of issues related to the validation and verification of the data.

Introduction

In conformance with academic rituals most research reports have a purely rational and neat face, however, according to Burgess (1982) the way in which research papers are written up actually constitutes a fraud because the actual process of doing research follows a different pattern from that represented in the papers. Instead of using strong terms such as fraud, it can be argued that it is somewhat inevitable that the researcher is likely to present himself/herself in a favourable light. It is not surprising, therefore, that most researchers choose not to show the messy and clumsy 'backstage' area and this part remains unexplored, like the proverbial black box, in many research reports. Fortunately, some recent writings which reflect upon experiences in the field have somewhat changed this scenery (Hyde, 1994; Vulliamy et al., 1990).

This chapter tries to portray the backstage scenery and reveal some of the human dimensions that constitute this study and in so doing aims to further clarify the methodological position of the research. However, writing itself is, in fact, a kind of re-construction as well as re-enquiry and not just a mopping-up activity at the end of a research project. By writing in different ways we also discover new aspects of our topic; form and content are thus inseparable (Richardson, 1994). However, one form can be chosen in any specific writing, therefore, there are limitations in terms of what can be revealed. If the above arguments are accepted, then the confessional nature of this chapter deserves sympathetic understanding.

Polanyi (1962, p.43) once remarked that ‘There is a dialectical relationship between the researcher, the subject of his interest and the historical tradition in which he works.’ In choosing an appropriate methodology and matching research techniques it is useful at the outset to consider the research questions posed. Here an affinity or fidelity to a particular research tradition solves the problem fairly quickly, however, struggling with the questions is one way the researcher can help the emergence of a relevant methodology. This in turn helps the choice of research techniques of data gathering, analysis and interpretation to be consistent with the chosen epistemological approach. In other words the research process is a dialectical one; one in which an internal coherence develops during the interplay between the questions, the methodology and the analysis.

The four main research questions guiding this chapter were set out in detail in chapter two, however, as an *aide memoire* they are repeated:

- To what extent has the teacher educator’s past experiences shaped their practical professional knowledge?
- How and in what terms do they describe their experiences in teacher education?
- What is the nature and character of the practical professional knowledge teacher educators hold and use?
- How do teacher educators use their practical professional knowledge in the context of their subject work?

Such questions call for an evocative description of the lived experience of teacher educators which in turn requires a further deeper interpretation and conceptualisation of the phenomenon (Van Manen, 1984; Weber, 1989). The questions also require the application of research techniques that are qualitative and naturalistic (Yinger, 1988) because the study is an exploratory one, the purpose being to better understand the origin, nature and use of the practical professional knowledge of teacher educators. It starts from the assumption that tutors hold a complex, practically-oriented set of experiential understandings which they use actively to shape and direct their work with student teachers (Elbaz, 1983). Since the source of this knowledge is the tutor’s lived experience, the methodology required will inevitably be a phenomenological one, however, as many suggest, with more than a little humour, there appear to be almost as many views of phenomenology as there are phenomenologists. For instance, there are marked differences between the transcendental phenomenology of

Husserl, the existential phenomenology of Satre and the hermeneutic phenomenology of Heidigger and Gadamar; and yet all of them purport to be working within the same tradition.

At the core of the phenomenological method is a disciplined approach to observation, interviewing and analysis (Van Manen, 1990). It also requires careful evocative description and detailed systematic analysis so that the essential themes of the phenomena can be made visible. For the purposes of this study the methods of the Utrecht School of Hermeneutic Phenomenology have been adopted (Barrit, Beekman, Blecker and Mulderij 1983; Van Manen, 1990). This school has attempted to break through the misty exterior to create a methodology that can inhabit the world of education. In essence it stresses the dialectical and interpretative nature of lived experience and relies on linguistic and observational methods in the search for meaning. The data gathered does not rely solely on the recounting of 'thick description' (Geertz, 1971), but also demands rigorous analysis and theorizing in the form of a thematic analysis; these themes represent the essence of the phenomenon and are usually expressed in a manner that link the research questions to the analysis.

According to this tradition, such research should go through a number of phases:

1. The gathering of the data through a combination of interviews (unstructured and semi-structured), observation, document collection and personal reflection.
2. A preliminary analysis of the material to create evocative descriptive case studies.
3. A cross -case analysis in order to uncover the emergent themes while simultaneously placing them within the wider research literature.
4. Discussing the findings and formulating recommendations for the phenomenon which can influence practical action.

The research design

Denton (1979) has advocated that the search for research techniques must be suited to the aims of the research and the sorts of methodological approach, which underpin the study. Miles and Huberman (1984) suggest that researchers should provide detailed descriptions of their research process so that the logic in use is clearly outlined and available to the reader. However, despite the apparent common sense of these statements, Miles and Huberman (1984) further suggest that a sort of double bind operates on the researcher. Put simply they claim that the status of the conclusions drawn from qualitative studies is uncertain because researchers do not fully report their methods, however, they do point out that this desire for

clarity is not helped by the fact that there are no fully established conventions in this area and much of the process is intuitive and highly personal. In order to give a full account of the research process as possible but noting the problems outlined by Miles and Huberman (1984), the rest of this section is structured around a series of questions which are related to the stages through which the methodology was constructed.

- ***Why has a case study approach been chosen?***

Michael Bassey in 1991 noted that,

To the interpretative researcher the purpose of research is to describe and interpret the phenomena of the world in attempts to get shared meanings with others.... it is a search for perspectives and theoretical insights. It may offer possibilities but no certainties as to what may be the outcomes of future events. (p.412)

One of the characteristics of a number of investigations into the teachers' practical knowledge is the case study approach. Here the focus is usually upon an individual or small cohort investigated in an intensive manner (there are notable exceptions to this generalization). This suggests that of the available research models the 'case-study' with an interpretative framework would seem an ideal type for the answering of the research questions outlined earlier. In the middle of the 1980s, Bromley (1986,) pointed to the undeserved low status of the case-study as a research paradigm and urged researchers to use the method more frequently when designing investigations.

At that time case studies were generally held to be a suitable method only where the content and context were novel or particularly complex and as such were probes, yielding material for subsequent more rigorous approaches; a cautious toe in the water before the real plunge. Hamilton (1977, p.71) found that case studies, compared with surveys, were regarded as a form of 'immature science' and were 'analyses of single settings or occurrences with no presumption that 'different instances can be thrown together to form a homogeneous aggregate'. The rationale for the case-study was that since social phenomena are 'person-made' the methods of natural science need not logically apply and that educational phenomena should determine the methods employed in their illumination. In contrasting case study with survey methods, Hamilton (1980) saw them as projecting different images of the world (artifactual versus natural), having different notions about human behaviour (active

behaviour versus passive observation) and with differing ideas about scientific practice (interpretation versus generalization).

This robust defence of the case-study is a useful starting point but it fails to address the issue of how to evaluate case-studies and challenge the idea that extensions beyond the singular remain problematic. Bromley (1986) provides a positive affirmation of the case study as the opposite of 'immature science' and rates the strategy as one of the most powerful in the social sciences. The case-study approach, he claims, combines notions of making a contribution to knowledge with a recognition of the 'textural' qualities of persons and context. He goes on to assert that such studies can be of immense value as long as the individual, the context and events are described, analysed, interpreted and evaluated within a conceptual and methodological framework.

It may be acceptable in positive science to say 'science is not concerned with the individual case', however, social science, lacking as it does the grand theoretical structures of the natural sciences, and by the nature of its material, must be concerned with the individual in specific contexts. It would seem to me a proposition worth holding that one of the more important dimensions of this approach is the context in which individuals are sited. Put another way, that what can be generalised about them is conditioned by contextual parameters, but this not to deny the possibility of the 'advancement of knowledge' beyond the singular as long as the findings are further explored in other settings and/or are set within the existing framework of knowledge.

An important epistemological question is therefore: what counts as knowledge within this tradition? Memory is potentially unreliable; events described may be unverifiable and the interpretations offered manifold. Lyons (1990) sees these issues as being fundamentally connected to accounts of teachers' (or for that matter teacher educators') generic knowledge, their subject knowledge, their knowledge of pedagogy, their knowledge of students, their personal knowledge, their 'knowledge-in-action' and their various understandings of other sources of knowledge. Extracting and reconstructing these varieties of knowing as well as providing an epistemic map through the qualitative data is challenging more particularly because teacher educators' epistemic cartography has undergone very little investigation or review.

Bromley (1986) argues that the standards which apply to case-studies should not always be those of positive science but what he calls the ‘quasi-judicial method’ which can be rigorously applied to the analysis and interpretation of evidence. For case study to become case law requires the evidence and interpretation to be considered as though it were given in a law court. Courts are given evidence, witnesses present their testimony, their claims and counter claims are cross-examined and the jury comes to a view on the evidence provided as to whether the case is proven or not. This is a time-honoured procedure for verifying claims and offers a structure within which to evaluate differing stories.

A case study therefore achieves legitimacy to the extent that the researcher reports truthfully on the person’s life and circumstances. This requires accuracy in matters of detail and the relevance or importance of any fact, data or observation is established by rational argument not special pleading. Bromley (1986, p.61) advocates setting a clear aim for the case-study and sees the study of the person leading to a ‘close, fairly long and possibly difficult relationship.’ This requires a researcher who is capable of creating trust and handling personal problems as they arise. The lengthy nature of the relationship not only allows for trust and intimacy but also allows the time for corroboration of testimony and to check internal consistency. Among his rules for the conduct of a case-study is that the person must be seen in an ecological context since the proper focus is not on the person but the person in context.

In his analogue of the courtroom Bromley (1986) offers the following comparison of the social studies investigator with a court of law.

CASE STUDY REQUIREMENTS	THE TRIAL
Investigator reports truthfully	Testimony under oath
The case study sets out some explicit aims	Formal charges are laid
The investigator makes an assessment of how far the aims have been achieved	The evidence is laid before the court and examined
The investigator is properly trained	Those giving evidence have a qualification to appear in court
The account of person-events is placed within its ecological setting	Extenuating circumstances

The account is delivered in plain English	The interpretation is based on the behaviour of the reasonable person
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Its procedures are:

1. problems and issues stated clearly;
2. background context evidence collected;
3. prima facie explanations offered;
4. which lead to searching for other evidence;
5. the collected evidence is scrutinised for admissibility, relevance and the credibility and competence of evidential sources examined;
6. sources of evidence as well as evidence is scrutinised;
7. critical inquiry into the internal coherence, logic and network of argument;
8. most likely and plausible account selected;
9. implications considered;
10. a report is prepared which interprets the person in context while adding to the case law by virtue of abstract and general principles employed in explanations and these can be applied to other and similar cases, with minor adjustments.

This approach is introduced as an example of the possibility of working towards a contribution to knowledge through the interpretative case study. We can now enter the world of the 'person in context' using the criteria of the quasi-judicial approach to satisfy ourselves as to the trustworthiness of the data and those conclusions drawn from it.

• ***How were the participants chosen for the study?***

Since the foreshadowed problem at the heart of this study is an exploratory one aimed at delineating the origin, nature, character and use of the teacher educators' practical knowledge and its relationship to their sweep of their lived experience, it is deemed important to give an account of the way in which the participants were chosen for the study.

Doing full-time doctoral research can be an arduous business, however, to attempt the process on a part-time basis whilst simultaneously carrying out a full-time role as a teacher educator in the current climate, can accentuate the problem. It was therefore decided to locate the study within the same institution thereby helping to ease issues of accessibility and to be able to timetable the research gathering in a more flexible manner. All of the full-time (at the

time twelve) PGCE tutors at the School of Education at the University of Bristol were approached, and the possibility of their involvement in the project was discussed. The final sample was decided upon using a typical case procedure combined with what Miles and Huberman (1984) call an opportunistic approach. Eventually six tutors decided to participate.

The decision to set the study within the School of Education at the University of Bristol was not taken on purely pragmatic grounds, it was also felt that the considerable personal knowledge of the researcher of both context and persons, would allow him ease of access, the ability to surmount any problems relating to the establishment of a meaningful rapport and the gaining confidence. A mutual trust had already developed and an ethical framework was formally constructed to ensure confidences as well as to guide the return of and commentary on both the transcripts and the final written cases. Finally, it was decided to bound the study within the setting of the PGCE subject seminar. No attempt was made to explore the tutor's practical knowledge and experience of working as a school supervisor or as a tutor on other courses within the School of Education.

Any study which has the individual at the heart of the research process is bound to encounter a number of ethical problems. The tutors were colleagues and were willing to share a vast array of personal experiences, intimate encounters, individual opinions as well as allowing me access to their seminar rooms as a participant observer. It was important at the outset to establish some parameters so that issues regarding disclosure, sensitivity and trust were firmly secured. Discussions with the tutors led to a framework being developed for the study. It was agreed that all transcripts would be handed back as soon as possible after the interview, allowing the tutors to change any aspects of the text which they felt misrepresented them in any way. It was also agreed that they should be allowed to keep copies and to decide upon their future use; they were in effect their intellectual property. At every stage the emerging case studies were returned to the subject and we met regularly to discuss any changes. Throughout the highest possible ethical position was maintained and copies of the final interpretations and descriptions have been deposited with the subjects. Furthermore, the use of the data was to be confined to the study in question and any papers written should be given to the tutors for perusal prior to publication. It was also agreed that in any final accounts they would be given pseudonyms as would the names of any other prominent characters.

Finally, whilst recognising some of the familiarity pitfalls and the problem of making the well known appear strange, it was felt that 'being one of the tribe' and having a working knowledge of the context would outweigh any significant disadvantages. Furthermore, despite being a tutor on the PGCE programme, the discrete subject settings combined with tradition of subject independence created enough dissimilarity for the researcher to feel comfortable with the setting. The data gathering began in 1992 and ended in 1996. During that time one of the original six subjects left the university and because his data sets were incomplete, it was decided to continue with the five remaining participants. The period also coincided with a turbulent period of change in the world of initial teacher education. As a result a number of issues were in the forefront of their minds, including not only a range of professional concerns such as course construction, partnership and the whole argument relating to competency but also anxieties about their own position within any future structure. The early 1990s saw tutors become increasingly vulnerable to political attacks and the threat of redundancy loomed large as course managers struggled with the financial implications of the new directives. Such a state of affairs inevitably had an effect on the participants as it did on the researcher.

- ***How was the data collected?***

The interview has a wide variety of forms and a multiplicity of uses. Different types of interview are suited to different situations. To pit one type of interview against another is a futile activity (Fontana and Frey, 1994). In any qualitative study it is therefore possible and sometimes desirable to apply different types of interview which complement each other. The practice of interviewing in this research was very flexible in order to fit the different contexts. All of the interviews were individual, face-to-face verbal interchanges; the majority of which took place over multiple and lengthy sessions. Regarding the location, most were held in the interviewees' work setting, but some were carried out at the interviewees' homes.

Research techniques are not only determined by the nature of a study, they also go back to the process of framing the research problem. An interesting analogy addressed by Fisher *et al.* points out that if the only tool you have is a hammer, every problem will begin to look like a nail (Fisher, Kopelman and Schneider, 1994, p. 17). The tools employed in this study include unstructured and semi-structured interviews, participant observation, and documentary analysis. The data was analysed using a multi-methods approach, and triangulation,

respondent validation and other methods of verification were employed to validate any claims made.

1. Unstructured in-depth interviews

Following Yin (1994), a multiple methods approach to data collection was adopted. In order to elicit material relating to past experiences, (see figure one, chapter two) a biographical approach was taken (Butt and Raymond, 1987) This involved 'life history conversations' being conducted at regular intervals with the tutors. These took place at various times and places. Most often in their study during set times but sometimes in their homes. The interviews were open ended and relied on minimal interference from the researcher. Questions were similar to Ducharme's (1993) agenda in his study of the lives of teacher educators in that they took a diachronic approach and their lives were enumerated historically. Areas covered included family background; early school and family life; secondary and university education; their entry into teaching and experiences of being trained; career history and watershed moments; their entry into teacher education as tutors, and finally questions relating to their experiences within the institution. The choice of area was left up to the tutor and their chosen experiences were the prime data source. No attempt was made to move them in particular directions, and the conversations were varied and ranged along a number of dimensions depending on time and subject. The number of interviews with the respondents also varied, however, on average six one hour long meetings took place.

The relationship with the subject was an important one and at all times the researcher attempted to share their viewpoints. This dialogic approach was taken so that the lived experiences of the subjects would not be seen as isolated examples but part of a 'shared experience' (Buber, 1966). This 'shared experience' or as Erikson (1977, p. 36) terms it 'disciplined subjectivity' was an essential element in the data collection. Some regard instances of self-disclosure by the interviewer as dangerous and influencing (Oakley 1981). However, others, notably Hammersly and Atkinson (1979) and Measor and Sikes (1992), feel that the presentation of oneself through self disclosure is part of an offering up of those aspects of one's own experience that provides a bridge for building relationships with the participants, thereby helping to break down barriers. Stephen Ball (1983, p.32) puts the issue with stark directness 'the interviewer comes to know his subject without necessarily having to engage in a reciprocal process of personal striptease.' Perhaps all that can be said to

reassure the reader is that during the interviews the researcher acted professionally at all times and the relationships established were mutually beneficial and occasionally uplifting.

All the material was transcribed as soon as possible after the interview and then made available to the participant. The transcripts were reproduced as accurately as possible although the numerous pauses and slight repetitions were cut down to manageable levels. As with much qualitative research, the process of collection, interpretation and analysis are not separate acts but simultaneous operations. During both the interviews and the transcription process, key ideas, issues and thoughts were noted and logged thus providing the researcher with valuable memo- based inferences which were followed up in subsequent interviews and during the more formal interpretation. This iterative process allowed early analysis to proceed alongside data collection thereby making the process more fluid and flexible.

2. Semi-structured interviews

The second set of interviews were semi-structured and aimed at eliciting data related to the tutors' current teaching situation (see figure one, chapter two). On average a series of eight interviews took place each lasting between forty-five minutes and one and a half hours. In this instance the interviews involved the use of a more tightly scripted agenda. Examples from the agenda included:

How is teaching and learning organised in your subject sessions?

What are your aims and goals in terms of your course, your students' learning and how do they relate to your subject sessions?

What role do you play in the seminars?

What sorts of beliefs and understandings underpin your choice of strategy?

What topics, themes, issues and ideas are explored in your sessions?

What strategies are deployed in your subject seminars?

What types of interpersonal dynamics exist between you and your students?

How would you describe a typical session (s)?

What specifically are you trying to achieve in your seminars?

How do you view the learning process of your students?

What conditions are most conducive to their learning?

In what ways do you develop particular teaching skills?

Can you outline to me the session you completed today?

What role should a tutor play in the sessions?

Is there a coherent underpinning to your work? If so can you describe and explain it?

Although these questions were markers they formed the basis to detailed discussions on the nature of the tutors' practice and the sorts of principles and knowledge underpinning it. The conversations often followed their own course pushed along by the tutors' own preoccupations and ideas. No attempt was made to take the tutors' thinking into any preconceived avenues other than those introduced by the question. Where necessary the agenda was placed in the background, and in such instances we both became absorbed in issues relating to the theory and practice of teacher education. After the interviews, many commented on the importance of the conversations in heightening their awareness of their thinking and actions. All reported being affected in some way by the research process with many claiming that there were not enough opportunities for PGCE tutors to meet and have similar discussions. Finally, all of the participants claimed their involvement was therapeutic, allowing them to express inner feelings while increasing their confidence in terms of the value of their contribution to the process of teacher preparation.

3. Participant observation

A number of observations of the tutors at work were undertaken during which the researcher acted as a participant observer, however, due to timetable restrictions (the researcher was usually timetabled to teach in slots identical to the participants) and other organisational problems, only a small sample of the work undertaken was observed. For English 22 hours of observation time was logged; for mathematics nearly 30 hours spread between two tutors; for science 20 hours and for languages 18 hours (the time here was restricted due to language problems). The observational data collection was guided by Spradley's (1977) ethnographic principles with detailed descriptive field notes being taken. Included in the notes were detailed portraits of the tutors' actions; the reconstruction, as accurately as possible, of the different types of dialogue which took place within the seminar; a thorough description of the physical setting; in-depth reconstructions of the events taking place within the seminar as well as a recording of the researchers hunches, impressions and reflective comments. Additionally, some seminars the tutor agreed to have his/her verbal exchanges tape recorded using the appropriate technology.

Following each observed session, a brief explanatory interview was held. Here the observation notes and (where possible) the taped evidence formed a key element both in understanding their principles and practice as well as helping the emerging analysis. These interviews were usually no longer than half an hour in length and were informal discussions aimed at clarifying any outstanding points. Questions were also asked relating to reasoning and justification. At all times the questioning was for explanatory purposes only and was never judgemental.

4. Documentary sources

Documents collected included all the relevant subject handbooks, numerous resources and materials relating to particular sessions. In addition, overhead transparencies, booklets, literature reviews and some examples of student assignments were photocopied and stored. These were later used in the case construction and served as a useful cross-check on the primary interview and observational data. At the conclusion of the research it was agreed that these materials should be returned to the owner.

• *How was the data analysed?*

In the spirit of hermeneutic phenomenology, the constant interplay between data and conceptualisation is the main characteristic of the process of analysis. This process is similar to the constant comparative method in grounded theory, however there are a number of significant differences. This constant comparative method combines the procedure of sampling, coding and analysis in order to generate theoretical ideas more systematically. This method is concerned with generating and plausibly suggesting many categories, properties and hypotheses about the problem investigated (Glaser and Strauss, 1967). The hermeneutic phenomenological approach, on the other hand, stresses the importance of the creation of evocative description. This involves generating a time to life telling that recreates the lived experiences of the participants as close as possible to their natural form. Geertz's (1971) term 'thick description' is perhaps the most suitable analogue.

The analysis of data was not a distinct phase in the study; instead, as in most qualitative research, it went through the three concurrent flows of activity: data reduction, data display and thematic interpretation (Miles and Huberman, 1994). In order to be as explicit as possible regarding the procedures used, the following stages relate closely to the logic used.

Stage one

The first formal process of analysis related to data display. Time ordered narratives (Miles and Huberman, 1984) were constructed using diachronic and synchronic data, the latter being made up of a mixture of the in-depth and the semi-structured interviews, observational field notes and documentary sources. This preserved the chronological flow permitting the researcher to get a thorough look at the relationship between the different elements in the conceptual framework. These narratives were not extended but sequential allowing the fitting of new synchronic data into the matrix (Miles and Huberman, 1984).

Once the corpus had been placed in order, a case description was constructed using the three organising concepts outlined in the guiding heuristic; these were images, practical principles and rules of practice. In terms of the first, the 'four common-places' proposed by Schwab (1964, p.167) were used to analyse the biographical corpus. These were images of subject, images of teaching and learning, images of students and images of situation. The transcripts were then combed using the method suggested by the Van Manen (1990). This involved isolating statements that corresponded to the definition of image used in the conceptual framework. Often these tended to be metaphoric statements which gave richness and clarity to the images as well as being devices for data reduction. In addition, they allowed the diachronic data to take shape and patterns to develop without an over-reliance on chronological sequence. During this aspect of the analysis care was taken not to look, too early on, for overarching metaphors as representations of image, the purpose being to move from the denotative to the connotative. The four images also helped to connect the data to the principles and rules which were simultaneously being incorporated into the analysis, albeit at this juncture, on a secondary level.

Stage two

For the analysis of the full data sets two approaches were used simultaneously: the first was the holistic or sententious approach which involved attending to the data as a whole while highlighting particular phrases, concepts, ideas and events which the researcher felt captured fundamental meanings. The second involved the selective approach in which the transcripts and the tapes were listened to simultaneously to expose the essential statements that revealed something crucial about the phenomenon or the experience being described. Here the field notes and documentary corpus were used to cross-check particular instances and to add saliency to the statements.

During this process a number of techniques for enhancing theoretical sensitivity, similar to those suggested by Strauss and Corbin (1990) were used. These included flip-flopping (a technique of turning a concept or an idea upside down in order to make a comparison at the extremes of one dimension) and far-out comparisons (a technique of comparing themes which emerge from analysis to concepts in seemingly unrelated areas in order to increase creativity). In classic grounded theory, theoretical sensitivity indicates an awareness of the subtleties of meaning embedded in the data, and its capability to develop a plausible interpretation. (Strauss and Corbin, 1990, p. 41). During the analysis stage of the study (although again it must be stressed this was not always a discrete phase) a great deal of time was devoted to the reading of the literature so as to enhance theoretical sensitivity; it was also a deliberate attempt to maintain a distance and avoid 'going native' by identifying too closely with the subjects.

It has been suggested that during data analysis the researcher should never take anything for granted; it being particularly difficult to recognise and challenge any assumptions based on a researcher's own professional and institutional perspectives. However, it is simultaneously acknowledged that interpretation in qualitative research is influenced by the position of the observer (Spindler and Spindler, 1993). Beattie (1981) also argues that it is an epistemological commonplace that people see what they expect to see, and the categories of their perceptions are largely determined by their social and cultural background. Obviously the fact that the researcher was located in the university and was part of the PGCE team has to be taken into consideration, however, all knowledge springs from an interaction between the object investigated and the culturally shaped investigator (Thomas, 1995) and any such problems should be seen as a limitation not a deterrent.

Stage three

The third stage of the analysis involved the writing of the first drafts of the descriptive case studies; these were built around the three concepts outlined in the conceptual framework - images, practical principles and rules of practice. This process inevitably raised the issue of written reconstruction. Clifford (1986, p.54) when referring to this problem asked: how shall the social scientist write? He posed this question in order to stimulate social scientists into considering new and alternative ways of presenting their findings.

How we frame knowledge also determines its importance and as Vygotsky (1962, p.126) remarked 'though thinking undergoes many changes as it turns into speech. It does not merely find expression in speech; it finds its reality and form.' For Vygotsky, speech refers not only to talk and as Wertsch (1985) notes, his concept of speech refers to the sense we have of language, both written and oral. The way we as social scientists and educationists write, therefore shapes our identities as scholars. Finding an appropriate style is central, particularly if the subject is an individual and the nature of the research is to describe and explain aspects of their experience and knowledge. Bentley (1946) perhaps best illustrates this process in his description of a writer as someone sitting on top of a brick wall describing to someone below, the action on the other side.

As Krieger (1984) and others have suggested, a powerful model for writing up case studies can be found in what has become known as the *new journalism*. Although the precise origin of the phrase is unknown, most agree with its chief advocate and exemplar, Tom Wolfe (1973), that the *new journalistic* writing began appearing in the mid-1960s during a period of information overload. Hellman (1981, p.8) claims that the *new journalism* was a revolt against homogenised forms of experience, against monolithic versions of the truth. Wolfe (1973, p.9) explains he began to discover a new 'artistic excitement in journalism' and the possibility that journalism that would read like a novel, more specifically the novels of social realism.' Holowell (1977, p.23) argues that 'the *new journalism* strives to reveal the story hidden beneath the surface of facts'.

Since there would appear to be similarities, in terms of both belief and method between the *new journalism* and qualitative research, the writing strategies and techniques employed by the new journalists appear to offer an appropriate model for the writing of case reports.

Wolfe (1973) has identified four writing devices central to the *new journalism*, they are:

- i. Episodic construction
 - ii. Characterisation through the judicious use of dialogue
 - iii. The use of the third person perspective
 - iv. A detailed telling of events staying close to the participant's 'life, status and experiences.'
- (p.32)

A combination of all four devices was used at various times during the writing of the case studies. The detailed telling of events as in iv. above was used constantly and the deployment

of the concept of image allowed the biographical data to take on an episodic feel (as in i above). To avoid the pitfall of over interpretation during the writing of the various drafts, the author deliberately kept a distance allowing the subject to speak for him or herself, as suggested in iii. above. However, to claim anonymity would be foolish and mistaken; the cases were the researchers accounts and in no sense were they joint enterprises. The respondents had an input into the writing but only at a referential stage. Stake (1978) suggests that for case studies using the *new journalism*, a writing style that is informal with as much verbatim quotation, illustration and even allusion and metaphor as possible should be attempted (as in ii above). This he feels is more appropriate than the more technical style often associated with conventional research reports.

After the drafts were completed, they were handed to the respondents for final verification. They were then returned to the researcher and adjustments were made. It was at this point that the second stage of the analysis took place. This involved a cross-case analysis in order to uncover the essential themes. This paradigmatic analysis aimed at uncovering general instances of particular notions. Here the cases were inspected in detail so as to allow the themes to emerge inductively from the data. This inductive analysis included movement from similar instances in the data to those already acknowledged in the relevant literature (Strauss and Corbin, 1990).

Stage four

Although it has been argued that this cross-case approach is inappropriate for some forms of qualitative research (Lincoln and Guba 1985), the question remains. For Glaser and Strauss (1967), Atkinson and Delamont (1986) and Van Manen (1984), the cross-case generalisation through thematic analysis deepens both understanding and explanation. It is here that all qualitative researchers have to negotiate the tension between reconciling the need for uniqueness with the demand that their findings be in some way generalisable. A number of approaches are recommended and the researcher must find one that fits with the propositions and questions guiding the study. In terms of this investigation it was decided that a multi-exemplar approach would be used (Denzin, 1991). This is not so much an analysis as an interpretive synthesis, in other words, the themes are a collection of multiple instances observable in the cases. The themes then form the basis to a discussion, which will in turn help generate further questions, as well as formulate recommendations for practice.

- ***How valid, reliable and trustworthy is the research?***

Issues of validity and reliability haunt the qualitative researcher like a spectre. To eradicate its presence, triangulation gradually developed as a required element in qualitative research. The concept of triangulation, is borrowed from land surveying, and is related to the quantitative tradition. The core idea is to 'cross-check', i.e. to check different findings against each other (Bryman and Burgess, 1994). The fundamental belief is that a variety of approaches offers the best chance of achieving validity (Jary and Jary, 1991). The 'within methods' triangulation devised by Denzin (1994) claims to enhance reliability but not validity (Hitchcock and Hughes, 1989, p.105).

There are many ways to triangulate. Four different but related dimensions in triangulation can be recognised, i.e. data, investigator, theory and method (Bryman and Burgess, 1984; McKernan, 1991). Each strategy has its respective strengths and limitations. Among them the dimension of method is the most widely recognised, and it generally refers to the use of more than one method of data collection within a single study.

Incongruities between different data sets is not unusual even in quantitative research. In qualitative research any finding or conclusion is likely to be more convincing and sound if it is based on several sources of data while simultaneously following a corroborative mode. Patton (1980, p.247) discusses four types of triangulation in case study type investigations, that is the triangulation,

1. of data sources;
2. of perspectives on the same data sets (multiple theories);
3. of methods (multiple methods);
4. among different researchers (investigator triangulation).

The present discussion pertains only to the first three of the four types. With these forms many potential problems can be addressed. First, because the use of multiple sources of evidence allows multiple insights into the same phenomenon, not surprisingly case studies using such an approach have often been rated more highly in terms of their overall quality than those relying on single sources of data (Yin, Bateman and Moore, 1983). Second, the widely recognised strategy of multi-methods has also been applied in this study. Interviews, both in -depth and semi-structured, participant observations as well as documentary analysis

have been employed. The analysis was likewise validated through the constant interplay between the researchers interpretation and the respondents cross -check.

With regard to multiple-theories, this approach gave the researcher an opportunity to try out alternative interpretations and avoid imposing too many theoretical propositions on the data. However, given the nature of the study it was decided to bound the unit of analysis within a conceptual framework in order to guide and structure both the data collection and the preliminary analysis. In so doing the study was illuminated by insights from social phenomenology and hermeneutics, and such an awareness helped the researcher to steer clear from the temptation to impose any rigid theoretical propositions on the data. The limitations of phenomenology have been recognised even by Husserl himself from the perspective of methodology, additionally, facts do not stand alone but are theoretically informed (Allan and Skinner, 1991) and it is widely accepted that theories are involved at even the simplest descriptive level (Beattie, 1981). In a similar vein writers on hermeneutics would argue that all understanding is based on some level of preconception, no matter how implicit or hidden; theory and concept are always unavoidable in every study, however, such preconceptions or prejudices need to be open to challenge within what Bernstein (1975) calls the hermeneutic circle. The first and most important step is to make these implicit or unconscious assumptions explicit and conscious from the outset. The issue is further explored below.

Despite the usefulness of triangulation, all research must respond to the canons that stand as criteria against which the soundness of a research project must be judged. Lincoln and Guba (1985) have phrased these canons as questions: first, how credible are the particular findings of the study and by what criteria should they be judged? Second, how generalisable and applicable are the findings? And third, how sure can we be that the findings are reflective of the subjects' meaning rather than a creation of the researcher's prejudices?

Lincoln and Guba (1985) go on to propose four alternative constructs that perhaps more accurately reflect the assumptions of the qualitative paradigm. These will be discussed briefly and reference will be made to the attempts by the researcher to ensure these constructs were addressed.

Credibility: this relates to the way in which the inquiry was conducted so that the subject was accurately identified, described and represented. Here the final case studies and earlier drafts

were returned to the participants to ensure that the interpretation offered stayed as close to the original as possible.

Transferability: this refers to the broader applicability of the findings in terms of other (similar) contexts. This is always problematic for the qualitative researcher, however, given that the study was framed by a conceptual framework, others who wish to carry out new investigations or make policy from the findings, are able to see how the research ties into a body of literature and theory. Additionally, the findings from such studies often have a powerful influence on practice through what Van Manen (1990, p.37) calls the 'phenomenological exchange' whereby practitioners and researchers engage in a mutual recognition of similar instances.

Dependability: here the researcher has to account for changes in course of the investigation. Since this study followed Miles and Huberman's (1984) notion that qualitative research is both an interactive and iterative process, changes were inevitable. It should be noted that at each stage of the research new ideas, further lines of questioning and analysis emerged. These are explained fully in the analysis steps outlined earlier.

Confirmability: finally Lincoln and Guba (1985) ask whether the findings of the study could be confirmed by another. This was achieved through constant discussion with colleagues and my supervisor as well through the presentation of many of the preliminary findings at conferences and research seminars.

In conjunction with the above criteria the notion of *trustworthiness* should also be added. This is perhaps the most effective criterion in the search for soundness. Put more directly we need to know when published teacher based case studies research become trustworthy. Mishler (1990) is noteworthy in this respect when he says,

The key issue becomes whether the relevant community of scientists evaluates report findings as sufficiently trustworthy to rely on *for their own work* (my italics). (p.417)

As we learn more about the actual ways in which positive science is conducted particularly when dealing with human activity characterised by uncertainty, conflicts and power plays, validation becomes not simply a technical exercise but a problem at the heart of the enterprise. Mishler (1990) again argues that no general rules can be provided to give an overall level of validity in respect of particular studies or domains and that ultimately all attempts

at securing validation end up as judgemental or interpretive. Construct validation then becomes the problem of putting meaning and interpretation at the heart of the matter. He presents the view that in place of validation we should consider the 'trustworthiness' of observations reported, interpretations offered and conclusions drawn.

The operational definition of trustworthy research is that 'we trust it enough to act upon it' (Mishler, 1990, p.417). He goes on to say,

The more the members of a research community act as though the research results were valid, the greater the likelihood that such research acquires a taken-for-granted 'truth' - it has high persuadability; like a good story told in court, the jury of peers reports the verdict, 'we believe this testimony'. This notion of trust as a basis for action shifts the emphasis from an objective, neutral, dispassionate 'truth' to a social context of praxis and discourses. Evidential definitions and criteria for trust do not emerge from technical methods but from a network of assumptions embedded in a tradition (p.418).

Kuhn's (1970,p.171) view of knowledge as being embedded in 'shared exemplars' as well as in modes of knowing 'brings out the impossibility of replication of the usual prescriptive algorithmic road to validation, even with exemplary reporting on research methods. He cites the common practice of scientists visiting each other's laboratories to see how an experiment was 'actually' carried out as opposed to how it was reported.

Within social science there are groups of researchers sharing common assumptions, perspectives and approaches which acquire within those domains the cachet of trustworthiness. Mishler (1990) looks at life history and personal identity, oral narratives, phenomenological cases, and Proustian narrative strategies as foci for an exploration of the extent to which published research in these areas can be regarded as trustworthy.

Mishler's (1990) analytic approach is to:

- a] focus upon a piece of descriptive discourse;
- b] take its text as basic datum;
- c] reconceptualise it as an interpretive instance;
- d] provide methods of characterising its thematic elements;
- e] specify the relationships between them;
- f] interpret meaning within the structure of the theoretical framework. (p.97)

Among the issues he examined was how some researchers cope with voluminous and variable language samples using limiting analytical constructs and converting these into themes. The complex and diffuse original data is transformed and usually reduced into more manageable units. However the change produced by this transformation means the exclusion during the analysis those parts of the data which may lie outside the analytical framework. This he regards as an inevitable result of the process of data reduction.

Burgess (1982), Mishler (1990), and Marshall and Rossman (1995) take it for granted that any account produced in an interview is a reconstruction shaped by the context of its telling. The respondent's answers and tales then become the basic text for analysis and interpretation. For Mishler (1990, p.227) there is no problem of 'distortion' of the present account as opposed to some authentic, objective reality which, if recoverable, could serve as a validation, of the current account. The absence of an objective correspondence is therefore not a weakness '...but rather the hallmark of interpretive research in which the key problem is understanding how individuals interpret events and experiences, rather than assessing whether the interpretations correspond or mirror the researchers' interpretive construct of objective reality.'

For many the touchstone of validity in interpretive work is the extent to which the interpretation makes sense to the respondent. We have seen that interpretation is vulnerable to the effects of countertransference and the 'acceptability' of the interpretation is mediated by the relationship between the respondent and the researcher. In this sense the art of interpretation is identifying within the original transcript or text a representative set of patterns which can be grounded (Glaser and Strauss, 1967) or tied in some way to the conceptual framework outlined prior to data collection. Most qualitative researchers recognise that all the reader can do is to respond to the interpretation offered unless the full data sets are made available. If that is possible, other researchers could come to the same data and arrive at different patterns and conclusion as historians often do when analysing similar primary sources.

To clarify this issue the researcher must ask himself/herself a number of key questions:

What are the warrants for my claims? Can other investigators make a reasonable judgement of their accuracy? And, on that basis, can they decide whether the findings are trustworthy enough to be relied upon for their own work?

In this way the case study researcher protects himself/herself from attack by suggesting that his/her methods do not validate his/her interpretations (which must rely on the construction of a discourse through which a study comes to be socially defined as trustworthy). For Mishler (1990) the task in case study qualitative research is that in the final account the specification of analytic themes is in terms of discernible features in the text, and that the theoretical cross-case interpretation focusses on relationships between the themes rather than on any variables.

The central theoretical aim therefore is to describe, analyse and interpret a pattern of relationships within data generated from a clear conceptual framework. That is, the analysis shifts to a more abstract level as theory and analysis engage in a mutual dialectic, and with sufficient information we can make decisions as to whether the research is sufficiently trustworthy for action.

Summary

To return to the questions guiding this section of the dissertation. First of all, the chapter has asserted the significance of case studies as 'acts of mind' that have intrinsic value. Second the methodological route taken and the analysis and interpretation techniques used, brings with them significant riches of thickness, texture and specificity to the cases (Geertz, 1971). These techniques are balanced against the problems of over-interpretation by the concepts of triangulation and trustworthiness. The case-study method of studying of individuals or small groups are capable of yielding insights and understandings which offer the possibility of knowledge beyond the singular. Such approaches also allow the identification of insights and understandings which enrich the perceptions and professional development of those (still a minuscule proportion) who have been involved in the research study as well as offering illumination to fellow practitioners and educators.

PART TWO

The case studies

CHAPTER FOUR

BETH

Biographical synopsis

Beth joined the School of Education as a full-time PGCE maths tutor in 1990. Prior to that, for almost four years, she managed to combine the role of part-time tutor with that of LEA advisor. In 1984 she was seconded from her post as Head of maths at a local comprehensive school to co-ordinate the Resources for Learning and Development Unit (RLDU), an LEA initiative which produced teaching and support materials for teachers both locally and nationally.

Beth entered the teaching profession as a maths teacher in a Bristol comprehensive (her first and only school) in 1972 after completing her PGCE at Exeter University, eventually becoming head of maths in 1980. Her undergraduate degree was completed at the University of Oxford in 1971.

As a child Beth was brought up in a Blackpool boarding house run by her parents. She and her sister had a conventional education and both gained places at the local girls' grammar school, however, the death of her father when she was only fourteen had an important effect on her, and she claimed that her success was mainly a reflection of his influence and commitment.

IMAGES OF SUBJECT

Three main images represent the clearest expression of Beth's relationship to her subject. It is the working of these images - developing first one set of possibilities then another - that gives the fullest expression of the role they play in her thinking and practice as a teacher educator.

Maths as the centre of the world

A central element in Beth's practical professional knowledge is a powerful image of mathematics as being at the core of both her personal and professional life. It is the glue that binds her experiences together. At school it was a subject at which she naturally excelled; even at primary school she remembered being able to work things out and get the right answer easily. Her affinity

with the subject was natural and when she attended the girls' grammar school in Blackpool this innate ability was quickly spotted.

Maths is the centre of the world for me. The subject is deeply important to me and I can't really see anything outside it. It provides me with my ideas on a range of issues - educational, social, political and professional. It is part of my vision and is the dynamic behind my notion of freedom and constraint. Maths has the ability to empower, to enlighten, to instruct and most of all to transform. It is a way of thinking that is central to my existence. And somehow I've always been able to do it quite naturally without really trying except at university but that's another story.

And yet this natural ability remained a mystery to her. She recognised that it was and is still in many respects intuitive - an ability to see through problems quickly and produce correct answers even when never fully understanding the question or playing the algorithmic game.

The reason why I felt I could always do it was because I used to learn maths without trying and I could do it very quickly from an early age. I could always get the right answer even if I didn't follow the set path. Sometimes I couldn't follow what the teacher was doing on the board but I still got the answer quicker than anybody else. I could always get the tick in the moment. Funnily enough I assumed everybody else was the same but it slowly dawned on me that they weren't. Some girls couldn't do it at all. One friend of mine couldn't play the algorithm game because the whole thing went out of her head too quickly. I always came top of the class without really trying. And yet I didn't think I was clever like many of the other girls at the school I suppose because I was conscious of being poor and working class when they were mostly middle class.

Despite gaining high 'A' level grades which secured her a place at Oxford, Beth never fully got to grips with mathematics as it was presented to her there. She claimed that the problem of meta-cognition plagued her during her undergraduate years and this is still powerfully represented in her image. In the following extract we get an early glimpse of her embryonic beliefs about maths as a subject and how it is best learned.

At Oxford I simply couldn't do it anymore. There was a point in my first year when this dawned on me. So I had to learn by rote to survive, I had to memorise basic structures. But for me this wasn't mathematics. I hated it and couldn't be bothered. So I didn't change underneath. I played the game on the surface but told myself stories and I convinced myself I was an intuitive thinker and not a rote learner. So you could say I reached my ceiling in my first year and spent the next two years rote learning and reading literature, rowing and reading psychology. But maths was still close to me and despite the problems it still is the most mysterious of subjects.

Maths as a mystery

This image of maths as being a mystery, is best understood by her continued reference to the importance of the creative tension within the subject. This is highlighted in her description of two poles - a sense of control and a sense of freedom. Throughout her career the tension between these two ends of this continuum had been at the heart of her work. She commented that,

Maths forces you into the complex zones, its language and symbols are different. I try to work with this dissonance, with the tensions between freedom and restraint that the subject offers any individual. My starting point in all my educational work is maths is a mystery, it's at the core of my beliefs and provides me with a personal and professional vision. I want to help individuals create meaning in their lives and to transform themselves through the study of mathematics.

Her embryonic and intuitive understandings about mathematics were given substance and direction by her PGCE year at the University of Exeter. This was a watershed experience for her in a number of ways. Firstly because she was introduced to Mick Turk, the maths tutor at Exeter, who was to take on the mantle of professional mentor and guru over a number of years; secondly because the PGCE gave her back her self-belief in the subject. Mick helped to remove the veil that had descended over Beth's image of maths since the first year of her degree. He convinced her that personal ceilings of understanding in the subject did not exist and that everyone, regardless ability, could learn and enjoy the subject. Mick was therefore the 'critical friend' whose ideas helped to guide the creation of Beth's current images. She said emphatically that Mick had helped her to stop 'paying the price for learning' and that since then she had been 'determined not to let her pupils, students and others suffer the same ignominy'.

She vividly recalled the first ever PGCE maths session with the group in Exeter. The intensity of the description underscores Beth's powerful sense of liberation and the effect of the experience still resonates with her present practice.

I remember walking up the stairs on the first day of term and going into the maths room - the stairs was full of crates and we were all squashed into the middle of the floor. Then a man with dark hair appeared, with bright sparkly eyes and he just sat there. The floor was covered with paper. He didn't say a word but started drawing on the paper - vectors - we were mesmerised - he didn't say a single word, he was teaching us about vectors and doing it with such speed - but he didn't speak at all.

I found myself suddenly enjoying maths for the first time since my schooldays - I remember so much because I enjoyed getting involved for the first time in years. That really stuck in my mind

what he was doing with us - this diverse group of mathematicians - he was teaching us maths through experience.

This event transformed her; its significance cannot be underestimated and is central to her image of maths. Essentially it was a moment of truth, a turning point when maths came alive again. From then on she asserted, the stories she had told herself about maths were correct and her previous negative experiences were 'mere blips on the horizon'. She went on,

At last I was doing maths. Not just rote learning which was pointless but it meant that those years at Oxford could now be put behind me, I was right about myself after all. Because here I was enjoying it, Mick made us think about maths all the time nothing could be understood outside it. He made us sort things out for ourselves but he also gave us the conceptual tools to do it in practice. It was so comfortable for me it felt like I had come home. It was a part of me that had returned. There it was instantaneous, it was like being given something precious back that had been lost.

Ever since my PGCE maths has remained the driving force. But it was Mick who allowed me to see it differently. Now I encourage my students to think like that. Maths is not dull and boring, it is not about churning out formulae, it's about mystery, enjoyment and creativity. Too often children have to suffer maths, like I did at university, and there's no need to fall into a black hole with it, it can be learned and understood positively and can bring enormous pleasure.

Looking back she realised that Mick was using maths to transform his students and Beth now takes a similar approach in her professional life. She left the course then with a vision of maths that was transformative and the experience was, she claimed, 'a significant milestone in her professional life'; one that gave her 'direction and meaning for over a quarter of a century.'

For Beth then maths 'has a certain mystery that allows people to explore it at different levels and the mystery is only uncovered as students explore its problems'. In her professional career at both as a school teacher, consultant, advisor and maths tutor, this image was enacted through the use of 'dissonance theory to create energy in the minds of the learners. This is a constant and is ever present in my work with students today and when I was teaching at school. The key is to create dissonance in the learning space then the mystery comes alive.' She recalled a typical lesson at Bluebell school where she taught for twelve years,

I would ask a pupil to tell me and the class a story from the day; then I would create a mathematical problem from that experience. They all have space for learning maths in their minds I simply put problems there that are mysterious but relevant. If you can hone in on where they want to go then you are half way there. But the learning is always done through maths,

that's what drives me on and underpins my work with student teachers as well - everything we do is related to and driven by mathematics. In any learning situation I am involved with there is a space between me and them and I work in that space - I get them, whoever they are, to learn by creating dissonance and energy between their known experiences and understandings and the unknown.'

Maths as transformative

As has been shown Mick Turk helped Beth to realise her own professional vision. He offered her a way of communing with the subject that had been missing since her schooldays. He also helped her to realise her potential, to re-conceptualise the subject and to see 'maths as a vehicle or transforming children's experiences.' In retrospect, however, she realised that his approach had a number of drawbacks. She admitted that his ideas about maths and the teaching of it were at times 'too stiff and his ideology was pervasive. One had no choice on the course you accepted his way even if you had doubts. Even the course was set up so that we were placed in schools where they followed his ideas and approaches.' Beth had to do her teaching practices in Bristol; these 'professional bases' as they were called were 'hand picked because of their affinity with his ideas and practices.'

Many such schools then employed his graduates and his ideas got into the system. This 'cloning process' as she described it, did now concern her, although at the time she did not recognise it as such. Mick Turk also believed in the 'cardinal principle' which she claimed was 'the practice of selecting individuals within the course who would persuade and cajole others who were not true believers.' She was chosen as a 'cardinal' but looking back she could see the dangers and the unfairness of such an approach.

I'm like him and not like him in many respects - if you get my meaning. Although his influence has been enormous I still have doubts about certain aspects of his approach. Although I have a strongly held vision similar to his, I don't use my power excessively. I don't believe in cloning my student teachers; instead I have my own images of mathematics, about seeing it as transformative in children's lives but I don't think as teacher educators we should create a single type of maths teacher because people are different and diversity is good, also in the end too many will react against you or pretend to go along with you but keep their own views private. As well, schools and maths departments are all different and so cloning would never work because of the variety of views and approaches you can get - even in one school.

IMAGES OF TEACHING AND LEARNING

Making connections

Beth's images of teaching and learning are difficult to disentangle from her powerful images of maths as a subject. Both are symbiotically connected and go a long way to creating her vision of teaching and teacher education. One of Beth's guiding image of teaching and learning is best represented by the term 'making connections'. She continually referred to this process both in her interviews and during her practice, and the image was visible at a number of levels in the data. She mentioned, for instance, 'the connections between teaching and learning;' 'the connections between the individual and the subject;' 'the connections between the teacher and the child;' and 'the connections between freedom and constraint.' The origins of this image are to be found deep in her personal and professional past and a variety of conduit metaphors are used to represent it.

As a child she claimed she learned by 'connecting with things herself for herself.' For example, she remembered learning the piano by guesswork and connecting the keys with the right sound; and she recollected learning to read with her sister without any formal tuition 'simply by linking the letters, the sounds and the stories together.' This intuitive approach evolved in an environment which was marked by a lack of financial and intellectual resources, but one which was nevertheless supportive and comfortable to live in. At school Beth enjoyed both the literary and creative aspects of the curriculum, and never saw maths as one sided or her own learning as one dimensional.

This intuitive and experiential learning process did much to create the belief that a great deal of learning is done independently of teaching. 'What people learn' she claimed 'is rarely the result of what other people teach them.' Early on in the interviews she acknowledged a personal debt to Caleb Magntena's book, *What we owe children*, similarly the writing of John Berger had also been highly influential. A central tenet in her thinking was that 'all children deserved a high quality maths education and that too often maths has been seen as either elitist because of its alleged inherent difficulty or the idea that you can either do it or you can't.' Both positions she felt led 'to the great majority of children having an impoverished maths education because of the dominance of a hierarchical system.' She went on,

Most maths courses have been aimed at bright kids and many of these use the system and get away with it. But what about all of the others the majority of kids who struggle. That's why I

believe that maths should be for all children and the top lot should not have a curriculum that suits them at the expense of all the others.

Parallels can also be found in this broad view of education and learning with her attitudes and beliefs concerning teacher education. For Beth 'student teachers come in all shapes and sizes. Many have enormous potential as teachers but few are able to capitalise on it. At times in the past those who were natural teachers shone, I believe that all teachers can shine in their own way and my course is about preparing all teachers to do just that'.

It was at this point in the interviews that Beth raised the issue of reflection and its role and purpose in teacher education courses. For her it had all too rapidly become 'a mantra' despite the fact that 'so few are able to define it accurately or sensibly.' She also believed that the concept had been 'imposed from the outside rather than coming from within.' The origin of her personal conception of reflection can be located in her images of the teaching and learning of mathematics.

For me reflection is still about the relationship between constraint and freedom. It's what happens between the two. We have to examine both and think about both in relation to professional learning and development. You see, when students begin to think about the issues surrounding mathematics teaching and learning the tensions and dissonance emerge. The tension between aims and achievement; between understanding and confusion; between resources and time; between ability and achievement; between knowledge and process; between the curriculum and autonomy; between teaching and learning. The list is endless. We as teacher educators have to explore the dissonance between the poles to get learning either for pupils or student or experienced teachers for that matter.

Unlocking learning

Beth accepts, nevertheless, that student teachers like children, need a framework for learning. Again her description of the relationship between freedom and constraint comes to the fore. She stated that,

the role of the teacher and the role of the teacher educator in the classroom is to create the freedom so that pupils or student teachers can learn. It's about giving them freedom, guided controlled freedom, that's the key to unlocking learning in every individual; it is this creative tension that produces the best learning whether in a maths year seven class, in a maths education seminar or in other university courses.

She admitted, however, that creating such conditions was difficult and believed that the idea of an all powerful, omnipresent teacher was a barrier which many students and children had a problem surmounting. It was, she insisted, 'similar in many ways to maths being seen as difficult and only for the initiated, the problem is that too often learners, and I count student teachers as just the same as kids, are trapped in a cage of their own making.'

In the interviews the terms 'unlocking' or 'opening up' accompanied many of her stories about her own undergraduate education, her years as a teacher and her time as a tutor in Bristol. The fact that she had struggled personally with similar blockages and had eventually overcome them, gave her the confidence to believe that she could help others surmount similar ones. This image remains intrinsic to much of her work as a teacher educator and can be recognised in the following extract,

I still use ideas from my teaching in my daily work. Every student teacher I come across has had a little part of me in that sense extract in some way. That's why new teachers must look beyond the surface of teaching and the National Curriculum and begin to explore the perspectives of the pupils. To get close to them and seek out their individual value and potential - it's limitless you know!

In many of the interviews the dark, prescient sense of rote learning as described in her school and university days, was contrasted markedly with the numerous positive images that were evoked by her current descriptions of mathematics as a school subject. Traditional teaching is presented in cold adjectives such as 'dull', 'grey', 'slow,' 'boring' and 'crude' and in the use of mechanical metaphors, for instance, 'learning maths through chalk and talk is so machine like and uninteresting' or 'it's like putting children on a production line in a sausage factory'. Her image of unlocking learning is, on the other hand, is represented as 'fun and playful' and 'enlightening and bright.'

In one interview she talked at length about the importance of Bruner's ideas, particularly his distinction between easy questions and middle range questions. For her this represented the key to progress in learning. 'Kids, students, undergraduates anybody can learn' she declared 'but to ensure maximum learning and efficient learning we have to be dynamic and help develop constructive dissonance in each child. This means energising their learning space - this is the real and rightful role of the teacher and teacher educator.'

She recalled enacting her philosophy during her time as a teacher and head of department in a local comprehensive school. During her time there (12 years), she was instrumental in setting up a branch of the new Association of Teachers of Maths (ATM) and set up after school sessions for teachers 'so that they could be energised as well as feeling part of a community of maths teachers.' These symbols and institutions are still important to her and the local branch of the ATM continued to be her:

...professional locus - the School of Education is merely the base form which I now operate. My main focus is and always will be the maths education community. I am in essence a maths educator - nothing more, nothing less. It's what I've been doing for a large part of my professional life. I am and always will be fascinated by teaching and learning mathematics. What I want to do is to continue to learn about how children and others learn mathematics - adults, students teachers and myself. Teaching for me is a permanent affection, because I will never ever learn enough about it - its my central interest - in fact I'm only really comfortable when I'm teaching and helping to unlock learning in others. In school I had lots of it - it's different here - but there's still enough to keep me going.

IMAGES OF STUDENTS

Conduits

The clearest description of Beth's' image of her students can be found in the following fragment taken from a longer transcript.

Student teachers are the conduits through which I see myself and my ideas being transformed and transported into schools. Children are going to be taught by them - are being taught by them - so they need to be on my wavelength; that's why they are so important to me and that's why I spend so much time with them discussing issues, supporting them, challenging them. Without them the whole set up would be pointless and I would probably resign.

This image of students as conduits was further elaborated upon during the interview; it was, she said 'part of the process of keeping maths education alive through the encouragement of innovation and reflection.' Although she recognised that students came in 'all shapes and sizes' and that it was 'impossible to make them all teach in one way'. This, she indicated, led to 'cloning - the same sort Mick Turk used to do and as you know I'm dead against that! Also it wouldn't work because there are too many variables in between schools, departments, teaching styles and kids.' Nevertheless, she still wanted her students to have a professional vision, one that will 'sustain and help them to come through the difficult times.' The main components of this

vision were based on the images of her subject and the teaching and learning of it, outlined earlier.

At times she admitted being frustrated by some students' obstinacy and their inability 'to shift their perspectives,' however, she said she worked even harder with these so they 'might come to see what can be achieved... if they challenge themselves and carry these new ideas into their teaching.' The following exchange illustrates this image further,

B - If I had a performer for instance...

I - Sorry to interrupt but how would you describe a performer?

B - One who sees teaching purely as a performance and maths as being taught through interest and enthusiasm alone. They use their personalities and enthusiasm a lot rather than concentrating their energies on the subject. I wouldn't stop them or say it was wrong, I would instead try to develop something else to help him or her see that performance is not enough and that to get effective learning you have to work in other ways with children because not all children respond in the long run to character.

I - But are the two mutually exclusive?

B - What do you mean?

I - Well, you can use personality and charisma and still have that commitment and vision you talked about. I suppose to put it another way, when writing, grammar and punctuation do not hinder creativity or do they?

B - Yes I agree that's why I said I wouldn't stop them but too often that's all they have and they rely on it too much and forget that learning is more complex. Yes it's useful to have but there has to be more and it can get in the way. Children might just enjoy the lessons and like the teacher but may learn very little. Jamie this year, he's a performer, he listens and takes advice but I know that underneath he feels he can do it because he has this personality. So I'm working on the deeper level with him so that he can develop the vision to take into his teaching but he's stubborn and only listens to the bits he wants and claims that I'm always making things too complex and that learning maths is simpler than I make out. I'm trying to get him to think the opposite.

IMAGES OF SITUATION

Feeling cut off

During many of the interviews Beth continually remarked on the fact that she missed the collective spirit and energy that was the hallmark of working in a school. The university, she

claimed, was 'too autonomous and too individualistic where sharing and collaboration are not really embedded in the institutional culture.' This lack of community spirit was all the more difficult for Beth to accept because teaching and learning for her were 'embodied entities - part of my very existence,' and despite being a member of staff for over seven years, Beth still felt she was 'cut off from the institution and was never likely to have a close relationship with it.' She continued,

I can read a book about a particular problem in maths education for instance, but it makes no living sense to me because I'm not in the teaching space -it's therefore an abstract question. In schools you could always relate your existence to the classroom, to children, to learning so I never really had any problem there. I was always confronted by a child's misconception, it was alive, it was living; it meant that I could offer something directly to each individual. That's still where I am, except I'm one step away. I teach teachers to teach children, to pass on those values and embodied beliefs. That's what teacher education means to me but here I'm not a part of the place and I don't think I ever will.

This feeling of not being 'part of the place' meant that Beth remained ill at ease with its values and ethics. As such, she insisted, her focus remained outside the school of education 'in the world of practitioners and advisors, in the world of the ATM and in classrooms.' This was partly to do with the fact that she felt the School of Education was 'too far removed from the real world of practice to really influence schools and learning.' Nonetheless, she acknowledged that being a tutor did bring certain advantages: she had more time to reflect and think about the problems facing teachers and learners of maths, and was able to use her position to channel ideas from conferences and meetings directly into her students. However, she still felt strongly that too few of her colleagues 'particularly those upstairs, were interested or indeed willing to learn about schools' This she blamed squarely on the practitioner - academic divide in the School of Education, declaring that:

The academics upstairs really spend very little time in a school. I was involved directly with schools for nearly eighteen years either through the RLDU as an advisor and as a teacher and Head of Maths. I'm steeped in it. It's where I'm coming from and it's where I've been, so I have to maintain the links. All my work is aimed at improving practice. I am not interested in telling stories about practice or in gathering meaningless data, I want to influence practice at its root -my work is about change - in teachers' minds, in the classroom and in the learners abilities. Academics ask too many abstract questions and sometimes damn foolish ones as well.

Navel gazing

Part of the disembodied nature of her role comes from the academic emphasis within the institution on writing. Beth is not against writing, in fact she sees it as the very essence of communication and as an individual it is her prime mode of communication. Ever since childhood she could remember writing, partly as a way of communicating with herself and partly as a way of showing her inner-self when the usual means of communication were blocked. In fact during the interviews she would often show me parts of her personal archive which consisted of journals, diaries and papers spanning a quarter of a century or more. Most of these were private jottings but many were public documents relating to her early years in education; she even showed me her PGCE assignments completed for Mick Turk.

So it wasn't a block against writing that angered Beth, it was the pointless 'navel gazing academic writing of the name bracket variety'. For her, writing 'had to lead somewhere to a change in practice, to a source, to an individual.' In many ways this image of academic writing as 'naval gazing' was linked to her own personal epistemology. 'Knowledge', she maintained was 'inextricably bound up with the knower and based on their understanding of experience. This form of knowledge is related to the person and is embodied by them in the act of teaching and learning.' Writing for Beth therefore represented a means to an end, a process whereby knowledge could be made explicit, challenged if necessary and translated into effective action. Furthermore, this conception of knowledge was connected to her critique of the sorts of knowledge produced by her more academic colleagues which was described as 'very male and hard.' Her kind of knowledge, on the other hand, was seen as being 'based on sharing, open to question and not fixed. It is soft and more user friendly - it is I suppose very female.' This gendered view of knowledge and its relationship to academic writing is one that is central to her understanding of her situation.

Beth's ideal is that this personal, shared form of knowledge might become the 'ethical way forward for School of Education because it is different and allows people to express their desires, hopes, thoughts, feelings and practices as one entity not separate.' However, she is well aware of the pressure on her to produce research papers and publish in 'acceptable journals', but her resistance meant that for the foreseeable future she would 'remain on the outside' and instead preferred to work in her own way and hoped that 'eventually the institution would come round to recognise the power and importance of her ideas and her way of working.' In order to push this

along and to 'keep her sanity' she was in the process of trying to establish in the School of Education 'an alternative culture where practice and ideas are shared within a community of practitioners'. She was under no illusions as to the enormity of the task because 'the culture of the institution negates such ideas because it is based on extreme forms of individual autonomy, individualism and privacy' while her culture 'was about openness, debate and uncertainty.' She described this in more detail in the following extract while also alluding to the increased tempo of her work.

The academic culture here is very strong but it's not central to me. I work hard, as hard if not harder than most teaching a variety of courses, and believe me PGCE is still the most demanding, I go to endless meetings, I support students etc., etc., - all of this takes up loads of time - checking partnership arrangements- -you know what it's like. But on top of all that I'm expected to write as well. The time issue is central - if I was freed up a little more but it will never really happen. In fact the problem of time seems to have increased since partnership with all our diversification into inset and consultancy work and the pressure to write and track the students to check they are receiving their entitlements. I find PGCE more demanding now and they need more support now they are in schools longer and that combined with the research stress - my diary is choc-a-bloc; I just can't find the time. But upstairs they seem to be swanning about, teaching some MEd or EdD, I do those things and more. My time is being squeezed more and more.

This problem of time being 'squeezed' combined with her local and national professional commitments had forced Beth to consider her position. The only way she could write was to do it 'in her spare time' and this was difficult because she needed to operate within a community of practitioners and to use educational experience as a starting point. It was also evident in the transcripts that Beth felt that the pace of life on the 'third floor' as she called it, was the direct opposite of her experience of time.

I really feel the tension when I do occasionally drift up to the third floor -usually when I am flying and I have to wait a while so one of them can finish some irrelevant conversation in the corridor. It's all about pace; up there they go their own sweet way and are working on a time scale different from ours. For them MEd and maybe EdD and some supervision is all they do but we have to mix our priorities. I teach PGCE, do inset, MEd and do loads of other professional consultancies - they don't do half that - so they live in a different world and have a different view of the world. Theirs is an academic view - laid back, autonomous while I have to play off different roles and have to compromise myself all the time. They seem to have the thinking space while my diary and days are full professional activities.

Beth's image of her situation is coloured by such thoughts, experiences and feelings. The sense of what C.P. Snow (1959) called 'the two cultures' is powerfully outlined in her narrative.

Despite being a respected authority in maths education world, she still feels an outsider in her own workplace because ultimately, as she put it, 'the institution did not appear to respect her ideas or give her credit for her style of working.'

No collective spirit

Beth also felt stymied in her attempts to change or challenge the prevailing ethos in the School of Education. She used the 'Liberating the Learner' project to illustrate the problem. This was conceived originally as a collaborative writing project whereby staff in the School from all the different programmes would come together to produce an edited book. It was agreed, she pointed out, that each member of the group would write a draft chapter then appoint a reviewer from within the group who would comment on it. However, according to Beth the structure collapsed very quickly and returned to what she termed 'the autonomous freewheeling of the academics'. The following extract explains the problem in more detail.

B - It collapsed because of the others - not the PGCE people -we all produced our chapters on time -you even did two - and we tried to get the reviewers and the collaborative meetings but only the PGCE people and one or two others came. Most of them were either too busy - that's rich - or they hadn't finished their contributions or something else. We did it and reviewed each others and went to the meetings and your comments were very helpful.

I - How do you explain that?

B - It's because we are used to working together in schools, here and outside. Its part of our professional habit, it's a hangover from our teaching days having to work to deadlines and meet others and support them. The others talk about collaboration and sometimes even write about it but they can't do it - they are the worst, it's no wonder we have a theory - practice problem in education - it exists right here in the School.

This last comment regarding the disjunction between the espoused theory of educational academics and their practice was also prevalent in other interviews. Beth constantly attacked the way many of them entreated teachers and school managers to change their practice and yet failed to do it themselves. 'They are the ones who go on and on about management, and teaching and learning but won't or can't bloody well do it.'

For Beth writing, thinking and practice is about 'committing yourself, it's about putting your energy into something which is worthwhile and relates to action. It's then that collaboration can work when the participants are committed to the project and have ownership of it'. This 'collective approach' she felt was also more 'time efficient and less wasteful.' This belief sprung

from her professional background where she continually worked in collectives - 'collectives of teachers, student teachers and curriculum researchers.'

This image of School education as a collaborative learning community is one to which she aspires. She claimed to have transformed the PGCE maths course so that now each member worked collaboratively, so that the students can see the value of it. She reiterated, 'it's no use telling PGCE students to work collaboratively if you aren't willing to do it yourself!' Such an approach, she insisted, would help her students realise their potential as teachers through the process of reflection and through the sharing of ideas and practices.'

When questioned on this issue of academic success, she declared that the institution 'had an image of success which she could not in all honesty participate in,' and she pointed out, with some anger, that too many colleagues 'on our floor above and elsewhere, spent half their time lobbying those with the power.' The short extract below sums up her feelings,

I - What do you mean lobbying?

B - Arse licking to put it bluntly. So many spend their time sucking up to certain people making sure what they do is seen and heard by the right people. This tends to be male but there are some females who play along in order to get their pound of flesh!

PRINCIPLES AND PRACTICE

Beth's maths sessions were constructed according to an agreed set of principles which she claimed gave her students 'a structured working framework within which to operate and learn.' Every Monday, the first part of each session was based on 'the raising of issues,' while Friday mornings were entitled 'reflections on practice.' These were only general rubrics and the sessions were much more broadly based than the titles suggest. The first sessions of Autumn term fell under the heading 'orientation week' as Beth and her colleagues tried to help their students get to know each other as well as giving them a route through the course.

Beth's subject work is underpinned by a set of principles based on five broad labels: the development of reflection; setting an example; re-orienting; creating an arena; and the sharing of

practice. Here the creation of subject specific pedagogical knowledge is a major goal (although Beth never used the term herself).

Developing reflection

In her images of maths and of teaching and learning, it was clear that for Beth theory was a living entity based on the 'noticing paradigm' which focused the 'practitioner on the artifacts of action'. She insisted that she was not interested in researching or writing in the traditional format where 'theory is disembodied from practice'. For her they are inextricably bound together. This underlying image is taken a stage further in her practical principles when she preferred to talk of 'theorising' and the creation of 'personal theory' based on practical inquiry rather than use more formal definitions of the term. She declared:

Theory is not something sitting on book shelves waiting to be discovered it's out there, it's a living entity that can change and develop with experience. There are some interesting ideas floating around and you know I'm interested in intuitive awareness and cognitive processes but these ideas grew alongside my practice not separate from it. That's the problem with the upstairs bunch - they can only see one form of theory - one that is abstract and embedded in papers and books.

For Beth, the use of reflective practice is an important device in the professional development of her students, claiming that 'the reflective process is central to theorising because it gives structure and form to the experience that students or teachers for that matter, are experiencing....in a way it forces, I know that's a strong word, but it does, it forces the student to think about what they have done or what they are about to do or what they're doing. It can even be vital during practice when they have to make decisions in the moment'. Her Friday sessions were more overtly aimed at trying to explore these personal theories through the use of the 'reflective anecdote.' Here her students' thoughts, experiences, ideas, observations, images and traumas were expressed and examined in what Beth described as 'a reflective arena'. Her job, as she put it,

is to give their theorising direction, to point the way so that their thinking, practice and the context of their practice is open to critical evaluation by both myself and their peers, so in the end that it can be better understood and improved. Theorising for me is sense making, it's about understanding the moment or the moments that make a classroom and teaching what it is. As teachers and novice teachers in particular, they will have to make the most of the teachable moments so that they can maximize learning.

The key for Beth lies in the fact that these reflective moments were endogenous rather than exogenous and that theory in the traditional sense was cold and rational but she could 'make it come alive by acting as a filter, helping the students to make sense out of the pile of papers that are flying around the maths world.' She went on to proclaim that this form of theory was informative and had a place but only 'one on a large menu of ideas, theories, thoughts, explanations and ideas about and for teaching. I have to make sure that any formal theory makes sense to them and that it relates to their practice in a feasible and relevant way.'

Beth's personal conception of reflective practice is also underpinned by a series of ideas taken from the 'noticing paradigm'. Essentially, this is the belief that individuals have to start with the foundations of experience in order to become attuned to their context, only then, she heralded, 'will they be able to notice the moment'. These moments are real events or actions and the reflection takes place when the event or action has to be accounted for and understood. 'Unpacking these episodes' she pointed out, 'creates levels of dissonance which can then affect the follow up action.' This process is based on her reading of Festinger's cognitive dissonance theory but was overlaid with experiential knowledge derived from years 'working with the theory in practical situations.' Beth also enumerated that for her too much of the reflection she witnessed and read about was simply 'navel gazing' while her approach had 'a cutting edge because it's critical, collective and cyclical - the students share a problem, it's put to the test and a set of solutions are offered, and so it goes on; the students are always at some point in the reflective cycle.'

This conception of reflection is not bound up with the theories of Donald Schon or John Dewey but of Caleb Mantegna.. During the interviews Beth quoted him liberally her favourite being 'I have nothing to share but the awareness of my own awareness.' This she emphasised summed up her approach to reflection and its use in her course. She also highlighted two other important characters: her old mentor Mick Turk, who helped develop her ideas in relation to mathematical reflection and John Mason, Professor of Maths Education at the Open university. It was he who introduced her to the 'noticing paradigm' and is someone who continues to inspire her.

When asked whether she thought reflection worked at different levels and the role it might play in professional development, some further thoughts came to the surface. Reflection, she conjectured,

might also be a mechanism for change because events or actions are often made uncomfortable by the recalling of them. In fact sometimes I think it's the very act of recall that makes them significant. It is these moments of remembrance that are energising, when something is trying to come out because the psyche has chosen it from all the others. It then has to be worked on by the individual but with the help of others, only then will teaching improve and professional development be more than just updating of skills and techniques. It is also vital if we are going to get change and real professional learning that these events are put under the microscope...for reflection to be effective it has to be public; too much reflection is private and then no-one knows whether it is useful or effective. It is too limited if kept within the private domain. So reflection for me is about energising the student; it is about asking them to think about the origins of their practice and the direction it is going to take. I work with the moment but I also set up situations so that those significant moments can be brought out into the open and deliberated upon. It's the intensity of the experience that creates the sparks of professional development.

Beth's conception of reflection, however, and the principles that underpin it are firmly rooted in the classroom. She claimed to have no agenda in the wider political and social sense apart from improving the quality of maths learning in the classroom. 'I am only interested in what goes on in children's heads, in their thinking in classrooms. The wider political and economic and social circumstances don't really come into it. I am not a political therapist, I can't sort out society's ills, I'm just interested in learning full stop.'

To illustrate this point, Beth recounted the story of Rupert, a PGCE student who completed the PGCE maths course the previous year. Rather than enter teaching and he went instead into research into artificial intelligence, because

he (Rupert) was very political, he was interested in social and political change, the trouble was he was so bound up with it he couldn't get the basics right, the technical bits. His teaching suffered. He wanted to change society, and he saw teaching as a way of achieving this.

Of crucial importance to this practical principle is Beth's ability to work with students on an individual level. She maintained that she spent innumerable hours talking to her students in her room about their planning, ideas, their practice, problems, thoughts and reading; for it was only in this intimate situation that she could 'really get to know them as people and gain their confidence'. This also linked to her ideas regarding reflective practice because, as she put it, 'the reflective process is about creating better people, who will in turn become better teachers, who will in turn regulate themselves and thereby improve maths education and learning.'

In practice this principle was operationalised in a number of ways. Beth insisted her students kept a reflective journal; one that was separate from the professional journal which was a course

requirement and was predominantly functional 'a repository for lesson plans, evaluation, resources and schemes of work. The journal, on the other hand, is an instrument to record events of significance, to write down private thoughts and to engage in thinking about practice.' The entries in this journal formed the basis for many of the Friday sessions on 'critical incidents'.

In the first weeks of the Autumn term, Beth encouraged her students to write their autobiographies and to evaluate and compare their own learning with that which they had already encountered in their primary observations and early school placements. Beth also exploited her 'dissonance' approach to teaching and learning, when her students explored the nature of maths as a subject. She began her session with the words 'Maths is.....' and then asked the students to write down their thoughts in no more than a paragraph. Their ideas were then contrasted to various definitions gleaned from text books, historical texts, philosophers and maths educators. She also gave the group her own definition and encouraged them to challenge it.

In setting guidance for school based tasks the same principle was again in evidence. The focus on the learner rather than the teacher in much of the material, was an attempt to get the students to 'shift levels and perspectives' in order to focus on the learner rather than the teacher'. In one observed session, Beth showed a carefully edited video of a maths lesson. The lesson had been filmed from two perspectives: the teacher and the taught. The cross-cutting of the footage was very revealing and highlighted the different outlooks. The students were then asked to discuss the video in relation to their observations and suggest ways of solving the problems highlighted in the film. A second task related to the ways in which they might question the teacher about his practice so that learning became the primary focus. A mock video of a teacher being interviewed using two methods was then shown. The first was a spoof with the student deliberately asking the 'wrong' questions; a process which led to the teacher becoming defensive and eventually aggressive. The second illustration showed a sensitive interviewer, and the results of both were compared. The students were finally given criteria for the creation of interview schedules. The afternoon session saw the students create their own interview agendas based on already observed teachers; their final drafts were then trailed in pairs.

Creating an arena

Of crucial importance to Beth's practice throughout the year was the creation of what she termed an 'open, democratic, learning environment'. From the first day of the Autumn term, Beth aimed to create 'a mature group'; one in which 'all the participants felt comfortable and able to express themselves in a thoughtful and mature way, where being critical is seen as helpful and where my ideas are of equal value to theirs.' This approach was central to her working method and she felt it was indispensable because 'the students must feel able and willing to express themselves so that the whole group gels without factionalism and unrest. At times students need each other more than me, to bounce ideas around, to give support or to simply listen and reflect.

In her sessions Beth claimed to be operating at a number of levels simultaneously: sometimes at the surface level of practicality while at others at a deeper, more implicit level. However, she was keen to stress that throughout she was always 'pulling the strands of the course together....always trying to give them a holistic picture of their learning and its development'.

In the first week of the term a great deal of time and effort was spent building group cohesion and support, because she felt 'they (the students) must be comfortable with each other and with me'. The first session was carefully planned so that the group could receive information but at the same time interact with one another. All the members of the group gave a brief potted history of themselves, as did the tutors, then the group played various 'getting to know each other games' so as to improve familiarity and create cohesion and confidence. Beth commented about this aspect of the course: 'it may seem trivial but it's showing them directly and indirectly that knowing people is the first step to gaining their confidence, it also gives them ideas to use in their first encounters with maths classes - so it serves two purposes at the same time.'

In another session at the end of the first week, the students were given the following task: 'Using your own experience, prepare answers to two questions: Teaching is....? Learning is....? The subsequent answers went on to form the basis to the session. The strategy was an attempt to open up a series of issues associated with teaching and learning. One student answered 'teaching takes place in time and learning takes place over time' and went on to give a brief characterisation of his learning of maths in the primary school. Another claimed that 'learning was practising and teaching was giving you the knowledge and skills so you could practice'. Both ideas and the others in the session were then taken up by Beth and the rest of the group and discussed at length.

Throughout Beth played a facilitating and challenging role, interchanging frequently according to the demands of the situation.

A week later a session was observed whereby the students had to prepare a 'mini-lesson' on a subject or topic of their choice but completely unrelated to a school subject, the purpose being, to 'see how they translated their early conceptions of teaching and learning into actual events without burdening them with subject matter.' One presented a session on paper folding, another tried to get the group to learn aspects of the violin in unison, while another taught the group the rudiments of basketball. A brief discussion followed each 'mini-lesson' as Beth in particular, and the group in general, tried to link their learning to the ideas they had encountered in previous sessions and to their early observations in primary and secondary school. Some of Beth's comments on their lessons are worth recording as they reveal a great deal about both her practical principles and rules of practice.

'It is important to maintain eye contact with your learners particularly when giving instructions.'

'The use of metaphor, imagery and analogy are vital when explaining something difficult or new.'

'Style of delivery is important and should relate to the sort of learning you are trying to achieve.'

'The introduction to a lesson, however short, is vital because it sets the tone.'

At the end of the session Beth introduced some mathematics into their thinking. She asked the group 'would you teach simultaneous equations in a similar way?' Most answers were equivocal and ambiguous perhaps reflecting the confusion and sudden change of emphasis to a more challenging question. One student felt the classroom was an inhibiting factor given its rules and procedures; another believed that maths was not always meant to be fun and that learning maths was not like learning a sport or indulging in a hobby. Beth answered somewhat curtly that maths was her hobby and always had been so why not for children? Another student commented that children need to have structure so they can learn and move on. At the end of the session Beth summarised the main aspects as she saw them on an overhead transparency and she gave the group a typed print out of the summary later in the afternoon.

During the post-session discussion, Beth claimed that sessions such as the ones enumerated above, illustrated her working principles because throughout she had been 'working at two levels

- the surface and the deep.' In the former she was concentrating on the techniques and skills of teaching; but in terms of the latter, which for her was much more important, she had been working at a more fundamental level so her students' implicit theories about teaching and learning 'could be outed and challenged...where their preconceptions could be confronted in the present and then related back to their origins'. She went on,

The symbiotic relationship between teaching and learning always comes up in these sessions. Even in their 'mini-teaching' they got into information overload and take for granted things that we could do without thinking about it. Many also failed to prepare thoroughly enough and had to improvise, this let them down, but more importantly, it showed that teaching for most was about telling and here they used their own experiences of teaching to teach. It was interesting that some dismissed some of the more active approaches used because they felt they were inappropriate in maths lessons. I therefore had to work, as I always do on a multi-leveled approach, shifting levels all the time from the surface to the deep and back again, trying all the time to explore the origins of their understandings while at the same time giving them advice and ideas about teaching and learning.

Reorienting

A third practical principle underlying Beth's work revolves around the notion of getting student teachers to re-think their understandings and images of both mathematics and the teaching of it, this she defined as 'a process of reorienting' Many of the Monday sessions in her programme were undertaken under the general title: 'raising issues' and were an attempt to get her students to confront their 'implicit theories about loads of things like teaching, learning, maths, children and so on.' She continued,

They (student teachers) all have different conceptions of maths and maths teaching, that's why I think it's so important to start with those ideas and emerges and work with them. This goes back to my MEd thesis in part because as you know I did it on the images of maths that teachers hold and how they affect practice. Many come onto the course with an image of the all knowing, controlling, delivering teacher. Others come because they live mathematics and that teaching is a job that allows them to continue to stay close to the subject. They often believe that just because they love the subject and are enthusiastic this will automatically lead to children somehow learning.

In order to challenge many of these assumptions, Beth used what she called 'strategic challenges based on the creation of friction'. But this, she admitted, had to be done sensitively and subtly, otherwise there might be a reaction leading some students to either, 'dig in their heels or simply play the game,' the latter being especially difficult to counteract because 'it was often hidden and

conspiratorial' with students 'accepting your ideas at face value in order to curry favour but keeping their deeper beliefs in tact.'

Beth was then asked whether such an approach might lead to a sort of cloning similar to that used by her mentor Mick Turk in his PGCE course? She replied,

No, working in this way does not mean cloning, because I'm aware of the need for difference I just work at the vision, the underlying principles which are mostly mainstream and well within the National Curriculum. This vision is in the long term far important than the technical skills, which can in general be learned through practice and application, but the deeper motives and understandings they have to be developed over time and that's where we are important. My job is try to close the gap between their beliefs - their real beliefs - and their practice. When the gap is wide there is a lot of dissonance and that's where I work, in that tunnel - in that black box of ideas, values and principles.

She then went on to enumerate these,

A sense of direction is important, a sort of 'knowing where you're going' in the classroom, also an ability to choose the moment, the optimum point so that quality learning can take place. I also want them to see mathematics as creative and full of energy, a subject that has moral choices built into it. Working with children's understandings and misconceptions and developing a basic empathy with them as learners also central to my vision. Once these are in place then the technical skills will develop alongside, but you have to have a position, it is the hidden aspect of teaching, but in the end it, makes maths something special in the classroom.

Two examples will be used to illustrate the sorts of strategies Beth used in her attempt to 're-orientate' the thinking and practice of her students. The first is taken from a story she enumerated during an interview. In essence it describes the highly personalised nature of her practice as well as giving the reader an insight into the way she challenges her students in terms of their tacit beliefs and ideas. The second is taken from participant observation data detailing a session entitled: 'Investigations: a four minute workshop.'

a. Mark's story

I - Can you describe to me the way you try to 're-orientate' your students?

B - The best way of explaining it, apart from you seeing a typical session, is through my relationship with students. Last year I had a student called Mark, and I could see right from the start of the course that he was a performer. Mark was very charismatic and felt that his pupils would automatically love and learn the subject just by coming into contact with him. Don't get me wrong he was very good in many respects, he could control classes and his maths lessons were well delivered and nicely packaged. But that isn't enough, so after one session in the first

week back in December I mentioned to him that I thought he was a performer. He suddenly became very defensive which was good because I had created dissonance in his mind, I had planted the seed. Later in the year he kept reminding me of the discussion and slowly through long discussions about maths and children, as well as giving him Mantegna's book to read, he slowly began to see that his style and underlying philosophy was flawed because he was only reaching certain children and that many could not follow and were not learning effectively. Slowly but surely after many discussions and arguments, he began to alter his style and to change his understandings. Eventually, his teaching style changed too, he stopped being so didactic and began to offer different types of task. It was a long process though, but it shows the importance of creating dissonance and challenging them to re-think their views.

b. The four minute workshop

In the observed 'four minute workshop' session set in the maths subject base, a series of exercises and tasks were constructed in line with the National Curriculum theme of 'investigations.' Groups of students could spend no longer than four minutes on each task but had to complete it fully. A rota was drawn up and in groups of five, the students were unleashed. As the workshop proceeded it became clear that each group gradually became more competitive and vied for the Beth's help, throughout she acted as a typical teacher trying to balance her commitment to each group.

At the end of the session the students had to mark the work of the other groups using the levels of attainment set out in the National Curriculum document. Near the end, a discussion ensued about the nature of the tasks and the problems and misconceptions that children might encounter. Some felt that the tasks were 'too easy' while others claimed that many might have problems reading the instructions. One commented that 'this couldn't have been a real lesson because there was no input from the teacher apart from help and guidance at a personal level,' while another felt that many of the tasks 'were not obviously mathematical and just required common sense, particularly the one associated with estimation and the area of Berkeley Square'. He continued, 'it wasn't real maths, it was just guess work, surely kids would guess and come up with a ridiculous number. I know there were guidelines but kids are kids.' Beth took up the challenge and illustrated her comments with findings from research into the investigative method. She explained that research had found that 'estimation is an important real life skill and brought maths into the real world' and pointed to a study which indicated that children were often turned on to maths through estimation. She then gave the example of the division of a pizza and how that could be turned into an exercise in estimation based on fractions and percentages.

Setting an Example

This practical principle was in evidence throughout both the interviews and the observations. It stemmed from a desire on Beth's part to 'set a good example for students' in can be understood on a number of levels. First, the principle was also tied up with other generalised notions concerning the need to work with students at the level of practicality. This did not mean handing out 'model lessons' but instead saw Beth use a series of strategies that allowed them to gain access to ideas for teaching while at the same time experiencing them as learners. Of crucial import here was her role as the teacher/tutor because as she put it,

I am a role model and I have to set an example. This approach is crucial in the first term because unless the students have some effective, usable models of good practice they will quickly revert to type and rely on their own personal models which may not be appropriate and could lead to some disastrous results. Addressing their understandings are also important but stories for their own sake are pointless, I'm interested in action and how stories, models or anecdotes change practice. That's why these exemplars are important.

Second, the principle was bound up with Beth's own experience. She believed it was vital that student teachers should have a role model to work from so she was always mindful that her own practice should be exemplary and highly professional because, as she put it, 'my demeanour is just as important as the substance my sessions.' The centrality of this principle is underlined in the following comment,

If our aim is to create reflective, thoughtful teachers then we must attend to their learning through our practice. The quality of my teaching is a reflection of my sense of professionalism and it must always come first. Many of my sessions are in fact role plays where I set up the room to model a classroom. I pretend that they are a typical year eight or ten group and they have to react accordingly. They slip into role very easily now because they are used to it. In fact that's the way that I deal with classroom management issues, not in a separate way but I get them to experience it within a lesson, the importance of desk or table order, student sitting arrangements and so on. As I've said, I don't have discreet sessions on classroom management but instead I'm stranding all the time, it's more subtle than in some subject areas. I'm pulling the strands of the course together in sessions. In my seminars I also think carefully about questions and names and involvement. Sometimes, I even think out loud to show them why I'm taking certain decisions. It all adds up in the end.

Third, 'setting an example' meant helping the students to develop a professional vocabulary. The National Curriculum had created a new set of terms, some generic and other subject specific, which she claimed, 'had to be learned and internalised. Programmes of study; attainment targets, levels of attainment etc. all need to be understood in context.' Alongside this Beth believed that student teachers should also be helped to develop a language of practice that can inform their

planning, their classroom management, their questioning, the task setting and so on. She postulated thus:

My seminars are about wider issues not just about the teaching of maths. They are about clueing them (the students) up to deal with assessment, planning and the National Curriculum. Assessment, for example, is not just about ticking boxes its about knowing the difference between formative and summative approaches, its about diagnostic assessment and so on. They also need a language so they can help them understand teaching and learning as well as one that can help them to reflect.

These components of Beth's principle of 'setting an example' are best understood with reference to an observed session on probability. The detailed account which follows is an edited version of full field notes taken while acting as a participant observer.

Understanding probability

In this session Beth aimed to get her students to understand the concept of probability as it applied to a typical lesson at Key Stage Three in the National Curriculum. Before the session she informed me that often students have a 'very skewed idea of probability' with some fearing its inaccuracy while others seeing it as straightforward, and based on a series of formulaic steps. She had four specific goals for the session: first to challenge their views on probability as a mathematical concept; second to make them think about the ways children might learn and apply the concept; third to give them a living example of practice in the area; and finally, to show them, by example what good practice in relation to this topic actually looks like.

To give the session maximum effect Beth wanted to get the students into role as year eight children as quickly as possible but without mentioning the purpose. 'I want them to be able to switch from student mode to teacher mode to pupil mode freely and without notice,' she claimed 'because this helps me to operate at different levels and to shift levels without having to think and explain. They have to learn to read the situation, and sessions such as these not only helps their thinking but also develops, indirectly, their professional judgement.'

The start of the lesson was therefore crucial. Beth had had already set up the room so that it resembled a classroom. The tables were placed in groups of three, so that six students could comfortably work together. All the tables were arranged so that the students were sitting to the

front of the class, because Beth had told the group that she was going to work from the front 'a fair bit, explaining and questioning.'

The students entered and immediately realised the need to move into role. Beth was busy at the front of the class sifting through large numbers of coloured bottle tops and carefully placing them in groups of 20. The students began to get inquisitive but Beth gave them only a brief hint as to the expectations. This, she explained later, was a tactic they needed to use in schools in order to build up a sense of expectation and help generate enthusiasm.

The lesson began with Beth pretending to do a recap. on the previous lesson, the group responded positively and gave sensible answers; ones that might typically come from a group of year 8 children. For instance:

B - Last week you were trying to find out about big and small numbers. Can you think back to the lesson What were you asked to find out?

ST1: Whether numbers came up regularly or not?

ST2: 2 was the smallest and 3 the biggest

ST3: I thought 7 was the biggest because you can make it go different ways $3+4$; $4+3$; $6+7$; $1+6$ and so on

ST4: We also found out what happened if the same number added up differently

Beth summarised and then told them they were going to play a game to see if the questions they had been asking were accurate. On the Overhead projector she put up a diagram of a river with channelled numbers.

B - Right year eight, you are going to play a game against me. The point of the game is that there are 20 people trying to cross the river; you can put you counters anywhere on the paths; you have to guess where to put the counters so they stand the best chance of crossing the river. Remember you have to try to beat me.

She then placed her counters at intervals along the paths and each student had a turn at beating her. Sometimes she placed more counters on particular squares in order to make it more difficult for her to be beaten. The students soon realised this but continued to get involved as if they were children. A record of the numbers was kept to give the group an idea of the concept of distribution, which was then explained. After a few rounds the game was halted and Beth distributed a set of boards and counters identical to the one she had been using on the overhead projector. Again she spelled out the rules using an overhead transparency.

B - What I want from the groups is the best distribution of numbers possible and the reasons why - so that's your task - you have half an hour and then we'll come together to discuss the results. I will wander around and help anyone who needs it.

The game then got underway and Beth discussed various issues with each group in turn. Group one for instance, immediately posited that numbers 20 and 7 would be the best but could not agree on the reasons. Beth slipped out of role briefly and asked the group a pedagogical question: how might they get a group of children to resolve the issue if they were teaching them?

Soon another group finished and began to ask questions out of role, for example,

What if a group finishes early?

What if some in the group are disaffected?

What if some kids can't understand the game?

What about noise levels?

Beth tried to give provide answers to such questions but always within the context of the classroom. This advice was suggestive not prescriptive, and the students were encouraged to come up with their own answers using what they had seen and experienced in the classroom.

In the feedback session to the lesson, symmetrical numbers, such as 2, 12 and 20, were felt to be the best but others argued for 7s, as a result a long discussion developed based on statistical laws, the students were now clearly out of role. At the end of the feedback session, one student, a Canadian with a PhD in mathematics, said to the group 'thank you for allowing me to question my own understandings of my knowledge of probability'. Afterwards Beth communicated to me that she thought this comment was 'a fitting testimony to the success of the session.'

The second part of the morning was given over to an exploration of some of the implications of using such an approach in a typical classroom. The discussion centred mainly on pedagogical issues, particularly classroom management and control. Concerns about the noise levels that might be generated by such a lesson were widespread as was the use of appropriate questions and answers and the giving of instructions. The introduction was analysed closely as was the spread of questioning and the resources. Finally, the group discussed the learning process and the implications of the method in terms of common misconceptions and errors. At one point the

group explored, in detail, the conceptual difference between probability and chance, and the confusion this might cause while using such an approach.

In our discussion after the session, Beth claimed that she had been pleased with the reaction of the students in that they had begun to see that 'even an apparently straightforward concept such as probability was a more complex than they imagined.' She also felt she was giving them a 'principled position to work from' and that the session 'had provided a concrete example which they could use in their teaching and they would hopefully now realise that such lessons are possible.'

At another level Beth stressed that the session had been more than a model lesson because a major part of it had been given over to an exploration of the pedagogical implications. She also claimed that in teasing out the students' own implicit theories about probability, she was extending their subject knowledge and understanding. As far as children's learning was concerned, the session reiterated the importance of focusing on learning in lessons as well as giving the students what Beth called 'an insight into constructivist forms of learning.' On the negative side, she felt that she 'hadn't fully got to grips with the problem of meta-cognition whereby the students were challenging themselves', this, she speculated, would come later as they became more confident and experienced in the classroom. Finally, she was a little anxious about the two 'non-mathematicians in the group, who at times appeared to be on the periphery of things.'

The noteworthy point about the session was the way it illustrated the global nature of Beth's thinking and practice. Her approach throughout was multi-layered and appeared to be consistent with her notion of 'stranding,' whereby a number of different principles were approached within a singular context. In the session she was addressing the students' latent subject understandings, their pedagogical beliefs, their ability to reflect and consider new options and approaches, as well as being an exemplar for use in their practice.

Sharing Practice

Beth's final practical principle is one which is very close to her heart: a deeply held belief in power of collaborative learning and the sharing of practice to bring about professional learning. This principle has a long lineage and can be traced back to her undergraduate days when she worked as a counsellor with 'Encounter Groups', to her career as a classroom teacher, and to her time as a LEA advisor and curriculum consultant. She commented,

I'm steeped in a collaborative culture, it's my natural way of working, it's a part of me that's reflected in all my work. When people say they have changed and shifted their practice to take into account of others or they have become more collaborative - I'm always amazed - mine has been like that for the best part of two decades, it's always there, and always constant. I work the same way with students, teachers, overseas people, MEd. whatever, it's the same.

Moreover, Beth believed this principle was vital to the long term professional development of her students. 'They have chosen to enter a complex and sometimes stressful professional world' she commented, 'one where working collaboratively and sharing understandings and ideas with others is central' and as she claimed 'a basic principle of being a teacher.' Every opportunity was therefore taken to create situations where collaborative ways of working could be introduced and experienced. In the observed sessions, the students rarely worked alone; in fact they often planned collaboratively and worked together in pairs or in larger groups. Assignments were organised so that students could share ideas and the Friday 'critical incident' sessions, despite being based on personal anecdotes and events, always ended up with a collective discussion and a sharing of ideas, practices and solutions. Even during the school based elements of the course, the maths subject section had retained the principle of 'paired working' during both the Autumn and Spring term placements. In explaining her position Beth came up with the following statement,

Collaborative working is about pooling energy, talent and resources. It's about sharing ideas and expertise. It's about being creative through others and it's about fostering a way of working that is essential to schools these days. I've always worked in groups until I came here (the School of Education), it's too autonomous here, everyone skuttles off to do their own thing. There's no collaborative culture, that's why I feel isolated. But the Friday sessions are aimed at helping them to share and to connect with each other. It's there that I do a lot of noticing and the 'noticing paradigm' comes in very useful. It is amazing how common many of their significant events are, and how in reality they are sharing common experiences despite being in a variety of different schools. I suppose it points to the constancy of concerns that student teachers have and they just manifest themselves in different guises.

During an observation of a typical Friday session these principles became apparent. Colin, a mature student explained his 'critical incident'. He had found working in small groups with children quite difficult and how one particular pupil had exhibited problems understanding the decimal point. He recounted that he was sitting next to the girl and trying many different tactics to help her understand the concept but after a while he felt 'he simply wasn't getting anywhere and other children were demanding attention. The girl just couldn't understand it.' So in desperation he began writing out the problems long hand and then gave her some model answers just as an experiment as well as buying him time to see other pupils. Suddenly, he announced, the child said she saw the pattern and began to answer the questions as well as anyone else in the group. This led to a discussion about the incident and its significance in terms of teaching and learning.

Some students thought it was just luck, others felt it was due to the questions being phrased in long hand which was obviously the key to her understanding. Beth agreed and reminded them of the work they had done on cognitive style. She also stressed the intuitive nature of teaching and the importance of experimenting and being tenacious. She said 'look, Colin could have left the girl and given up but he didn't, he continued and by chance he unlocked her understanding....what was good about this incident was that it highlighted the issue of knowing - how do we know and how do we come to know things? And how can we be sure that someone understands or fails to understand? Remember there are no ceilings to children's learning; the ceilings are often of our own making.'

Beth's belief in the sharing of practice went beyond collaborative ways of working. She was also an enthusiastic supporter of the use of experienced teachers' craft knowledge as a professional learning tool. In a session entitled: 'The complexities of planning' we get a glimpse of the way an experienced teacher's planning practices are used explore the intricacies of lesson preparation.

The complexities of planning

In this session Beth used case material derived from an interview with an experienced Head of maths, regarding his planning for a specific lesson. The session began with Beth asking the group about their lesson planning in general and the sorts planning they had encountered in their schools. Most recognised the importance of planning but few had real models to work from,

because, as one student put it, 'I'd have to be a mind reader to get at my AT's planning because as far as I can see experienced teachers don't appear to plan.'

At the start of the session, Beth told the group that the aim of the session was 'to help you understand the complexity of thinking that goes into every lesson plan.' After the session had finished Beth told me that she did the session this particular way because 'too many students think that teaching is an unplanned extemporized performance that requires some knowledge of maths, some enthusiasm, good class control and some interesting teaching tactics. The purpose of this session was to get them beyond this idea and to help them see the complexities that lie behind the apparent reality.'

At the outset the group were given an A4 photocopy taken from the teacher's planning diary; there was the usual two line outline for each of the day's lessons. Many of the students recognised this and commented that experienced teachers didn't need to plan because they knew exactly what they were going to do. Beth then asked them whether they felt there might be more to it than that, and what they thought might lie below the surface of the two line entry.

A detailed transcript of the teacher's planning thoughts was then distributed. Its content was a direct contrast to both the summary in the diary and the predominantly descriptive lesson plans the students had begun to produce for themselves. The amount of detail amazed the group and Beth asked them to analyse the data and look for patterns within it.

The groups worked intensely and after about twenty minutes the feedback session began. The students detected the characteristics of the lesson, the teaching and learning strategies the teacher intended to use, the direction of the lesson and its ultimate goals, the way it fed into previous work, the movement from the initial introduction to the presentation and feedback segments, and the representation the lesson and the task. The groups were also astonished at the depth of the teacher's knowledge concerning individual pupils, how this was woven into the tapestry of the plan, and finally the ways in which he tailored material to their needs and ability levels.

Beth carefully noted these points on the whiteboard and slowly began to build up a detailed picture of the essential components of an effective lesson plan. A discussion then arose in which the level of contextual knowledge and its use in planning was the main focus. Many of the

students were anxious to know how they could get detailed knowledge of individual pupils given they had very little direct experience of teaching them. Additionally, they were fascinated by the way the teacher in the case study anticipated certain events and the way he planned for a variety of contingencies. They were surprised, however, by the apparent lack of timings; Beth explained that experienced teachers often relied on their intuition in this respect but they, as beginning teachers, should be specific so that the lesson moved smoothly.

During our brief discussion after the session Beth commented on these and a number of other issues.

They have a naive connection with planning and teaching at the moment. They can't quite see the learners and they can't fully see the complexities of teaching and planning. This transcript gave them an indication of what can be done and how to orientate their planing so that it focuses on the pupils rather than the teacher even though it looks teacher driven, it was far from it. It's also helpful in getting them to understand the characteristics of planning and what ingredients make up a good plan. Too often they spend hours and hours planning the superficial things, this was a real eye opener for them. It also allowed them to share practice with a fellow professional and to get on the inside of his thinking.

In the second half of the session the group began to order the elements they had come up with in first part of the morning, in order to create a structure for their planning. Aims and goals were discussed and their importance was explained; introductions and conclusions were stressed and each group was given the task of devising a short introduction to a lesson they were going to teach the following week.

Beth then gave the students some pro formas based on similar approaches. These were offered as possible alternatives but as Beth put it 'we don't insist on one system or type of planning, it's up to you, these are guides to help you and are based on different structures.' Finally, the session was wrapped up with a short discussion relating to evaluation and its role in lesson planning and teaching. This was done very superficially as it was to form the basis to the next session. Before the students left, they were given guidelines on the construction of interview schedules as a way of accessing the 'hidden world of teachers' planning' as Beth put it. In addition, they were also given the complete transcripts of the teacher's planning which had formed the core of the session.

At the end of the session Beth commented that she hoped they (the students) had understood that planning is often the end product of what she called the

mulling process whereby ideas, thoughts, resources, strategies are creatively thought through. This pondering lets ideas emerge but it takes time and too many student teachers want to rush headlong it with either lessons that are too complex or ones that are too simple. I hope this session gave them food for thought.

Again in this session there was ample evidence of Beth's practical principles at work. Firstly, she encouraged her students to explore the nature of planning both in terms of their own thinking and the thinking of their mentors. Secondly, she was attempting to inculcate a technical vocabulary; one that would enable her students not only to begin to create their own lesson plans but also be able to question their mentors about their planning and preparation.

Thirdly, she encouraged her students to begin to question their own preconceptions of teaching and the role planning played in the process. This was linked to an attempt to stimulate her students to think about lesson planning as a design process; one that was fundamental in the use and creation of professional knowledge for teaching. Her presentation of planning and preparation as a considered act rather than a spontaneous operation, was also vital in her attempt to get her students to see teaching as a deliberate process not an extemporaneous performance. Finally, she tried to help the students see the fact that planning was tied inextricably to the cycle of reflection, she commented thus,

by showing them the extract from the teacher's planning book I was trying to help them understand that planning is the foundation, then you teach and evaluate, and then plan again and so on - it's all cyclical and they have to get into this routine otherwise they won't produce long term learning in the kids and won't learn themselves.

CHAPTER FIVE

EDWARD

Biographical synopsis

Edward was born into a military family in mid-Wales in 1953. His father was a sergeant in the Royal Engineers and as a result Edward spent much of his early life living in Army Camps both in the United Kingdom and in Germany. He and his brother had a conventional primary education but in order to minimise the disruption to their education, both were sent to a minor boarding school in the South East of England. Despite disliking the long periods spent away from his family, Edward enjoyed the boarding experience and soon developed an interest in electronics (a hobby that was eventually lead to an affection for physics).

At the age of sixteen Edward left the school and entered the sixth form of a school outside Cardiff and lived with his parents who were now permanently stationed in the area. After completing his 'A' levels he gained a place at the University of Salford to study electronics. After graduation he was invited to work on a project investigating the military value of semi-conductors as well as studying for a doctorate; he never completed his thesis and left in 1974 to take up a post as a temporary teacher of science at a local comprehensive school. Although untrained, Edward adapted well and decided to make teaching his career.

By 1980 he had moved to Bristol where he was head of science at Franton High school. It was there he first began to take an interest in Initial Teacher Education being made an Associate Tutor to a number of science students from the University of Bristol in 1984. He left Franton in 1988 to become a full-time science tutor on the PGCE course at the University of East Anglia; a year later he returned to Bristol to take up an identical post at the School of Education. From 1992-6 Edward was co-director of the PGCE course with special responsibility for school relationships and is now also involved in the training of new university lecturers.

IMAGES OF SUBJECT

A thorough combing of the transcripts revealed two images which explain Edward's relationship with his subject. The first deserves emphasis because it is expressed in terms of great personal affection; physics he affirmed was 'the most beautiful of subjects.' The second image entitled: 'a subject for all seasons' was more wide ranging and related to the subject in terms of its usability and utility for both children and adults.

A beautiful and enabling subject

In order to understand the first image an appropriate place to start is at the end of a lengthy discussion about the nature of physics and the role it played in Edward's life history. During a sequence of exchanges about his personal memories of being taught at school, he picked out one moment early in his first year at boarding school that made him realise, for the first time, that his relationship with physics would always be something close to a 'love affair'; one that would keep him 'interested and excited for the rest of his life.'

Most lessons were transient, in that they came and went and I thought nothing more of them. In fact looking back I can hardly distinguish one from the other. But physics - I just loved it. It was perfect and has remained that way ever since. Even over time I still find something in it that sets my pulse racing, the trouble is I still can't fully explain why - I suppose the closest I can come is the fact that I discovered it rather than the other way around. It was and remains the most beautiful of subjects and it has had a pervasive influence on so many things in both my personal and professional life.

The passage of time has done little to diminish the affection but has done much to buttress the image in terms of its distinct role in the school curriculum. Now Edward sees it as an enabling subject, one that helps people to 'decode the world around them.' To fully understand this one has to delve deep into his biography. At school, his discovery occurred at the age of eleven when he began to read the textbook he had been given. It appeared to feed an innate interest but also, and perhaps more importantly, it fed directly into his new hobby - electronics. The making of transmitters and the playing with valves and 'other boyish things' as he described them 'became even more intense as physics began to explain the practical discoveries I was making.'

This image of physics was a far cry from the traditional approach taken by his teachers, however, he was keen to stress that 'despite the teaching which looking back was as dry as dust, I still knew there was more to it because it was doing so much for me. Since becoming a teacher and a

PGCE tutor my ideas have obviously changed but I still think that the roots of my thoughts and feelings regarding physics were planted then...physics is still a 'flying circus' full of ideas, surprises, and excitements.'

At eleven Edward was forced to attend boarding school because of his father's military movements. Throughout his time at the school Edward did not consider himself to be very bright. He struggled to gain five 'O' levels with low grades - except in physics. This one success he put down to the teacher whom he still respected despite the fact that he now he realised his teaching methods were 'very poor...but the thing he did well was to enthuse us - even the smallest things, he would get excited over. He lived and breathed the subject and although he stuck close to a traditional format just being in his presence gave me a lift.' Edward was also keen to stress his own personal involvement with the subject,

From the age of about eleven, I loved reading about physics as well as doing it. The text book started it even though looking back it was traditional and very dry - it just opened a window on the world and I was engrossed in it; I still have a copy in fact - just as a memento you understand. The ideas and concepts were all presented in an abstract form but they were still wonderful. It's funny I hated similar books in history and geography. But the physics one, it just appealed and I devoured everything I could about physics both in and out of the classroom because it just connected with me and my interests.

At 'A' level Edward did maths, physics and chemistry and was lucky to have the same inspirational teacher to take him through, and despite being less than confident about applying to university, he was eventually persuaded and gained a place to read electronics at Salford.

A subject for all seasons

The second image is linked to Edward's time at university and as a teacher. It gains potency from a series of experiences which forced Edward to re-think the subject and its relationship to teaching and learning. The following extract gives us a flavour of this image and its importance in Edward's' current thinking; the rest of the section will try to place the ideas in context by tracking the particular events and experiences that gave rise to it.

My image of physics now is one which sees it as in touch with reality and yet maintaining an element of the unknown. It underpins everything we need to know about our natural world and is so close to people's understanding of their lives - even though many, sorry most, don't realise this. It is not an abstract subject, a hard subject, it is real and is there to help people to solve and understand real problems. It is one of the most useful subjects of all - it is a subject for all

seasons. The trouble is we still haven't managed to get rid of the old hard image. My purpose now is to get student teachers and children to see simplicity behind the veil of complexity.

So how did this new and apparently more exciting image emerge?

At Salford university, Edward felt the course of study was in many ways 'an extension of school, although we did practicals, the physics we did was still abstract and based on a traditional conception even though we were studying electronics. The teaching and course structure was traditional, but I kept close to the subject. Looking back I can now work it out all out - the abstractness, the conceptual problem solving and the mathematical underpinning - it was all based on the academic version of physics; one which predominated and still does.'

After gaining a good degree he was asked to work on a research project relating to atomic collisions which took him closer to his physics than ever before. He enjoyed university life and decided to take up the offer which included doing doctoral research, however, the deeper he delved into the research the more disillusioned he became. The subject and its application remained restrictive and by the end of the three years he had come nowhere near finishing his thesis. He was offered a further extension but he was becoming disillusioned with the research enjoyment of university life had waned. However, a new era was opening up in terms of his relationship with his subject.

A chance meeting near the end of his research period proved to be a turning point. A group of friends worked in a local comprehensive school near Manchester and one mentioned that the school needed a temporary physics teacher. Edward laughed off the idea initially but the opportunity became attractive as he 'engaged more and more with the idea.' He was interviewed and took the post despite having no training and very little idea of how to teach a class, nevertheless, he felt his 'self confidence and personality' would get him through.

His first lessons he remembered as being disorganised and difficult. His methodology, he confessed, was a 'a rag bag of borrowed ideas and approaches gleaned from his experience as pupil being taught physics and from watching and listening to my new colleagues.' Gradually, he improved although he admitted 'it was all based on serendipity'. His techniques were 'based on mixture of enthusiasm combined with knowledge and humour - in fact very much like my favourite teacher at school. I got through and was regarded by the end of the year as a fairly

successful teacher. I managed classes reasonably well and was popular, although all I was really doing was passing the same view of physics that I had received - but remember I had nothing to challenge it.' During this period, in the late 1970s and early 1980s the Nuffield Science project was coming on stream and many schools were beginning to take on board the idea of integrated science and new pedagogical approaches. Edward remembered coming into contact with the ideas for the first time on an in-service day,

It was the sort of physics you could play with; it related to real events and phenomenon It was not based on a stylised problem which physics then abstractly solved. It made sense to me and for the first time I realised that the subject could be taught and understood differently; that my own love affair with the subject could be extended to all kids and that the cold approach could be removed and replaced with a lively, life enhancing subject, full of surprises and excitement and relevance.

As the ideas permeated the school and the department Edward began to see that old physics and the way it was taught eventually turned children off, even if it was taught with enthusiasm and skill, 'simply because in the end it would be seen as difficult and mathematical and irrelevant. It would then continue being taught only to an elite few - those who were initiated.' For Edward this was 'the spurious camouflage..... that covered the subject' and one that needed to be 'stripped away if the subject was to thrive and become genuinely open to all.' Physics now became a tool to help all children learn about and understand their world. No longer, he enthused, 'would children be condemned to forget it and label it as useless, from then on for me it was to physics for everyone.'

The liberating aspect of physics can be seen in the way that he presents the subject to his students many of whom enter the PGCE course with 'all the old abstract ideas associated with the subject.' In his subject work these images can be found at almost every turn. In his presentations, in the tasks that are set, in his tutorial work and in the way he models his own teaching. His concern is that 'student teachers enter with this elite view and that unless they are challenged then they will continue to present the subject in its academic format and thereby not only do children a great disservice but also the damage what remains for me a rich, simple and relevant subject.'

IMAGES OF TEACHING AND LEARNING

Edward's images of teaching and learning are multidimensional; a composite of different experiences, understandings and beliefs. In many ways they are hard to disentangle from his images of physics as presented earlier, however, when analysed they do form a coherent story.

Making meaning together

At the heart of his image the term 'the making of meaning' resonates. This he believes can only come about if learning is negotiated with others - a community which includes teachers, pupils, parents, academics and others. The following dialogue exemplifies this image:

E - My image of teaching and learning although essentially eclectic in terms of style is underpinned by a series of fundamental principles that run through teaching like veins crossing over muscle. What is essential is that the learner, whoever they are - pupil, adult student, teacher, whatever - must make contact with the subject and the teacher; basically there must be a point of convergence either with the material, the problem the teacher whatever. This process can only start from the image of 'getting to know what you already know.' I know that sounds complicated but if I can digress for a moment - I mean we all have multiple ways of making meaning from the simplest things we do, driving around a city within an A to Z, for example, we make contact with what we know, road patterns, geography, reading, observing etc. - it's only when you recognise what you know and bring it to the forefront of your thinking can you begin to be flexible when approaching something new. That is the starting point, the key image 'getting to know what you already know.' We can put fancy phrases on it like meta-cognition but the more we do that the more we risk taking learning into the darker zones by making it more complex and frightening. Just imagine you're trying to explain volume to kids and you start asking them to use their meta-cognition for a moment - bloody stupid. Instead you help them to create meaning through the task you set or through your explanation or whatever.

I - How important is the teacher in this process of meaning making?

E - Very important. We are not invisible and I would hate that. Some of the worst lessons I have witnessed are those where the teacher is lost and learning is on automatic pilot. The teacher is important but it's the nature of the intervention and the structure that is vital.

I - How would you describe the sort of role the teacher plays in this process?

E - The image of the teacher that emerges from this is one who is an orchestrator, a conductor of the group, it is their job to steer the learning to keep it on track to bring in the right questions and provide the guidance. Just as a conductor would do with an orchestra - ensuring the right balance, keeping the music moving and making sure that there is rhythm and harmony in the music as in the learning.

Providing a deepening of context

A major strand in Edward's thinking about teaching and learning can be seen in his second guiding image: that of providing learners with a 'deepening of context'. It was during the 1980s that this image of teaching and learning began to crystallize. He recalled that in his early years in the classroom he didn't have this notion. He was instead teaching the old curriculum but in an energetic and enthusiastic way. 'Looking back many of the children enjoyed my lessons then and I'm sure got a lot out of them but I also think I lost more than I gained because I didn't have this clear conception and because I was inexperienced.' The image finds its clearest formulation in the following extract,

E - They (student teachers) need to have a set of principles to guide their work in the classroom. They are also learners and too often we forget that just because they are adults. I took a long time to get the necessary foundations, I see my job as giving the students such a foundation at twice or even three times the speed. I give them that deepening of context that is so important.'

I - What do you mean by that phrase -a deepening of context.?'

E - It's all about giving them a rich experience; one in which the context of their learning is so important. The department or faculty culture, the ideas and ways of working at the university, the school culture and their relationship to the subject. I see myself as providing a deepening of understanding about the subject and teaching and learning. Otherwise without that deepening they are like kids learning physics the old way, finding some parts interesting but overall put off by the lack of relevance and context.

Almost a decade before moving into PGCE work, Edward applied for and gained a post at a suburban school on the edge of Bristol; it was here that he became immersed in the new ideas that had permeated science teaching emanating from the Nuffield project. The move also coincided with a change within himself; he now felt fully committed to teaching as a vocation and became highly politicised both in his reaction to educational policy and in a broad social sense. Within months he claimed he could now see that 'learning and teaching were embedded acts - nested in the culture of schools, classrooms, friendships and families.' He went on,

The 1980s were an odyssey for me. I became active in the Union and in the science department, I began to realise that teaching science wasn't simply about being interesting and having some good anecdotes it was about a principled way of working. I became an Associate Tutor at the university of Bristol and began to take part in seminars and saw how new materials and conceptions of teaching science actually worked. I became critical of my own practice and became interested in cognitive style and how thinking in children needed to be stimulated. I learned to decode the subject and apply new active pedagogies in the classroom. From then on teaching wasn't about delivering, however interesting that might be, it was about allowing

children to learn about the subject by studying it as if they were scientists. I became conscious of the need to deepen the learning context; it was something that was and still is central to my thinking and practice.

These ideas were further advanced in 1986 when Edward enrolled for an MEd in science education at the University of Bristol; this was he claimed 'his first real training.' For the first time he came into contact with various theoretical positions and began to read and think about a range of issues. 'I learned to understand the more subtle parts of the teaching and learning terrain,' he said. These new ideas also cross-fertilised with his role as an Associate Tutor (AT) to a number of student teachers and he began to see his career moving in that direction rather than through a more conventional school based route.

In 1989 he applied for temporary post as a PGCE tutor at the University of East Anglia (UEA) and entered teacher education with clear objectives in mind. He said his career move was a 'natural extension of everything that had been happening to me during the previous eight years or so, but don't get me wrong it wasn't planned in a 'careery' sort way, it was just the next step.' He was also confident that he could translate his ideas on teaching and learning into a language that student teachers would find 'compelling and useful.'

IMAGES OF STUDENTS

Fragile learners

Edward's first contact with student teachers at the UEA shook his confidence to its roots. Being a school based AT and having responsibility for students as a PGCE tutor, he soon realised 'were not two sides of the same coin'. He was confident in his ability as a teacher but soon appreciated he was a novice when it came to understanding student teachers and preparing them for the profession. He commented 'I entered the job in a similar way as I entered teaching - with no training and very little support. It seems that to be a PGCE tutor all that was required was to have been a successful and innovative teacher plus a higher degree and some contact with students - that wasn't enough by any stretch of the imagination.'

A crucial anchor in those early days at UEA was his craft knowledge. The main problem that appeared was 'trying to see student teachers as the learners rather than the children.' Inevitably he found himself teaching children at a distance. 'I was giving them my knowledge, my way of

doing things backed up by some of my readings and some examples. I thought that was all I had to do and they would automatically respond and go into schools with the same ideas and enthusiasm because it was, for me, so obvious, this was the best way to teach.' What he failed to take into account, he said, was that student teachers are 'fragile learners and have no real understanding of how to teach or how children learn. They are frightened of the basics let alone the complexities.' This was elaborated further:

I - Could you explain a little more by what you mean when you say fragile learners?

E - They are like children, they have all sorts of embedded ideas about teaching stretching back years just as kids have about science. But they are the teachers of the future and they need to be nurtured through the year, helped, encouraged, fed and watered and occasionally pruned.'

For the first term Edward simply followed a curriculum that was left for him and gave his students various suggestions for practice underpinned by his own interpretation of resource based learning and Nuffield science. He was soon, by his own admission 'sloganising' and telling the students about the need to be progressive in their thinking, 'the ultimate contradiction,' he said, 'I was no better than all those academics who lectured on the sociology and psychology of education and at the same time told students to be child centred.'

Square pegs

A number of times during the interviews, Edward referred to students as 'square pegs trying to fit into round holes.' This image was further clarified when he went on to say that, 'some are less square than others but in that first year at UEA I began to see the problem but I had no solution only my knowledge and practice as a teacher to draw on. Now I see my role as developing their potential so eventually they fit - not easily you understand because I think there needs to be some friction so they can be shaped and smoothed'.

After a year at UEA Edward returned to Bristol as a science tutor at the School of Education in Bristol. Gradually, his ideas about student teachers began to develop and form into a more coherent image. They were now viewed as 'insecure and yet with a wealth of knowledge about teaching - some of which might be useful and some not.' He is also admitted to 'not having the answers' and that learning to teach 'said as much about the tutor as it did about the students.' At a foundational level he now saw students as 'co-learners' and felt he garnered as much about teaching from them as they do from him.'

Experience had also taught him how to use a number of strategies for 'shaping and smoothing' their learning, so they fit more easily into classrooms,' however, this process, 'took time and success could be elusive in the short term.' Edward's 'bottom line', as he called it, was that his students 'must be competent to go into a classroom and teach' but at a deeper level he saw himself as 'laying down roots in their thinking and practice that will have long lasting effect. Often it means challenging their ideas about physics, science, teaching and learning, but once the foundations are laid then many of the ideas will come to fruition later in their careers; some, the better ones, the ones who are less square and more rounded, often find themselves ahead of some of the mentors who work with them in schools.'

IMAGES OF SITUATION

Two images are suggestive of Edward's predicament as a PGCE tutor within the higher education: the first is grounded in his experience at the University of East Anglia and continued at Bristol and is inferred by the phrase 'the whole situation for a PGCE tutor is paradoxical.' The second image is captured in the term 'isolated individuality.'

Paradoxical

Edward recalled with ease his first impressions of being a tutor when he joined the staff at UEA

'It was strange entering a university as a tutor at UEA because even though I had done my MEd - I felt I was still a student. As an MEd student at Bristol I listened to the lecturers some of whom were erudite while others were and still are to my knowledge downright diabolical - but I listened made notes asked some questions but I was being taught about education through fairly traditional means. When I joined the staff at UEA the same thing struck me. In fact it's a paradox that goes right to the heart of educating teachers in a university - how do you train people for a professional environment in an institution which is by tradition and practice overwhelmingly academic?

This opening statement is an important one and carries a number of messages within it about Edward's thinking regarding the nature of professional training and the situation successful school teachers often find themselves in when they enter academia. Edward still considered himself lucky in many respects because UEA was 'less academic than many schools of education mainly due to the tradition of action research built up by John Elliot' but it was still along way

from the close link to practice he had expected. He stated emphatically that 'the whole place was based on action research but it didn't really have a great deal of interface with the teachers. It was still academic and the whole notion of supporting teachers was a bit of a sham; in reality even the most active of action researchers were still stuck in their ivory towers - I was like Gulliver in Liliput only the other way around.'

I was very much on the fringes of the school, as most of the PGCE tutors were, as long as the students went through the mincer and had their placements and gained their certificates then everyone was pleased. It was smug. Even here (at Bristol) it's the same. I was encouraged to do action research at UEA but it wasn't me and I knew nothing of its theoretical basis or the methodology, in fact all they seemed to do a lot of the time was argue about action research. It was difficult enough coping with the students and doing the basic job let alone research.'

Edward also admitted to being fearful of looking too closely at his own practice as a PGCE tutor in case, as he put it, 'I didn't like what I found.' This was put down to the fact that he was mindful of having no training and very little guidance. As a result he used his own craft wisdom and experience as a teacher to guide him; often this spilled over into 'teaching by anecdote' a process he saw as inevitable because he was given no professional advice 'beyond the accidental'. Within a year Edward had moved back to Bristol to take up a similar post as science tutor at the School of Education at Bristol. The move was as much a pragmatic one anything else: his family still lived in Bristol and his wife continued to work in the city.

The move did bring some stability and familiarity although Edward did notice that at Bristol the academic-practitioner divide was even more marked. Nonetheless, he settled in quickly and given his long links with the science tutors and his acquaintance with the local schools, his entry was smooth and comfortable. Despite this familiarity, the pressure to do research, he commented 'was very strong, perhaps stronger than in UEA.' He recalled during his first full week at the School being taken into a room by two professors and asked about research issues and plans. 'I hadn't even given it a thought - I waffled something about science education and learners but that was it.' As an MEd student Edward had not fully understood the structure of the School and how in many ways it resembled a large 'Edwardian house replete with upstairs and downstairs. We were on the lower floors despite the fact that teacher education was the *raison d'être* of the place; we, the PGCE staff, are the poor relations - the poor bloody infantry.' He further explained this by referring to the dichotomy between 'those who researched and wrote about teaching and those who actually did something about it.'

On arriving I realised that my situation was complex than I had realised - I was being sandwiched between my commitment to schools and teachers and the pressure to research and write. Schools are my natural home and I've spent a large part of my working life in them, you can't cut that off - you do gradually find a balance and you learn the language of the university but schools and teachers are still vital to my professional life. Sometimes that university language can obscure your basic principles and at times a feel like a footballer - always playing home and away.'

During his time at Bristol, Edward continued to maintain a strong interest in teaching and learning and has maintained a strong commitment to his students; all this despite continued and increasing pressure both from within and outside the university hierarchy to write and research. The flexible nature of university life, however, has allowed him to find his 'niche' as he called it 'somewhere where I can be comfortable and find my own sense of equilibrium.' Nonetheless, after five years his research yield was still minimal and had been a barrier to promotion. This paucity of output he put down to the fact that 'PGCE and teaching on the MEd drains you and research becomes an added extra, something that has to be done in your spare time rather than as part of your job.' He also felt that the type of research demanded by the institution hamstrung his progress 'we are encouraged, no that's too soft a word, we are harangued to do highly academic research. Marlene and I did some research on gender and science teaching and it took ages it was eighteen months alone before it came to anything and then it was turned down by an academic journal.'

Isolated individuality

A second defining image of his situation can be found in Edward's description of the sorts of personal relationships that evolve through working in the School of Education. This is best understood in the following excerpt.

Schools are intensive places where loyalties go beyond personal likes and dislikes. On Friday afternoons at school it was like leave from the trenches and there was always a sense of working together, of having to work together because you were in such close proximity. But here, well it's like a forest where all the squirrels sit on the nuts - people retire to their rooms and write and what's even more ironic is that some of these academic loners actually write about collaboration and tell teachers about the value of it. It seems the only collaboration that takes place is through self interest, when you join together to write a paper or a book then they all come rushing out of their hideaways like squirrels in Autumn.'

The PGCE group of tutors did have, in Edward's words 'a greater sense of direction because of its overall aims' however, he was at pains to point out that even within this grouping there were barriers against greater collaboration. These he put down to 'personality differences' and claimed that such diversity hindered 'any sense of mutuality beyond the pragmatic.' The coming of partnership he felt had heightened this sense of isolation because it,

cut the PGCE course off even more than before. We were sort of cast adrift. The whole course is now run by us with very little if any input from the academics. It's strange that we have on the staff so-called experts on children's learning, experts on teacher education and literacy but they have a minimal input. That just increases the sense of isolation – even the subject areas like geography, English, maths and so on don't get together. If they were school departments they would be speaking to each other regularly. It's the place, it encourages individuality at the expense of collegiality.

Being caught in a vortex of change

Since the coming of partnership Edward's professional situation had undergone further change, so much so, that often he felt trapped in 'a vortex of change'. The demand that students are prepared for practice earlier, combined with increasing external influence over courses and outcomes meant that PGCE tutors have come under increasing scrutiny. Although positive about partnership, seeing it as an important step forward in the education of teachers, Edward acknowledged to still feeling ambivalent about some aspects of the shift to more school based training. The immediate impact was, he explained, 'the loss of control and influence over the students, I sometimes feel they aren't mine any more.' Additionally, at the time of being interviewed he wasn't fully convinced that partnership would necessarily bring about a concomitant improvement in the professional learning of his students. He gave expression to his concerns in a series of lengthy statements, one of which is outlined below,

The problem is that there is a feeling in some quarters that more experience equals better experience. I'm not sure about this because in increasing the variety and involvement and by marginalising us, students might suffer. In many cases I'm sure there will be real improvements in time but at the moment what with its market orientation, partnership might mean that the experience encountered by students might be patchy and inconsistent. Some schools still see students as pieces of raw meat to be used at their convenience, also some unscrupulous heads use the money and the increased student time for other more selfish ends. In fact although partnership should mean partnership it might eventually lead to control being with the schools with us just left to pick up the pieces. I'm not against change but being forced into change against your professional instincts is not good and at the moment I feel vulnerable and caught up in a process I have little control over and still unsure about where it all might lead.

Edward's image of being caught up in a 'vortex of change' which appeared to diminish his input and expertise were further elaborated upon in the second extract taken from the transcripts. Essentially this snippet touches on a number of issues related to partnership and the way the changes have impacted on his situation.

As money has been passed onto schools so student numbers have risen as has the demand that they are technically prepared for teaching. I'm concerned that this might result in the very recipe type teaching that is the scourge of professional learning but we that we might be driven to it by the system and the demand that students be competent. I've also noticed a shift in my supervisory role; before I used to comment on students' teaching, I used to build up a picture of their development during a series of visits Now I'm more of a moderator and a monitor, checking to see that the competencies have been achieved and whether the ATs have been doing their jobs properly. Ironically, I have become an inspector checking up on the mentors and the students while at the same time trying to be a good ambassador and building up a steady placement for my students regardless of the quality of the department - we can't afford to be choosy now. I suppose I'm more of a manager these days - of the students' learning - but from more of a distance - and as a manager of the course, checking and counter checking to see that standards are being maintained.

PRINCIPLES AND PRACTICE

Many aspects of Edward's experiential images can be found in both the practical principles that underpin his work and the sorts of practice that gives expression to them. This section will trace the threads that bind these two analytical concepts together.

Distilling practice

A key principle buttressing Edward's approach to teaching his students can be found in the term 'distillation of practice'. He sees it as one of his main functions and expressed it in the following terms:

Practice in today's comprehensive school is a myriad of competing ideas, forces, and approaches. Throw into this mix the personality of the teacher, the mood and ability of the children, and the structure and management of the school and the curriculum and it can be a heady and confusing mix. But beneath that confusing front there are some basic principles; some core practices that can be distilled out and made sense of by the students. My job is to do just that. I'm a sort of magnifying glass homing in on key areas for them, in the literature on science teaching, on aspects of practice, on classroom management, on lesson planning and preparation, on the language teachers use and a window on children's learning.

This declaration of intent was to the fore in the first week of the Autumn term in a session entitled 'The Circus.' One of the laboratories was set up with a number of typical practical science tasks. Mixed subject groups of students had to complete each task starting from a different point in the circus. Each task was slanted towards one of the three sciences and it was expected that the subject specialist in each group would act as the 'able child'. The aim, as Edward pointed out, 'was to enable all the students to experience a range of typical school tasks from the point of view of the pupil.'

During the conclusion to the task, Edward explained the thinking behind the activity and the sorts of pedagogy that might be used to support such a session in schools; additionally, he clarified the ways in which the tasks fitted with the National Curriculum. The last section dealt with what Edward termed 'the pedagogic language' behind the session. He expounded in a humorous way, the sorts of language teachers use to describe their practice and gave a series of examples and invited the group to de-code the terminology (some of which was taken from the National Curriculum document).

In a brief conversation after the session, Edward made the point that the whole morning served to,

highlight and distill good practice; to engage them (the students) in what it means to learn science and to get them used to the sorts of things they will encounter in schools. The professional vocab bit was important and I'll be doing more on this later, because its no good seeing teaching and watching tasks if you can't get access to the thinking behind it because you don't know what questions to ask the teacher or what they are really saying when they try to explain it to you. We know that teachers have this code for expressing their practice - it's got worse since the National Curriculum - but the students have to know what they mean otherwise there could be confusion. I was trying to short cut the process, to distill a whole load of things for them, I suppose I was being pragmatic - did I succeed?

This pragmatic approach was observed in another seminar later in the same term. Edward introduced it as 'The cognitive aspects of learning in science' and spelt out its importance in the opening section. A set of key texts had already been distributed in the previous session and the students were asked to familiarise themselves with the main research issues, most of which had been taken from Ros Driver's research project at the University of Leeds. Included in the booklet were explanations and practical examples designed to illustrate the theories. Edward began by giving a short fifteen minute presentation illustrated by typical examples taken from a video of

children working on various problems in science. After the session he claimed he was trying to 'tie in the theoretical to the practical in a way that made sense to the students.'

Another purpose 'was to help the students see that children do not enter classrooms as blank slates, they are not empty vessels waiting to be filled but active learners with their own ideas, right or wrong about the natural world.' This assertion was, Edward propounded, a 'real eye opener for many students who up to then have often only seen physics in terms of a body of knowledge which corresponds to their own experience of learning.' After the opening presentation and the giving of instructions a number of transcripts of children grappling with a series of problems were worked on by the student teachers in groups of four - a mixture of biologists, physicists and chemists; they were asked to answer three questions:

1. What are the children's views of negative mass and vacuums?
2. How plausible are their beliefs?
3. How might we, as teachers, address some of these misunderstandings in order to improve learning?

Before beginning this part of the session, Edward stressed the importance of 'not rejecting the beliefs seen in the case study transcripts out of hand but instead trying to understand their origin and then to come up with strategies that work with the ideas rather than against them thus seeing their misconceptions not as impediments to learning but as a challenge to improve it.'

In the de-brief session following the task, many students were visibly shocked at the extent of the misconceptions and confusions apparent in the transcripts. One student said openly that the children manifested 'gross ignorance of the highest order.' Edward's retort was that he and others were 'interpreting their lack of knowledge as spontaneous ignorance.' One more perceptive student commented that the 'pupils seemed to be taking it in turns to bright.' Edward picked up on this because he felt the comment 'went to the heart of what he wanted to achieve during the session.' A long and open discussion then developed around two broad questions: 'what was really locked up in children's minds? And how might good teaching challenge these ideas? Before beginning the discussion which was group based, Edward again stressed to the group the importance of 'of not layering another level of abstract knowledge on top of intuitive understandings. This will only seek to confuse and at worse turn off the children totally.' The session was wrapped up with Edward telling the well known joke about the customs officer searching a suspected IRA terrorist and making him stand inside a chalk circle and he ended the seminar with the pithy epithet 'you will not find what you are not looking for.'

In the post-session interview, Edward revealed that one of the 'hidden agendas' of the seminar was 'to try to get the students themselves to out their own misconceptions about the subjects being considered and about their views of teaching and learning. In a way I suppose I was trying to be doubly deconstructivist - if that's possible. I wanted the students themselves to construct their own meanings from the literature and to deconstruct their own misconceptions about the subject, children's learning and their own views of teaching. In many ways the whole session is a metaphor for learning to teach.' He also confessed that many students felt uncomfortable in the session because they were opening themselves up to their own ignorance and that this often failed to match their expectations in terms of how science should be taught. Many, he maintained, were also afraid to admit their own confusions and misunderstandings, 'particularly in front of other science graduates'. His role in this respect was, he asserted,

to create an atmosphere where they (the students) feel safe and secure and are not threatened by each other. This takes time and each session breaks down a few more barriers both inside them and among them. The problem arises initially from seeing themselves as experts with all the answers and unless they get into situations where they feel they can openly discuss their concerns and not feel awkward about them, then the anxieties will either fester or be transformed into superiority - neither are helpful for their thinking or practice.

Injecting fresh thinking

A second principle underlying Edward's practice can be discerned in his remark 'I need to inject fresh thinking into their practice so that they in turn can inject new ideas into their departments; what I mean is they must have a platform of new ideas which can then be set against current contexts.' In order to achieve this he created a number of situations whereby his students could take risks within a safe and supportive environment. He also made the point that he saw himself as 'purveyor of good practice with the added luxury of being able to go to conferences and read about new innovations.' In one session on the creation and use of spreadsheets in the logging of data from experiments, Edward claimed he was attempting to give his students a 'head start' because this approach was in advance of most practice in schools.

Each group of students, again working within a broad subject mix, had to carry out a series of set experiments and then log the data using specialist equipment. The data was later transferred to a computer package and turned into spreadsheets and other forms of data representation. The students then interrogated the data and had to create worksheets based on the sorts of questions

they had asked. The tasks had to be differentiated according to at least three levels of ability and then were copied and handed around for other groups to use. At the end of the session Edward asked for some feedback. The students had clearly enjoyed the session and all agreed that the method and equipment were excellent, however, some dissenting voices focused on the issue of applicability. One asked 'In my school there is only one computer in the lab, they've hardly got enough basic equipment let alone this stuff, and the photocopying bill is enormous so the department are not allowed to spend any more money - how will I be able to use this approach? The nodding of many heads suggested that this was not an isolated example.

Edward answered the question and the concomitant concerns. He accepted that many schools would not be able to buy this equipment and that many students would not get the opportunity to try it out. He also sympathised with schools and departments on tight budgets. However, his role he told the group emphatically, was to

prepare you for the future, for practice two or three years down the line. Take that school you just mentioned, at the end of next term they will be discussing what to spend their budget on, you might be able to influence that decision by explaining all about the equipment, you could borrow it next term and do something similar. That may persuade them. Remember you are going to be teacher for along time - I hope in a few years you will be ahead of the game, bang up to date and able to show more experienced colleagues how to do new things. I'm preparing you for tomorrow's world - not the TV programme - but the analogy is similar, today's new ideas are tomorrow's current practice.

This sort of session, he insisted, was based partly on personal interest but also on the fact that he wanted to show the students how such an approach can be used to enhance learning and because 'he had seen it messed up so many times by teachers' that he was 'determined to get them to do it properly so they can be role models themselves.'

Opening their baggage

Despite having similar subject backgrounds, Edward believed that science student teachers are an amorphous group thrown together by a common enterprise. He also recognised that each student brought with them 'a load of past baggage; baggage which influences their learning style, baggage which gives them a set of expectations about the course, and baggage which sets in their minds certain ideas about what makes a good teacher. I see my role as trying to open up this baggage and put its contents under scrutiny.'

One approach used was counterparting - always pairing one physics specialist with a chemist and a biologist. This was a compelling strategy because 'the non-specialists expect the specialists to know things about the subject and be able to explain it but this is not always the case.' Such an approach was also aimed at helping individuals 'to develop the necessary subject knowledge that may be missing' and in many cases formed the basis for school based placements.

In one observed 'opening up' session on a Friday morning, one student pointed out that the sessions they had been having at the university sometimes bore no relation to the practice they were observing in schools. Some even hinted that the ATs and supporting teachers were openly critical and cynical of the sessions, claiming they were unworkable and idealistic given the constraints of time and resources.

Edward dealt with the issue at length and the discussion highlighted a number of issues that go to the heart of the partnership. He advanced the following defence of his approach 'We try to give you an ideal -something to be aimed for..... good practice is not everywhere apparent but in other schools you might have the opportunity to try these things out and our role here is to give you the best possible start. Remember you will be teaching for years perhaps and this may be the only anchor you might get.' The students agreed in principle but soon the debate turned to the nature of good practice and what it actually meant. One student pronounced that 'good practice' as far as he was concerned was a 'moveable feast', reflecting the nature of the school, the type of children in the class, their ability level and the type of teaching being fostered by the department or faculty.' The main concern of the students centred on what one termed 'the split of loyalties;' this he expressed as the desire, on the one hand, to do the things they had been encouraged to do in the university, and on the other, to conform to the school's patterns of working. Edward sympathised and felt that a compromise would have to be found. The debate concerning practice continued with a number of students pointing out that the National Curriculum laid down the methods to be used and if they were not being followed should they (the students) point this out? Again Edward advised caution, reminding the group that the National Curriculum was advisory and laid down guidelines or ideals that teachers and faculties should be striving to achieve.

Later, Edward admitted that the session had been lively and the questions 'pointed but necessary.' Without these sessions, he claimed, 'many things get hidden and never come out.'

That can lead to all sorts of problems in the long run.' He also felt the students' concerns reflected an on-going tension between certainty and contingency within the whole enterprise of teacher preparation. It was similar in many ways to what he saw as 'the students need for security and our desire for innovation.' This he put down to the fact that all schools are different and that if 'we prepared them for a certain type then we would never get anywhere because of the infinite variety,' although he was keen to emphasise that in many respects most students would prefer 'recipes or ready made lessons that fitted with what schools did.'

In fact partnership, as far as Edward was concerned, had not got anywhere near solving these or other problems. It had brought subject departments closer together and there was now more of a genuine dialogue and structure to the students' experiences but foundational problems remained. One observable effect of the changes which related to his practice was noted early on in the first term. A new session had been introduced entitled 'investigating classrooms'. Here his aim was to help his students to come to a better understanding of classrooms and teaching through structured investigation and observation. A mixture of video recorded lessons, lesson transcripts and lesson plans combined with structured observational sheets were all used to help the students 'see what they see' as he put it. Its purpose being 'to encourage the students to view classrooms through the eyes of a teacher rather than that of a pupil.' Edward further elaborated on this when he said that his role was 'to help to turn them (the students) from poachers to gatekeepers in a matter of weeks. That's the problem now we have less time and we have to push things and give them guidance material so they can learn from their experiences while before we would prepare them more thoroughly to teach in a certain way.'

The data gathered in school was then placed in the students' professional file and then went on to form part of their subject assignment. This was often presented in a number of ways with Edward preferring assignments presented in mixed media format using a combination of video, audio and information technology rather than the usual written presentation.

Another aspect of this 'opening the baggage' approach was witnessed in a series of sessions aimed at 'getting the students to re-think their subject knowledge in ways that made it more amenable for classroom use'. In one seminar, the physics graduates were asked to explain to the chemists and biologists how batteries and electric currents worked. The frustration on the faces of both the 'learners' (the biologists and chemists) and the 'teachers' (the physicists) was

remarkable given the apparent simplicity of the task. Many of the physics students became frustrated at the apparent inability of the others to understand their explanations and illustrations. Some had great difficulty in explaining and simplifying the appropriate concepts, making the session lively and interesting to observe. Many gave text-book like recitations and used complex abstract language, one frustrated student actually shouted at some members of his group 'for God's sake this is so simple - you must be thick or something.'

At the end of the session Edward pointed out that he had set up some of the students to be deliberately obtuse and to ask awkward and difficult questions. He told some of the physicists that if they behaved like that in some schools they might have real control problems and 'even possibly a riot.' This session, was however, only a starting point, and throughout the course Edward told them that they would be 'encouraged to reflect on aspects of their subject knowledge and its application to teaching in a number of ways both formally and informally in their assignments and lesson planning.'

In a linked interview, Edward admitted to not really liking the term 'reflection' because it had so many connotations and had become too fashionable. He saw the process more in terms of 'thinking about what you do and why you did it - in fact it's what good teachers have been doing for years,' however, he did agree that the process of engaging with your practice was important and helped students to 'deconstruct their embedded ideas about the subject and learning.'

Being a good role model

Edward used micro-teaching extensively in order to model lessons with particular foci. In one observed session his students taught mini-lessons using video clips, worksheets and CD-ROM data; after the 'lessons' the whole group evaluated the effectiveness of the teaching and learning using the same criteria used in school observations. Additionally, Edward claimed he always prepared and delivered his sessions as though he were a teacher in school; this he felt was vital if his students were to 'have faith in him and in themselves.' He went on,

being a good role model has always been important to me and I try to teach as well as I can. I know the seminar room and the labs are not classrooms but it is important that they are close approximations. Remember it isn't just what I teach in the sessions that's important, it's how I actually do it. It's too easy to deliver sessions and drive the PGCE in a content sort of way but the process is just as important. I try to show them in my own practice with them that I'm a teacher and that when I sat the learner is central or that we have to construct learning together, I

try to model it. That's why my style is always modelled on a typical teacher - it's a way of getting them to learn the approaches and strategies without thinking too much about it because in the end it becomes automatic very quickly.

In another session on the use of semi-conductors, the students took the part of the pupils and were encouraged to approach the task from a learners' perspective. Edward commented:

That's how I work all the time. I'm always trying to get to think about their own professional and subject learning while simultaneously thinking about the learning of children so they are receiving concrete ideas about how to structure a lesson as well as being challenged to think about wider scientific and pedagogical applications. In this sense I am working in a set of double loops of learning - I'm trying to remove from them their minds the idea that teaching should be based on the spray painting method whereby you shower the kids with information hoping certain key bits will stick.

Throughout the seminar Edward acted as a teacher might, the whole session being conducted as a formal role play. It took time for the students to adjust but when he asked two to stop talking and listen to the instructions, they realised that this was a lesson and they would have to behave as children might. His personal support and way of working was itself an exemplar of how a typical teacher might operate with a mixed ability group of children. At the end of the session in the debrief, Edward showed the group his lesson plan and the sorts of outcomes he wanted to achieve. The students were then asked about these aims and about the process of their learning within the lesson. Edward encouraged them to use the method in their school experience if possible, and told them that the equipment would be made available if required.

In a short exchange after the session, Edward explained to me the importance of such an approach.

How we teach is as important as what we teach. It's no good me banging on about innovation and planning and control and structure if then my own sessions are a mess. It's like the old educational studies lecturers telling students in lectures to be child centred - it would be too much of a contradiction. That's why the old method of training with psychology and sociology and rest got discredited because there was no match between style and substance. At least the subject and professional elements merge now and the teaching the students receive does reflect a variety of styles

CHAPTER SIX

PETER

Biographical synopsis

The year 1998 was an important year in Peter's career, after more than twenty years working as a teacher educator he decided to take early retirement. His long career began in 1961 when, after finishing his degree in mathematics at the University of Southampton, he decided to begin a PGCE at the University of Bristol. Within a year Peter was teaching maths in one of the flagship comprehensives in the city. After three years at the school, he decided to take his family overseas to Malawi to take up the post of maths tutor at the University.

He returned six years later and began work as an evaluator on the Schools' Mathematics Project (SMP) and from there launched his career in teacher education as a maths tutor in Bristol in 1976. Throughout his time at the School of Education, Peter took on a number of responsibilities. He was course coordinator for the PGCE course between 1982-4 and a year later was promoted to Senior Lecturer. Subsequently, he was to play a formative part in a number of overseas projects as well as teaching full-time on the PGCE and MEd courses.

Peter was born in Guildford in Surrey in 1940. His father was a self employed builder with strong Christian values and inculcated such beliefs in his son. At the age of eleven he gained a place at the local grammar school and progressed through school before taking up a place at the University of Southampton in 1958. Currently, Peter is working on a three year contract as a maths lecturer in a university in the Caribbean.

IMAGES OF SUBJECT

Peter's images of maths have a long lineage. On his father's side his cousins were all university educated and were either scientists or mathematicians and he recalled being reminded of this during his early days. At Primary school, however he could not remember having any particular ability in the subject but at grammar school he recalled being ridiculed during his first year by a

‘tartar of a maths teacher’ who reduced him to tears because of an inability to understand algebra. ‘Somehow’ he said ‘that experience has stuck with me, and throughout my career I have never ridiculed anyone who had trouble with the subject. Perhaps that’s reading too much into the exchange but it has often sprung into my mind at odd moments during students’ observations or whenever I see things that remind me of it. So I suppose it must be important.’ During those early grammar school days he began to show promise in the subject but felt this was ‘more than likely a reaction against foreign languages and humanities rather than anything positive about mathematics.’ On the same point he recounted feeling a considerable sense of relief after being freed at ‘O’ level from the ‘tyranny of the literary experience’.

A private subject

Peter put his early enthusiasm for mathematics down to the fact that it was a ‘private process’ and one ‘in which you could achieve success without a great deal of public expression.’ This links with Peter’s own image of himself as ‘a private and shy man’. He hated then and disliked now ‘being exposed in public’ and ‘maths being a private discipline, which was taught formally’ allowed him the space to develop the skills, understanding and competencies ‘which his teachers at the time demanded.’ This early image of maths has stayed with Peter throughout his career, and although modified by changing times and contexts, the subject remains a very private one. The following extract from one of the transcripts gives a more detailed description of that image,

P - Although as a teacher and teacher educator I have changed my position over the years, for me it is still a private subject and that notion has guided much of my practice in teacher education over the years. The idea that learning to teach and reflecting upon it is still to a large extent a private process best understood and got on with by individuals with help from people like me, associate tutors and others involved in the process.’

I - But do you think a collective approach is also important or not?

P - Of course and we are ideally placed to provide that and as you know I place great stress on keeping the paired working, the peer tutoring and group learning but in the end it is about a private relationship between the student and his subject and that’s the key and that’s what I try to tap into.

Gaining control

Whilst undertaking his ‘A’ levels Peter fell under the spell of a teacher he remembered as having an important influence on is thinking about mathematics as a subject and its importance in the curriculum. Although working within a traditional format, his approach was ‘inspirational,

thoroughly professional and committed and one who became and remains, in many respects, a role model. I suppose it was because he helped me gain and take control of the subject. He gave me the confidence to apply to study at university and since then maths has always been there like Christianity, helping me, guiding me.'

At university this image of maths as 'helping you to gain control' was more evident. At Southampton he began for the first time to explore the subject and began to see its hidden properties, the whole thing he now felt, 'had a sense of order, a logic to it and it was helping my deductive capacities.' In linking this to his current thinking Peter declared,

For children, maths can help them control their lives and their learning. The problem is that many see it as very difficult and boring - something you can or cannot do and they get blockages. These kids can't take control because they can't get to grips with the subject. It is our job as teachers and teacher educators to make sure they can get access to those hidden properties so they can take control through the subject. And as a maths tutor that's what I'm trying to do with my students.

Looking back at his school and undergraduate days, Peter realised that despite his success with the subject, he was in the main 'practising with a prescribed curriculum - whether at school or university - it was a subject bounded and decided upon by course leaders and examination boards.' Eventually, it was to be this conception of maths that Peter slowly reacted against preferring instead to help children 'gain control' and have 'their eyes opened' through the study of maths. Hence his decision to enter the teaching profession; a decision that was based as much on his desire to work with people as it was to stay close to the subject. His choice of career, however, was not popular with his family who felt that the job did not have sufficiently high enough status, because as he put it 'they were very ambitious for me and I suppose that has been a secret engine behind my career. Anyway that's what I wanted to do and they supported me in the end, just as I supported my son when he decided to become a teacher of maths - the trouble is it's in the family.'

Opening children's eyes

Peter undertook his PGCE at Bristol and the experience proved to be a turning point in his personal and professional development. There he came under the influence of Lewis Hull, the maths PGCE tutor who, although rooted in the public school tradition, did according to Peter, have some 'interesting ideas and positions on the teaching of maths; ones that I had not really

encountered before... He had written a book on the psychology of maths teaching and was widely recognised as an outstanding maths educator.' He was also, and more importantly for Peter, totally committed to maths education and had a powerful belief,

in sharing his love of the subject with others, and despite his traditional background, his way of exploring a mathematical problem was unique - almost bang up to date. In fact in terms of geometry and mechanics he inspired me to re-think some of my understandings as well as helping me to teach the subject. It was during my PGCE year that I slowly began to realise that children could be helped to understand the subject that their eyes could be opened and their thinking enhanced.

Peter's first teaching post was at Hatham school in Bristol, one of the pioneering comprehensives. It was there that he remembered having his ideas about maths 'challenged yet again,' mainly because of the mix of pupils and the need to adjust.

I had up to then only experienced grammar schools, both my own and on teaching practice. At Hatham I began to see and explore some of the new ideas that were taking root in the maths world; ideas about investigations and the emerging idea of 'modern maths' as it was then called. I suppose I was beginning to shift my perspectives but then we, as a family, decided to move overseas to Malawi to work in a university there. It was something I'd always wanted to do and it was an adventure I think for all of us. Up to then I'd been very conventional as had Chris, my wife, here was a chance to break out and teach in a university. So my ideas got put on hold because as you know working in a developing country puts your ideas into a kind of bottle.

When Peter returned six years later, he took up a post as an evaluator for the Schools' Mathematics Project (SMP); an experience which helped to re-kindle his enthusiasm as well as bringing him back into touch with ideas that had taken root in his first post at Hatham school. It was now that he began to see maths and the teaching of it as being inextricably bound together. 'Before that I think I saw maths as a subject and teaching as a separate process; the SMP experience helped me make a bridge so that now I saw maths and teaching as being part of the same act. I was, I think, moving in that direction during my time at Hatham but visiting and talking and observing for the project made me realise the relationship between the two was crucial.'

From then on maths for Peter was to be about communication, 'a way of opening children's eyes on the world because not only does it use a different language but you must have eyes to see. The job of a teacher, I realised, and that of a tutor or student teacher, was to open them (children) up

through maths.' Nonetheless, he admitted to still feeling the hand of the past on his present understandings. He commented:

Too often during the last two decades too many maths educators, in their quest for more and more ways into the subject, have forgotten its basic principles and this is something I regret. Perhaps it's because I still feel the tension between the conservative and liberating aspect of the subject.

I - How would you define these two poles?

P - The former are the underpinnings to the subject the basic formulae, the essence of the subject - the anchors of the ship, the latter, on the other hand, are the rudders - the guiding aspects, the ways in which the subject could be channeled and opened up for children.

It is on this continuum that Peter's current images of maths can be located. The blending of the past and present are in turn reflected in his current teaching and other work with student teachers. Whilst recognising that most student teachers enter courses with a multiple views and positions, he pointed out that even 'if he wanted to he couldn't make them all think like him.' Instead he works on the assumption that 'they should make their own decisions', and that their thinking about teaching and their views of maths 'should be confronted so that their own experiences were not be the sole arbiter of their practice.'

Nevertheless, Peter felt that this had to be 'a slow and mindful process' because with too much fervour you could 'quickly destroy someone's love of a subject by continually criticising their beliefs - some of which are deeply felt and held.' Hence his approach, which although on the surface was collective, collaborative and challenging, beneath it was based on the image that 'maths is essentially a private process, where individuals have to make their own way so they control the direction they want to go in. I am there to give them some pointers, to offer some routes, but in the end they have to decide how they want children to learn.'

IMAGES OF TEACHING AND LEARNING

Enabling learners

Early on in the interviews Peter expressed the opinion that teaching maths was all about 'enabling learners to understand and explore the world in which they live.' This image shifts the

emphasis away from the delivery of mathematics as a body of knowledge to the processes involved in learning it. He had arrived at this position after much reflection on a career spanning decades; one which had seen him play the role of observer and actor in the lives of children.

As a pupil and undergraduate, Peter admitted he was taught formally, 'where the interaction between the teacher and pupil was limited and where learning was an individual process.' He recollected that 'the onus was always on the individual to sort it out for himself. Despite whole class teaching and fairly homogenous groups emphasis was always on the pupils to solve the problems for themselves. If you failed then there was a gap in your thinking or you simply couldn't do maths. That was usual excuse -it was your fault.' The extract below elucidates this notion in more detail,

P - I regard the lack of contact between the teacher and the pupil as being responsible for a generation children who literally failed maths. Current approaches have, without a doubt, improved things. Some of the high fliers may have been neglected but the mass, the majority in the main have improved. The maths experience for a generation of children has changed and I think overall it's been for the better. Just think, what we see in the Gambia, it was like that for most kids, just a set of rules to be learned if you failed, well it was your fault.'

I - So traditional methods were bad and whole class teaching was part of the problem?

P - No it is an important method but only one amongst many. In fact I have a lot of sympathy with those who bemoan the loss of collective contact between teacher and learner and I am no supporter of the SMP work card method, a lot of it is soulless. Any approach which is over used, and even the investigative approach if used as the sole instrument, will lead to boredom and routine.

It was during his PGCE year that Peter began to have some of his views about teaching and learning challenged. He admitted to enjoying the lecture programme and although quiet in seminars he found the course engaging and informative. Its relevance was limited somewhat because he went straight into a grammar school environment for his teaching practice; a process that simply reinforced his own school experiences. Coming into contact with a series of varied and different approaches, however, led him to begin to re-think his ideas, although in retrospect he confessed 'they were very embryonic.' He explained further,

I didn't have a coherent set of beliefs about teaching when I left the PGCE, but it was memorable both for its form and content, although as you know I don't think the four disciplines approach is appropriate any more and I don't think it was then really. The trouble was any changes that were taking place were quickly reversed by my teaching practice where I simply replicated the

teaching I had received as a child and I copied those around me. From that perspective it was easy by not a real learning experience. Looking back it did make me see that the harmony between the course and school practice were vital elements in creating a successful PGCE, without that harmony I slowly realised that students would revert very quickly to type. It made me realise that if students were going to enable pupils to learn maths effectively then they also had to be enabled to learn how to teach it effectively.

Peter chose the Hatham school for his first post because he wanted to experience something different to his earlier learning environments but it was also to do with the fact that he was impressed with the headteacher and the ideals he espoused. 'The clientele were different and the environment was more open and experimental - it was fresh and new and it appealed to me. I had a nagging feeling that if I went straight into a grammar school I would be walking down the corridors of my own past.' Peter clearly did not want to become, 'cobwebbed, stilted and traditional - remember I had chosen to work with people and a variety of people, so it suited my conscience in some ways although I was not political in any party sense and I'm still not.'

His choice of school proved to be important in a number of ways. First because he came into contact with a range of ability he had not previously encountered; an experience which made him realise the limitations of the traditional approach. He declared 'too many kids got lost very quickly and became disruptive, so I had to re-think my teaching.' Second, the maths department was very forward looking so he naturally became acquainted with new ideas but he had to adjust in order to match their expectations. Third, because of the curriculum at the school was more integrated, Peter was able to see how other subjects tackled the problems he was experiencing in his maths classes. In relation to the overall experience, Peter believed 'the school was developing its own critique of traditional teaching, not in a formal sense but through practice - trying to find approaches that worked for all children,' and that his professional development actually mirrored that process.

After spending three years at Hatham, Peter left England for Malawi and took up a post as a university lecturer in maths and education. Although the experience of working overseas was invaluable, he fully recognised that the maths teaching and the training of teachers in Malawi was,

stuck in a time warp - it was like the Gambia now - so my ideas didn't move on as they would have at Hatham but they were put to the test in a different environment. There you had to slow down the pace of change and you had to adjust your expectations. But it did teach me the value

of moving slowly and taking people with you - perhaps some of our colleagues who want to do things quickly and are so convinced of the rightness of their cause should spend some time in Africa, that might slow them up a bit and for the better.

On returning to the United Kingdom, Peter began working for the School Mathematics Project as an evaluator. The ideas emanating from the genesis of the project were just coming to fruition with many schools beginning to using their ideas and resources. Peter joined the evaluation team but spent a long time re-adjusting to the English educational scene. His days as Hatham seemed a long way off and being one of the project evaluators was for Peter 'a steep learning curve.'

Nevertheless, having a roving brief did bring significant advantages and he soon began to get a broad picture of the current state maths teaching in British schools. It was during this time that he began to see the close relationship between teaching and learning and ways in which quality teachers 'seemed to be able to enable learners to achieve in the subject.'

He entered teacher education in 1976, but admitted he still had no firmly fixed vision of teaching and learning,

It was more a gradual process of finding a position. I did have some broad beliefs and ideas mainly from the project work but nothing was set in stone, even now I am not certain of things, I'm just comfortable; it's part of my nature I suppose, I don't hold to things too strongly particularly theoretical positions. I have my faith and I rely on my own reflection and understandings to guide me. Since being at Bristol I have seen all sorts of teachers and been in many classrooms and I have read some papers and listened to people, but ultimately I have my own views on teaching and they are still based on the proposition that teachers of all different types can enable learning to take place as long as they have a vision; a guiding set of principles.

During the interviews Peter got closer to expounding a more detailed and personal rationalisation of his image. At the outset he stressed the importance of the close relationship between the conservative and liberal elements of the subject, both of which, if handled well, could lead to quality learning. A key issue was the tension between on the one side, 'the limited approach which sees teaching as routine, and highly technicised requiring the application of particular skills and abilities such as planning, explaining, assessing, and managing,' an approach he felt that 'was becoming more widespread accepted because many teachers had simply bolted on some ideas that advisors or others had told what represents good practice.' This group he claimed, 'were similar to the traditionalists but were in fact poor replicas and were slightly dishonest. At

least the classical teachers usually had commitment and a love of their subject - these were and are just taking advantage and playing a game of good practice in order to get on.'

The alternative, 'extended approach' as he called it, had deeper roots,

Here the teacher has a vision of how children learn and tries at all times to base his teaching on those principles. They strive to find ways of enacting their beliefs so that children can grasp the complexity or even the simplicity of a concept or mathematical process. The problem with this approach is that sometimes they get very evangelical and proselytize, like my colleague next door, and sometimes they don't always see the harm their obsessions can do but at least they are committed and they have a position and a vision.

Peter saw himself as being closer to the latter type and tried hard to help his student teachers to get on the inside his thinking and share his vision. This image of teaching as 'enabling the learner' was also evident in his views of how student teachers develop professionally.

Children may encounter a mathematical problem in their daily life - but might not understand it. I want them to be able to understand it and to see it, then they will be empowered as citizens and human beings. Maths has a role to play in helping children feel confident in their understanding of the world, as teachers and teacher educators it is our role to make sure that they get maximum understanding so that they are empowered as people to control their lives. Students in many ways go through a similar process, they have to be empowered through a stable vision thereby taking control of their professional lives - it's all part of the same thing.

IMAGES OF STUDENTS

Requiring parenting

Early on in the interviews, the usefulness of the subject tutor to the process of teacher education was raised, Peter's emphatic reply was, 'that's like being asked whether I'm useful as a parent.' It is here that Peter's image of his students is best characterised, however, as the conversation unfolded a more detailed conception emerged. At its core was the belief that student teachers need a 'guiding figure, not in the Jesuit sense, but one who has ultimate responsibility for them, a sort of second parent.'

This metaphoric representation was further elucidated when he claimed that student teachers needed to be 'nurtured during their training year' and should be given some kind of overarching picture of their progress so that they can 'see their learning in context.' For him just being there

'organising, supporting and guiding allows them to take responsibility for their professional learning but within a structured environment.' He went on to say that for him being a tutor is:

similar to having a child - you can see they are about to trip up and you reach forward to make sure they don't hurt themselves. It's that overview; that watching over them, that's what it's all about. I'm also interested in people but I don't want to take the parent metaphor too far, because unlike parents I have to keep more of a distance and be detached in order to give them space and to assess them fairly.'

The source of this image can, in part, be traced back to Peter's upbringing and the inculcation of a particular set of moral values and beliefs. This interest in people and their lives is an important part of his value structure and emanates from his Christian beliefs. This ethical base to his work was further elaborated on when he talked at length about 'doing the right thing' with his students and the way in which the act of teaching 'gave his life and work direction.' He expounded,

Teaching provides me with direction - working with people and doing the right thing by them, that's important to me. Teaching also provides a link with people and individuals - research, on the other hand, seems to go on interminably and isolates you. I like working with people not always with ideas and data. When I was teaching, it was the children who came first, now it's my students. I'd also hate teaching something nebulous like management, that's why I love maths, it's a solid real subject.

Later in the interviews Peter once again returned to the distinction between teaching and research. He recognised the ambiguity in his position and that a great deal of it stemmed from the demand 'for research because finance was tied to the Research Assessment Exercise (RAE).' But he had always come down heavily on the side of teaching despite the pressure. He continued,

Look at those awful work load scores, I always come out highly on the teaching - I probably do far too much but it's what I enjoy and I can't stand those who continually shirk their responsibility to their students by always writing - if we all did that the place would fall apart. I realise there is pressure on us now to research as never before but you know this because we've talked about it at length many times before, but if it comes to the crunch I will always choose the students, but hopefully there will be no crunch. It does play on you and recently I've been making an effort to write with the Gambia book, but I think that can be put down to a professional interest and I suppose I've reached a point in my career where I can be more independent. My mortgage is paid off and I could call it a day tomorrow and if the stress gets too much especially on the publications front.

He was also concerned at the recent changes to Initial Teacher Education and the threat to the future of the PGCE. He was very wary of the Government's motives and also voiced concerns

about the changing aims of education departments. These changes, he believed, were the ultimate irony: 'on the one hand we are being asked to move closer to schools and to delegate much of our work to them and then on the other we are being exhorted to write more, particularly research that is more academic and less professional. The whole process has distorted schools of education ever since they opened, but now the changes were shifting the balance too far both in terms of the practical and the academic'.

Peter's image of his students as 'needing parenting' also originated from the fact that he had worked with, in his own words, 'hundreds, perhaps thousands of them over the years.' He also saw his relationship with his students and the relationship of his students with their pupils as analogous. He said he was,

essentially paid to look after maths students and to see that they are competent enough to teach other people's children. I have to look after them and they in turn look after their children. It is a generational thing - I teach children through them, what I do with them may influence what they do with children, so it's a big responsibility. This means putting aside a major block of his time for them where he can talk to them, work with them, observe them and advise them. Again it's like being a good parent but compare that to the poor old Associate Tutor in school who has to do that nowadays as well as teach the kids. This is my main role and they should not be overburdened.

Throughout the interviews it became clear that the students were Peter's major professional preoccupation and he was certain that he could offer them something distinct and relevant. The implications of this image in relation to Peter's principles and practice as a tutor will be described later.

Needing guidance

A second image can be evidenced in a series of metaphors which littered the transcripts. Continually Peter talked about giving students 'routes to follow;' 'directions to navigate;' and 'pathways for them to learn.' These metaphors were given substance by Peter's insistence that being independent, and working within a university context gave him the freedom to choose the appropriate experiences and locations which best suited the skills, characters and abilities of his students. He said his job, as far as the students were concerned, was about 'defining and moderating their experiences across a range of schools while simultaneously giving them direction and a vision.' He was, he claimed, ideally placed to do this because he had detailed knowledge of schools, departments, teachers, children and most of all because he had witnessed

'hundreds of student teachers teach in a variety of contexts.' This knowledge he felt **'could not be replicated elsewhere'** and had been built up during his years as a tutor but also informed by his **'reading and listening.'** He went on,

I defy anyone who has not done the PGCE for a number of years to have similar knowledge to me. It's unique -I've worked, as I've already said with hundreds perhaps thousands of student teachers; I've observed hundreds of lessons and helped experienced and not so experienced teachers on the way. I've also read a fair bit and know how to communicate that knowledge about maths teaching to real teachers and students. That breadth of knowledge is a great asset and should not be lost.

This image of guiding and leading was taken further when we explored the coming of partnership. Again Peter focussed on the dangers of 'writing PGCE tutors out of the teacher education script.' If this happened he claimed,

it would leave too much to chance, because regardless of the school based facilities, teacher training is not and never will be the part of the primary culture of schools because teaching children is their priority - even at Oxford and you know more about this than I do, there must have been priorities and children came first surely, even when you were a mentor. If they pretended that teaching students was their priority they were either misguided or wrong; it can't be and shouldn't be.

Peter was clearly concerned about the future, not from a selfish point of view but because he honestly believed that if the logic of the government's position was followed then schools might become independent providers of ITE; a change that 'would have dangerous repercussions for the coherence of courses and from the perspective of replicability and professionalism.' He was afraid that universities would become reduced to **'enormous clearing houses, processing, organising, placing and checking up on thousands of student teachers and mentors who go anonymously into satellite schools.'**

This nightmare scenario was, however, counterposed by Peter's continued optimism. He continued to believe that common sense would prevail, and that schools and the education world would realise the importance of the university link even if sometimes it might be 'out of pure self-interest.' His own unique form of professional knowledge had evolved with the job and would be too important to lose and claimed that if they did close down the PGCE elements in schools of education eventually **'the whole house would come tumbling down with it, and in the meantime we would all be writing papers that few people would want to read.'**

An important aspect of this image can be evidenced in Peter's conviction that he had a vital role to play in providing 'continuity across institutions'. Student teachers, he believed, because of the demands of central government, now had a fragmented and contradictory experience. He saw himself as providing stability and continuity, ensuring that the students are guided to learn from what can be 'a wildly inconsistent experience.' Thus, for Peter, having a base in higher education gave the students a stable foundation from which to explore the nature of teaching and learning. He was also of the opinion that the independent tradition of the university helped 'to neutralise the conflicting agendas that schools often have because we are not bound up with day to day micro-politics, as Eric Hoyle would have eloquently put it, instead we are non-aligned and independent.'

This ability to provide a wider and neutral perspective was viewed as complementary to the students' school experiences which Peter claimed were 'specific, context bound and idiosyncratic.' He insisted that he was,

in an ideal position to link their (the students) experiences and to pool and pull together their observations, ideas, teaching practices and concerns....in order to define the reality of schools and show them alternatives; this is not simply done through seminars and workshops but also through the informal meetings and discussions. I'm always reminded of this when I think about the evening meetings we have in the Spring term. They are all optional but are really well attended, because the students need each other as much as they need us.

IMAGES OF SITUATION

Not a university person

Despite spending a large part of his career in universities both in Malawi and Bristol, Peter never saw himself as 'a university person'. He entered the university because it gave him the opportunity to work with adult learners both at home and overseas. He recounted the nightmare of 1981 when the School of Education was threatened with closure and remembered not being bothered about having to return to school teaching.

When he arrived at the School of Education, his introduction was marked by a sense of isolation and confusion. Looking back he recollected with considerable unease, his first few years in the

job. This was partly due to his re-entry problems from overseas as well as having worked across schools as an evaluator; he felt he lacked the 'hands on practice other new tutors may have had' and on top of this he was hampered by a lack of guidance or orientation into the role. He said wryly 'I literally learned to be a teacher educator on the job using my own PGCE experience and some bits and pieces picked up from my teaching and from observations of classrooms while working with the SMP.'

He recalled his first PGCE maths group which was 'large perhaps twice as big as he remembered from his own PGCE, although still smaller than today.'

P - My first cohort came into the course without my influence. Many joined without the mathematical knowledge that was then needed to teach what became known as 'modern maths.' So there had to be a bigger content input from me more than there is these days although things are getting back to that given the variation of graduate we get now and the government's directives. I remember clearly the hordes of confused faces trying to make sense of my sessions. I remember asking what is the point of doing a particular investigation in mathematics - something to do with the area of Berkeley Square - they felt such an approach was trivial and unmathematical. Many of them came from grammar school backgrounds and had what might be termed a narrow view of maths and maths teaching. They saw the discipline as a set of pieces of knowledge to be learned incrementally in an abstract way with no real relevance to life.

I - Have things changed?

P - In some ways. Students are more ready to learn and to be critical of their own past teaching but the similarities are still there. Many today have narrow conceptions of maths and the teaching of it and have problems in coming to terms with teaching to mixed ability groups. Perhaps the difference is that they come from a more diverse range of backgrounds today: engineers, IT specialists, statisticians and older more mature types who have chosen teaching rather than drifting into it. Also many have been taught through the methods we use so it's a mixed bag but their own experiences are still powerful filters.

Peter also recalled having to work hard to develop and garner school placements for his students. In the first year and beyond he spent a lot of time visiting and talking to lots of heads of departments so as to develop relationships and to build mutual respect. He believed that this 'old model of training was not so different from the present one, except it was done piecemeal and informally and no money changed hands. But the relationships were close and very professional.' He stayed on this theme in the following extract.

Then I worked hard at developing links and I think the success of the maths course was based on those personal visits and store of knowledge built up across schools. Partnership has formalised it but the market emphasis and the exchange of money has sullied the whole process. Then we

drove the relationship and quite right too, it was and is my job; schools were the recipients but they had payback and were happy to reciprocate. Now we have to chase the places and check up on schools and we have less control over placements. if a school opts in we have to place a student in a department regardless of ethos or vitality; that's not progress!

Peter also saw the university as continuing what had always existed - the distinction between practitioners and academics. 'The School of Ed has always had a split personality, it's not new, it was here when I arrived and I'm sure it was there before.' This he felt was related to its academic traditions but in reality it meant that PGCE was always viewed as being 'unacademic and full of ex-schoolteachers.' This was best illustrated, he contended, 'in the way in which school subjects are used to define PGCE people while the others, the academics, use areas, fields of interest or the disciplines of education to define their work.'

We are either mathematicians or linguists or historians, like you, that's how we see ourselves. Upstairs they see themselves in terms of their research interests. They used to be divided according to the old disciplines Eric was always a sociologist and David was a psychologist. But now its management or overseas or assessment and curriculum or those new centres were about to have foisted on us with Mike's CLIO (Centre for Learning in Organisations) thing.

These divisions were not only visible at the level of subject culture but were also viewed in terms of 'hands-on and hands-off' tutors. 'The practitioners and those with continuing school links were all grouped on the second PGCE floor and the others, those who taught on masters and now EdD programmes were clustered up above and more recently down below.' Although Peter himself had a heavy teaching load which took him into the realms of MEd, Inset and other overseas work, PGCE remained a significant part of his working life. In consequence he believed that this created a separate mindset 'not only because of the demands being made on tutors but also because they shared a different history and culture,' and felt that,

being a PGCE person marks you out. You are still in touch with reality, with schools and children. You never quite lose that even as long as I have been in it. It makes me suspicious of too much abstract theory especially quantitative approaches even though I'm a mathematician, perhaps it's because I did my MEd dissertation with David Satterly! Although I've spent many years working with the overseas people I'm still a PGCE tutor and the way I work there is my foundation stone. The others, they don't really understand the demands of PGCE and the workload and the different teaching approaches needed. They have no idea!

New brooms create too much dust

The arrival of partnership was for Peter a double edged sword. He recognised that it had many promising elements and that it might in the long run, 'be a worthy and noble aim,' however, its manner of introduction combined with some fundamental conceptual flaws made it a 'hostage to fortune,' as he put it. The new arrangements had also changed his role to some degree, but he felt the remodelling of the course structure had not necessarily changed teacher education for the better. The whole process is summed in his metaphor 'new brooms often create too much dust.' By this he meant that partnership had taken something vital away from his role and he was concerned at the lack of rigour that was creeping into numerous corners of the course 'particularly the Educational studies elements.' He continued, 'we are a university after all and marking some assignments is very difficult, at times I don't know the contexts or the students, the ending of the cross-subject seminars and the new importance given to professional tutors has changed the emphasis. I feel anonymous far too often and for younger members of staff the new broom must be worrying because it makes us weaker both financially and intellectually.'

Partnership, he considered, had also forced him to 'put a quart into a pint pot' when it came to his subject work and this had robbed him of time to develop what he considered to be the most important aspect of a PGCE - the creation of a vision of teaching which could guide the students' practice. He pointed to the fact that,

Everything seems rushed these days, there is no time to develop ideas or to think things through. We have mentor training and there are some damn good ATs good but to be honest many are still working the old system or no system at all. Time may improve this but change is so rapid these days that you don't know what is going to happen next and we all have to pull together to keep the public face of the course. I sometimes feel like speaking out but I have to think of youngsters like you, you have a career and a family.

Fortunately, over the years Peter had begun to shift focus into educational development and overseas work. This had given him an extra option and he was spending more of his time abroad and preparing bids for contract work. He nevertheless voiced his concerns about the changes,

I suppose I don't have to do it as I have said, I could leave tomorrow but as long as I'm here then I have to get the corn and PGCE doesn't have a copper bottom any more. That's the shift and if you combine that with the RAE and everything else it's no wonder the whole thing appears to be like a spinning top..... Looking at it dispassionately I do see that my situation has changed, my visits to school were are now less frequent, and are mainly to check on the students and the ATs and to keep the teachers and departments sweet. I feel I'm keeping an eye on the schools, I know this sounds sinister but I do feel that I now have a quality assurance which for me means making

sure that students are getting a fair slice of the cake and that the ATs and PTs are operating within the guidelines set out for them - sorry agreed by us all - a little slip there. I preferred to spend the time observing and discussing lessons with the students, however, financial changes have meant that such luxuries as supervisory visits are no longer on.

Finally Peter felt that if formal university involvement were to end, then the students would lose out on an 'enormous residue of experience, talent and hardware available within subject bases and elsewhere in the school. These resources are always available and usually up to date and all the text books, software, materials, the RLDU stuff and so on would be lost; it would be plain stupid to waste such a store.'

PRINCIPLES AND PRACTICE

Re-casting their knowledge

A continuous thread running through much of Peter's subject work was the principle of 're-casting their subject knowledge so they can improve their teaching and make learning more relevant to their pupils.' This process, as Peter recognised, was neither simple nor straightforward and required tenacity and considerable professional skill.

In his 'What is Mathematics?' session, which was delivered early on in the first term, the opening sequence was both suggestive and cryptic. His first overhead transparency, for instance, was simply a picture of a gate in a field. Peter asked the group whether the gate had been put in the middle of the field or whether the field had grown up around the gate? A discussion developed regarding the nature of seeing and perceiving with Peter pointing out that 'what may appear obvious may be more complex.' This was followed by a number of definitions of mathematics taken from various sources including philosophers, journalists, mathematicians and previous students. The group was then asked to write down their own definitions, the origins of their thinking, and where their understandings fitted in terms of their current conceptions of teaching and learning.

The session ended with the individual definitions being read out and explained to the rest of the group, and then categorised using a typology based on research by Paul Ernest (a maths tutor and researcher). The various statements of meaning were then placed on the display board and the students moved around and discussed them informally.

In another subject session on the teaching of algebra, Peter began by drawing on his students' own experiences of being taught algebra as pupils and then tried to ascertain through specific questioning, the effect these experiences may have had on their current beliefs. The questions were structured around what Peter called 'first encounters' whereby the students were invited 'to interrogate their auto-biographies in an attempt to get a handle on the origins of their understandings and beliefs.' Some responses were extremely vivid with one student remembering an experience in her primary school when she was given apples, pears and bananas and was asked to place them in a particular order; the student in question called it 'fruit salad algebra'. The group were then asked to give more detailed definitions while at the same time reflecting on how such a definition might be incorporated into maths teaching in schools. For some it was all about building up logical thought patterns, for others it was a formulaic necessity vital to increase the speed of calculation and understanding. For another student it was about 'equations and the basis of symbolic calculations'. The variety of responses were then deliberated on to see if any commonalities existed; those that did become apparent were then placed into a composite definition of algebra on the whiteboard.

Peter then shifted the focus of the session to the present by placing their ideas into context through an explanation of some of the changes that had taken place in the teaching of the algebra during the last two decades thereby presaging what they might encounter in schools. Finally, Peter gave the group some up to date alternative definitions taken from various sources including research and professional development projects. Below are three taken from a longer list:

Algebra is:

- A shorthand for representing unknown quantities**
- A symbolic method for generalising problems in a logical way**
- A sub-language within formal mathematics**

Peter was anxious to end this complex definitional process because, as he pointed later, 'the whole thing might turn them off instead of getting them to think of algebra in schools as a mechanism for exploring maths that can both enlighten and enthuse pupils.' Near the end of the session he used the chess board analogy to illustrate how algebra can be used to solve a simple problem. The seminar ended with Peter showing a short video clip of a lesson where the teacher was using algebra in the ways he had described. The group were asked to pick out the 'significant

teaching and learning moments and to make a note of the teacher's actions, instructions and explanations.'

Both these examples illustrate graphically, Peter's attempt to question and challenge the origin of his students' conceptions while simultaneously offering them alternative strategies for thinking about and teaching maths. This attempt to re-orientate their pedagogical and subject understandings was linked to his attempt to create a particular vision of maths teaching which would act as a guide to his students' professional learning. As he put it,

I am continually trying to get to the foundations of their beliefs and ideas because without change at base level, all we are doing is laying on a new set of understandings and methods, which most will agree with but few will really understand. Unless their basic ideas are challenged all they'll do is bolt on the new ideas to older more deeply held ones which in the long run makes them more resistant to change and inhibits the creation of a vision of maths teaching which is so important to their professional development.

Despite this deeply held principle, Peter also disclosed that at times 'the whole process can be very frustrating particularly with those who refuse to consider these ideas and want instead to acquire the surface technical skills.' Over the years he had become less anxious about the 'resistant student' but at times felt that 'the exploration process and the raising of the issues is pointless - sometimes I feel like giving them what they want - some simple answers and model lessons and leaving it at that.' However, his experience had taught him that 'student teachers often don't realise what we're up to until the second or third term some even write to us well into their careers saying they only understood the point of the sessions three or more years later.'

Peter illustrated the nature of this conundrum with reference to one of his current students.

One of my current crop has put up the shutters already and we've hardly finished the second term. She simply doesn't want to engage with the issues. I've been trying to persuade her but she's very resistant. In the classroom she is competent and I think her progress has been fairly good but she is so unaccommodating and I know she is just watching, repeating and tidying up her practice. Her problem is that she refuses to see the relationship between the wider issues and practice, she is not a true professional in the real sense of the word. She listens but only to the practical bits, and is only interested when we do a model lesson or look through resources or explain our introductions, but she switches off when we move to analyse practice and on Fridays she shuts down totally when we reflect on practice in more detail. She thinks the whole thing is pointless, she is not interested in having a vision she just wants the practice.

Peter was quite emphatic that without such a vision, 'students would be rudderless and would get lost in the long run.' At the core of this vision is the principle of getting student teachers to examine the hidden values beneath practice, a process that goes beyond lesson planning and the creation of resources. The origin of the problem, Peter claimed, lay in their backgrounds, which were mainly academic and high achieving 'where the word of the teacher or lecturer is seen as pervasive and set in stone. For many the whole idea of having a tutor who admits he is not an expert is difficult for them and some have great difficulty in adjusting. But they have to learn that in teaching there are no experts because if they did exist then either they would be extremely wealthy because they could simply write up all the answers or very unpopular because teachers can be cynical and doubting.'

Peter then went on to outline the effects of this challenging and questioning process. Some, he declared, became very defensive or while others became compliant; it was the latter that Peter found the most frustrating because he found it difficult to get at 'their hidden reality.' The following extract from the transcripts gives voice to these frustrations and concerns,

Too many students become instant converts to some sort of investigative or constructivist approach to teaching and learning because it sounds so attractive but also because they realise very quickly where you are coming from and they can fit in. I don't want to create teachers who go around with some kind of crusading zeal because it won't last because some new bandwagon will quickly take its place. This type are like the new religious converts who have just seen the light, they are the worst type of evangelical - always proselytizing but never really understanding their beliefs - they are the ones who make a big splash but leave maths teaching as quickly as possible and go on to higher things - sorry about the religious imagery but that's the only way I can explain it - I suppose it is like the new evangelicals in the Church; I've seen all sorts come and go over the years but often their faith is built on sand.

I want them to understand and question their practice and the subject because otherwise they are simply dressing up their old ideas in new clothes. I'm firmly of the belief that it's because so many don't have a clear vision to place their teaching in that teachers end up moving around and shifting ground which is bad for the pupils because they suffer from all this change. One of my main roles, as I see it, is to help them develop some sort of reasoned vision.

Connecting with their thinking

A second practical principle underpinning Peter's work is discernible in his use of the term 'connecting with their thinking.' The problem of the unshakable student outlined earlier, formed the basis to explanation of this aspect of his work.

The problem with this type of student is that they always give you what you want but when you begin to question their thinking is only superficial and is part of the bargaining process that goes on in any teacher - learner relationship; they try to tell me what I want to hear but I would rather hear the opposite; someone who will not change but who puts up a good defence for doing so - at least there is common public ground between you. Too many students take on the rhetoric of change but maintain their own beliefs and values. You can only succeed by trying to connect in some way with their thinking, however difficult it is.

Peter was also cognizant of the fact that the attempt to instigate secure and long lasting change in such a short time scale was problematic; particularly when the time scale had been further telescoped with the coming of partnership. His main strategy in this battle for 'hearts and minds' as he put it was to have 'an on-going dialogue with the students; one that is continuous and consistent, in an arena that is open and free from prejudice and where they can express themselves and be challenged without fear of recrimination.' The first part of every Monday's session in the Autumn and Summer terms aimed at encouraging this dialogue. In one observed seminar, Peter concentrated his efforts on starts and finishes to lessons. This involved inviting students to come forward in pairs (these pairings were based on school placements) and give a brief account of a lesson which they had either introduced or concluded. The whole group were given a verbatim account and the accompanying resources were distributed.

Each example was then discussed by the whole group and suggestions, criticisms and alternatives were offered. At times the critiques were harsh but compelling and the pairs looked on their colleagues as critical friends. Peter's own character clearly had a lot to do with the positive and supportive atmosphere generated within the seminar and his own commentary was part of an attempt to unite with their thinking. At crucial points he attempted to link their practice and experiences with a wider vision of maths teaching while at the same time pulling together the diversity of ideas and practices into a coherent position. At one point a pair of students described an introduction they had given to a lesson on fractions, Peter immediately tied their ideas up to a research paper they had been discussing in the previous session, while simultaneously connecting the tactic to the National Curriculum.

After the session Peter was clearly of the persuasion that such a seminar was only really possible in a university environment. Where else, he insisted,

could you knit together research, the National Curriculum, resource materials and my own experience to form a coherent professional learning situation. Connecting with their thinking is vital of element if practice is to dynamic that's why Mondays and Fridays are so important. We have a duty which is part of our unique presence in teacher preparation to help them (the students) have a place where they can discuss, talk and make links with each other and each other's practice. I know good ATs and some PTs do this but it is still confined to the school; we are outside and I can connect with a number of institutions - I'm like a switchboard - I can plug into the contexts.

Such an approach was associated closely to Peter's belief in his role as an agent of professional socialization. He was all too aware of the power of schools to influence aspiring teachers and to wash out the ideas they come into contact with in the university. In this sense the maths seminar was viewed as a 'neutralising agent; one that 'balanced out the powerful impact of school on their thinking and practice,' however, this did not mean there had to be 'a rigid commonality between us and schools or that there should always be constancy, there can't be consistency of practice there will always be divergence and that's a good thing - its what's underneath that matters - the vision thing!'

Helping them to see

Another powerful principle at work in Peter's thinking and practice was best summed up in his statement 'helping them to see'. This he felt had become more prominent in his practice since the emergence of partnership. He was of the opinion that the changes meant a greater stress being put on 'strategies for looking' so that when they worked in schools they would be able to 'explore the nature of learning, various aspects of practice, the structure of schools and classrooms and the teacher's role.' A number of sessions were 'clinics' as he called them, whereby aspects of the teaching and learning process, the role of the teacher, classroom interaction and management were examined through 'guided tours'. These involved the use of various guidance materials to help students understand what they were observing; and appeared mainly in the guise of interview sheets, check lists and observational instructions. One session involved training in observational methods with Peter drawing on a research handbook written by Ted Wragg, while in another seminar his students were shown how to use check lists to understand the classroom management techniques of their ATs.

The findings were examined in 'critical incident seminars' which took place after the serial visits and school placement weeks. Throughout Peter invited his students to choose, in turn, a critical incident from the week, describe its origin and structure and then invite comments. He then chose a small number (usually four) and got the students to work in groups the purpose being to pool ideas and to come up with alternative approaches, ideas and strategies. Some of the incidents were classroom management based - one for instance was related to the use of video where a teacher had encountered a specific behavioural problem with a pupil; another was based on an incident in a student's own teaching whereby a pupil had problems understanding the addition of integers. The following extract gives a flavour of the way in which Peter dealt with the issue:

S1 - Well I tried to lay out the rules...like if you had two negative integers, the two negatives make a plus, but he couldn't get it...

P - Let's tease that out a little more. What do you mean?

S1 - Well I tried to explain that if you had -3 plus -4, then you just ignore the negatives.

P - Go on.

S1 - Well it's just $3+4$ but then you just stick the negatives back in.

P - Any other ideas?

S2 - I would have used a number line with numbers either side of 0. I would have gone to the first number on the line, and then to add a positive you group the line....to add a negative you go down the line. Then I would have tried to get them to work out $4+(-2)$ but that might be confusing, so I would probably go to 4 and then to -2.....

P - Let's tease out the problem a little more - what happened next?

S1 - Well I don't think they really got the idea of positive and negative numbers even though I'd been told they'd covered it already

P - So what did you do?

S2 - I gave them the answer and tried to work back but that still caused problems I think because they might have been confused before I started.

P - Yes I realise that it's hard to jump in and take over particularly when you don't know what's really being going on, but you need to explain things carefully, if you use the number line, the move to the right for adding and the move to the left for subtraction. But this requires the opposite of what you should normally do. So although it seems as if you should be moving to the right because you're adding, because it is a negative number, which is the opposite you should move to the left. You need to slide your finger and make them follow.

This excerpt shows that the students were engaged in thinking about how to teach integers and discovered that the process of learning was not as straightforward as they had first supposed. The number line, despite its familiarity, did not according to Peter 'ensure learning.' He continued,

P - The number line is the usual format and it works well for some things but it can cause problems with subtraction. I don't want to be too harsh on the line because I know that it is popular but are there some alternatives?

S3 - We thought of using money because kids love money - you have so much etc. and how much do you owe and so on.

P - Carry on.

S3 - Well I haven't fully thought it through but you could start with the idea that you owe somebody money so you're in the negative but then you owe them less...so that's where you get the two negatives but somehow you have got to turn around and face the positive.....I suppose you could subtract from the debt a positive number, say a debt of £50 is reduced by your parents paying £ 20.

P - These are all interesting ideas but the crux of the problem is that for you the whole concept is easy, so easy you don't even have to think about it but when you are faced with a class of kids who just can't get it, it becomes a problem especially if it appears to you to be easy. You have to move from knowing this for the purpose of getting an answer to knowing this for the purposes of getting children to understand it - that can be quite a problem. You have to work at it and experiment, ask your AT for ideas and use each other. There is no easy answer and it may take time in fact when you've discovered a way and you think they've cracked it someone will say I still don't understand.

It is clear from this segment that there are two levels of knowledge transformation going on. The students are engaged in re-learning and transforming their own understandings of the subject while simultaneously being engaged in thinking about how best to teach the topic so the children naturally learn. In this and other instances, Peter drew extensively on his knowledge of typical pupil misconceptions while simultaneously addressing the preconceptions and concerns of his students. He disclosed,

These sessions are attempts to help them get a grip on the new world they are entering. All of them have been in classrooms but new teachers don't always see things the way they are or might be. Also they quickly go native and might get carried away by a particular teaching style and try to copy it in their practice without realising that it's taken years for that member of staff to perfect it. They are also very egocentric until well into the second term and can't understand children's problems easily. They are all high achievers but many they encounter will be average or below and it's difficult for them to see the problems. By being so varied allows coverage and challenge while at the same time getting them into teacher mode and out of pupil mode.

Many of Peter's practices had evolved throughout his long career. He openly admitted, however, that this vision can be expressed in many different ways and he is in favour of heterogeneous methods of teaching. However, this diversity can be problematic, he commented that, 'often the view of maths teaching introduced to them does not readily fit what they see and have experienced as pupils, and they can become confused, defensive or just play your game or play you off. Take investigative maths for instance, that is central to the National Curriculum, and it has a clear philosophical rationale, but many just see it as fun; something to liven lessons up, that's when I get worried.'

Peter was also concerned that many of the suggestions for practice offered to his students were taken as straightforward 'kits'; answers to their immediate problem 'of teaching year eight on a Friday afternoon or something similar. While I'm trying to get them think beyond that and to understand what's behind it all. I sympathise with them because teaching is immediate, but just taking lessons and applying them without a vision is meaningless - it's the worst sort of plagiarism.'

A living model

A further principle can be seen in Peter's description of himself as a 'living model - not in the fashion sense you understand I'm no Cindy Crawford.... but I want my students to see that what I do is in line with what I say and that my own teaching is consistent with my vision.' This principle has a strong ethical foundation and is based on the building of mutual respect. Peter feels it is incumbent upon all tutors to have a commitment to teaching and to try to model good practice, he said that 'this did not only mean in the classroom but also in professional behaviour and attitudes. I and others here, including you, are powerful role models and our relationship with them must reach high ethical standards, confidences must be kept and good professional behaviour and caring must be central.'

In his sessions Peter always prepared thoroughly and presented his material often as if he were a teacher. He always gave the students meaningful tasks and tried where possible to guide them into certain ways of working. The sessions highlighted in this part of the case study are indicative of his commitment to high quality teaching and his belief in the power of stylistic role modelling. He was of the opinion that the way tutors presented themselves in seminars was of the utmost

importance and could influence both the professional perspectives of students and their emerging teaching style.

Encouraging reflection

A final strand running through both Peter's principles and practice was his belief in the use of reflection as a professional learning tool. His personal conceptions of reflection, however, predated the coming of the concept to teacher preparation and was not based on the reading of Donald Schon or other popular theorists. Instead, he could trace his ideas back to his time spent as an evaluator on the Schools' Mathematics Project. It was here that Peter first came into contact with the idea of illuminative evaluation which he defined as 'the attempt to ask pertinent questions about the nature of practice.' This process, he felt, was highly personal and was in the main 'an intra-professional dialogue that any good teacher undertook.....a private dialogue within a professional world.' However, he made no distinction between evaluation and reflection: the former was seen as 'an engagement with the very act of teaching, the materials and the methods associated with it;' reflection, on the other hand, 'is about how that evaluation is put to work in developing and improving one's practice.'

In his subject work Peter employed this distinction continuously, a point highlighted in the following extract,

Our written assignments are always based on these twin concepts, evaluating a piece of IT software used in a maths lessons is typical. However the reflection comes when they are asked about the impact on their practice and how it might improve the quality of learning. In a session I ask students continually to comment on their practice and to share their ideas and plans. Reflection, in this sense, is a window on their professional learning; an attempt to give them a guiding structure for their professional future. It also helps them become inquisitive and helps them to find purpose and meaning in their work.

Many of the observed sessions had this strand running through them. Continually, Peter asked fundamental questions related to practice and the sorts of criteria that might be used to judge its effectiveness. This 'illuminative evaluation' as he called it, helped 'to put their (his students) practice under some form of scrutiny' while the reflection allowed them 'the space to think about and change the approach if necessary.' Peter ended his thoughts on reflection with some warnings: he was concerned that the rationalization of teaching and the bureaucratic approach to assessment of both children and students, meant that the time, the necessary pre-requisite for reflective practice, was being removed from teachers' lives. Perhaps, he claimed that was part of the government's 'master plan,' but whatever the reason, he was adamant that

teacher education courses must provide that space for such thinking, and if institutions lost that role then teaching would simply become an 'operative occupation'. He ended by encouraging his colleagues to embrace reflective practice in a more open way, and pointed out that 'unless we reflect and evaluate our own practice more thoroughly; unless we make our own reflection more open and public to the students they are in danger of simply reacting with the old phrase 'this lot are saying do what I tell you to do rather than do as I do.'

CHAPTER SEVEN

PHILIP

Biographical synopsis

Philip was born in North London, the only son of a postman, in 1950. At the age of five his family moved to Stevenage and he was one of only two children in his local primary school to pass the 11+ examination and gain a place at the local grammar school. Despite struggling at first, Philip gained a clutch of ‘O’ levels and three ‘A’ levels and went on to study Spanish and Italian at Salford University.

After graduating in 1972, Philip went to work in the tourist region of Spain. He returned in the Winter of 1973 intending to raise money in order to study for an MA, however, despite his lack of training, he was offered a temporary teaching job at a local comprehensive school. Within a decade he had become a head of modern languages at an inner-city boys comprehensive in Birmingham and in 1987 he was seconded by his LEA to complete an MEd in ‘Information Technology and the Languages Curriculum’. During its completion he applied for and was successful in gaining the post of Lecturer in Modern Foreign Languages Education at the School of Education in Bristol.

In 1992 he was appointed joint co-ordinator of the PGCE course, a post he held until 1996. At present Philip is involved with the training of new lecturers across the university.

IMAGES OF SUBJECT

Language as intuitive understanding

In offering this image of his subject, Philip can only give a verbal rendering of a deeper pattern of experience, the totality of which includes much else besides words and articulated thoughts. The relevance of Philip’s early family and educational experiences to its creation was particularly noticeable in the data, although later biographical experiences both as a father, undergraduate, teacher and tutor further clarify the image in terms of its substance and origin.

Philip first mentioned the image in a graphic representation of his early days at a boys grammar school in Stevenage, 'I remember not doing very well in most subjects but I found myself completely at home with the verbal interaction in the French classes because I could do it intuitively. I suppose I had this ability all along but didn't realise it. But when it came to the literary parts of syllabuses I encountered problems and I had this fear of not being able to succeed.' This he put down to his family upbringing and his social class background, he commented,

I realised soon after entering the grammar school that most of the children came from a different socio-economic group to me. My parents came from the working class while most of my classmates were clearly middle class. I realised it at first by the clothes they were wearing. Mine were baggy and about two or even three sizes too big so I could grow into them and they were shabby in comparison to the other boys. There was also a linguistic difference; in our primary school we were all very similar but in the grammar school they all spoke so well and sounded so clever.

He managed to succeed at languages because they were foreign and he could hide his accent. Also he felt he was quick witted and was used to oral interaction because of his familial roots. However, he admitted that there was only a small amount of verbal dialogue within lessons but it was 'still more than in other subjects all of which were taught very didactically'. Philip also felt that his culture was marginalised at the grammar school where his ideas and experiences were not valued. 'Most of the writing,' he recalled, 'was transactional and his own cultural and imaginative world was given very little scope to flourish.' He went on,

My experience was marginalised in the curriculum and I had to adapt quickly otherwise I would have been thrown out. It was problematic early on and I was at the bottom of the D stream which was the worst and I was threatened with expulsion. It was that fear of being kicked out that drove me to succeed. I climbed steadily upwards - slowly and silently - but I was driven by the urge to succeed and I didn't want to let my parents down.

By the age of sixteen, Philip had worked well enough to gain a good clutch of 'O' levels with his main interests being in languages and history. In the sixth form he chose languages because he had been most successful in them but was unable to apply to most universities because he lacked a Latin 'O' level which was then a necessary requirement. He finally got a place at Salford to study linguistics with Italian despite doing French at 'A' level.

After gaining a lower second class degree, Philip decided to work in Spain order to fund a higher degree in politics at the University of Liverpool the following year. Having married in the first year of his studies both he and his wife returned home to Stevenage at the end of the tourist season. Having made himself available for work, Philip was sitting at home reading Trotsky's *History of the Russian Revolution* when he had a visitor. As a graduate in languages he was, unbeknown to him, also qualified to teach in secondary schools. The visitor was a deputy head of a local comprehensive school and Philip was offered a temporary post at the school. This proved to be the genesis of his career.

Philip arrived the following day and reported to the Head of department. He was told to 'get a kid to read a section from the text book, ask them some questions, and then get them to copy out the rest of the chapter.'

So he entered the classroom for the first time and he recalled the moment vividly:

They were quiet and surprised. I asked a boy near the front to read - then the class burst into hysterics and uproar ensued because the boy couldn't read English let alone any French. I didn't know what to do so I let them go wild; I had no experience and they hit me with all they had. When I asked for help I was told to 'thump the little bastards.'

Although a novice teacher, Philip did not enter the world of modern languages teaching *tabula rasa*; he had already collected a wide range of ideas about languages and how they might be learned. Many of these beliefs stemmed from his undergraduate education which was, he claimed, 'formative in creating my current ideas about the nature of language acquisition The course was about languages and the language learning and in many ways was an ideal basis for my career - although I didn't see it as a career at the time just a stop gap.' He therefore felt he already had a radical conception of language learning 'one which was embedded in my psyche well before I had even thought of becoming a teacher.' He continued,

It was because we did lots of linguistics in my degree so I'd explored theoretically, the origins of languages and how first languages develop. So I'd done a fair bit of thinking and reading on language acquisition. By the time I started teaching, which came about by accident, I felt I already had a more naturalistic approach - one that was intuitive and based on verbal construction of meaning. I now notice that my experience compares quite noticeably with most of my current students who come to the PGCE thinking that the grammar - translation method is all there is and it's set in tablets of stone.

His reading of Chomsky had been central to his thinking and gave him alternative to the classical grammarians; this combined with the study of socio-linguistics was vital in forming his early image of his subject. And yet for years during his early teaching career, his thinking was still hidebound dominated by the belief that 'learning was still predicated on coming to a better understanding of language which could be imparted by the teacher to the children.' This approach had its roots in the fact that up to that point he had been offered no real alternatives nor any reference points upon which he could fix his thinking.

This 'intuitive and naturalistic approach' as he called it, was further developed and reinforced by his observations of his young son learning to speak at home. 'This experience as a father,' Philip asserted, 'gave substance to many of my thoughts about mother tongue methods of learning and I began to see for myself that learning a language was natural and not rooted in any structure.'

By the end of the 1970s and early 1980s Philip's subject understandings were evolving alongside his pedagogical approaches. He was moving away from the utilitarian and drill based excesses of the audio-visual and direct method of teaching to seeing languages as having a 'deeper more fundamental meaning.' This he associated with the drift in psychology away from behaviourist notions to more cognitive based approaches and stated that 'I was moving away from seeing languages as a series of habits or conditioned responses to seeing them as a focus for the development of meaning through cognitive awareness'.

In the 1980s these approaches were further developed by the coming of the mother tongue theories of language learning and the pioneering of target language methods of teaching. The National Curriculum was therefore regarded by Philip as a 'unifying force...embodying all the current thinking and providing a guide for best practice and for me it was a revelation because the intuitive, naturalistic approach combined with the emphasis on target language methodologies offers the best hope for advancing language learning.'

IMAGES OF TEACHING AND LEARNING

Principled eclecticism

As has been shown, Philip arrived in languages teaching by a fortuitous route and his entry into the profession coincided with the development of a series of seismic changes to the way the languages were perceived and taught. By the end of the 1950s despite the supremacy of the grammar translation method and the narrow base upon which languages teaching rested, on the horizon were three developments that were to revolutionise the way languages were taught. The first was the arrival of new technology in the early 1960s; the second, and around the same time, was the beginnings of the comprehensive school, and the third was the relaxation by many university departments of their strict entry rules.

The interaction of these changes gave rise to the audio-visual approach to languages learning which began effectively in 1962 with the Audio-Visual Language Project. This was linked to the conviction that modern foreign languages teaching involved more than the delivery of a literary cannon for writing and should instead concentrate on the development of language for use. Furthermore, the dethroning of selective schools throughout the 1960s and 70s, combined with the emergence of the romance languages as genuine alternatives to French and German, saw languages teaching change dramatically. The Newsom Report also suggested that the growth of foreign travel to Europe had produced a strong case for acquiring at the very least tourist knowledge of another language. Associated with these developments was the proposition that language learning was for everyone not just a sullied elite, it was as Philip remarked 'a democratic and egalitarian view of language learning.'

At his first school the audio-visual method became popular and immediately Philip became a strong advocate of the approach. The stress on the spoken form and the use and deployment of support materials appealed to his image of language learning as being intuitive. As he learned the craft of teaching, Philip applied for a full-time post in Stevenage and at his new school, his head of department became his mentor. This significant other was observed and copied wherever possible and became Philip's guide and role model. 'He was dynamic and charismatic in the classroom' he claimed, 'he had zing and could always get the pupils to understand and participate in their leaning. He was so enthusiastic it was unbelievable. He could push kids along even those who appeared to be uninterested in learning. He was totally committed to giving all

pupils a languages education they deserved. I watched and copied as far as I could and I realise now that many of the things he did could be acquired through practice, they were a bundle of techniques but the vision and the commitment, that was something else.'

Here we have a glimpse not only of Philip's own theory of language teaching but also of the role of practice in the process of learning to teach. The skills of teaching remain for Philip, a set of tactics that can in most cases be 'copied or internalised through practice and application' and he 'was a living testimony to that process'. However, he admitted that the other wider professional and subject understandings,

were more complex and needed to be developed in other ways. Students need time to deliberate on the tactics, and a place to think and understand the issues and above all the application of thoughtfulness; and that's where we come in. Teachers are too bound up in their practice to stand back from it, and perhaps they shouldn't because then you lose something special, that intuitive feel that comes with being on top of your job. We, on the other hand, have the time and space and expertise.

Philip's enthusiasm for the audio-visual approach was augmented by regular in-service training and the development of resource based learning as a pedagogical mechanism. After working for three years in Stevenage, he moved to become a head of subject at an inner-city school in Birmingham. There he introduced the approaches he had used at his previous school and developed the communicative method to language teaching. His openly 'evangelical approach' as he put it, was in retrospect,

a little circumspect because there were problems with the approach that were glossed over. Oral work, for example, was very specific and many kids didn't always take to it. Some still preferred writing and I remember very clearly shouting at some kids for secretly writing vocabulary down on some paper during one of my lessons. Looking back I can see a lot of shallowness in the approach. It was learning a language but at times it was dead dull. Although we were teaching it for use all we were doing was helping them to be able to buy a bag of potatoes in French or spending a whole term getting them to buy two bags of potatoes. The only real advantage was that it was less academic and more user friendly but it had nothing for the soul in it.

Philip continued on this tack and further outlined his image of teaching and learning as it related to both his experiences in schools and to the many debates that had taken place within language education community. In the following segment of dialogue taken from the transcripts, we get a clearer picture of Philip's image of teaching and learning as 'principled eclecticism:'

P - In my opinion, there is a continuing and healthy dialectic between those who advocate teaching the use of language and those who want to teach about language. Most educationalists now seem to agree that languages needs to be taught for basic communication purposes rather than teaching about how that knowledge functions. From that basic division lots of sub-divisions occur in relation to teaching and the appropriate methodological approach. How do you teach languages for a practical purpose without lapsing into routine and drill teaching? This is a fundamental question and goes to the heart of the issue, for me there is no one better way, rather I prefer the image of principled eclecticism.

I - What do you mean by that?

P - Simply that as a teacher and as a student teacher you have to choose from a variety of approaches that are available to you. But your choice must be based on a vision of languages learning that is rooted in the mother tongue tradition. That's effective practice.

I - So could a teacher or student teacher use elements of the traditional grammar - translation approach and you wouldn't mind as long as they could justify it?

P - Well that's difficult because I still believe that exposing pupils to a language is one of the most meaningful ways of getting them to learn to communicate in that language. So my answer is yes and no. If they saw fit to use the grammar - translation method for a particular purpose then yes, but it would have to be balanced with other approaches because that single method could not suit all the pupils all the time. But principled eclecticism means that you choose an appropriate approach within a general position - a vision of good practice and learning that underpins your work based essentially on verbal interaction and language acquisition, so the grammar method wouldn't really fit, only occasionally perhaps. That's why it's so important that we give them that vision, so that a foundation for their practice is laid and it can then evolve from a principled position.'

Active and autonomous

Despite some doubts, Philip is still committed to seeing teaching and learning in languages as 'a dialogue between teacher and taught,' and he believes fervently in what he calls 'the progressive canon, in that learning is more substantial and long lasting if it is tied to experience because I believe that didactic is a weaker form of pedagogy than more child centred approaches and that active and autonomous learning are central to children's linguistic development.' He expressed this position in the following image,

learning should be active and autonomous and this underpins much of my thinking about teaching; it influences my work in PGCE and is a powerful strand running through my own practice. My image of good teaching is bound up with it, when I think about my practice, I always think about whether they, the students, have taken a step towards this objective and my sessions are based on the notion.

In his subject sessions at the university, we see this image at work. Its central tenets can be found in a small slice of dialogue again taken from a transcript.

I - How does this image fit with your work as a tutor?

P - It means that my students are encouraged to develop their understanding independently but within a collaborative environment. I try to help them become active in their own learning by challenging them and by giving them tasks that make them interact with the material, then they become active constructors of their own professional knowledge. This then helps them become more independent and autonomous in the way they think - I'm trying to get them to think for themselves,, to break with convention and become autonomous self-supporting learners.

I - We will discuss later how you go about doing this but could you just tell me a little more about the image and how it might relate to their practice in the classroom?

P - The idea is that once they become active and autonomous learners themselves they will see the value of the approach and will use it in their own classrooms. They have to learn to do this themselves then they will become self guiding professionals, because as you know, it's probably the same with the historians, they come in with a very fixed view of teaching and learning and some of these concepts are alien to them, even if they have come from progressive schools. It's because they are pupils and pupils don't always see what is going on - to them lessons are just lessons.

IMAGES OF STUDENTS

The raw material of teaching

For Philip student teachers are the 'raw material' of teaching and he sees his role as helping them 'to navigate a pathway through the morass that faces them.' His priority is to 'open doors for them,' and to 'help mould their skills and abilities so that they can realise their professional potential.' This declaration of intent is discernible in the following exposition taken from a transcript:

Being influential puts lots of pressure on you to act responsibly. You are automatically important because you're their first and main contact with teaching; my office and seminar room and whole School of Education is their home in a very real sense of the word. It's like being a parent - every parent influences their children; sometimes it's what you say, sometimes what you do, sometimes what you have to do - but overall I think your approach, your style, your commitment is vital. I am very committed to my students and I show them I care; we have to do this because they are the raw material of teaching. So my role is to help shape their professional lives and in so doing I have to be reliable and trustworthy and just be there for them. Sometimes it's just listening, or giving advice on a lesson plan or whatever. But they now I give them a high priority and I hope

that through this living relationship they themselves will become committed to their pupils and give them the high priority they deserve.

The metaphors of moulding and shaping are frequently inferred in the data and are testificatory in terms of his practice. Additionally, both are linked to his belief in the importance of the affective elements of teaching as being distinct from the technical, furthermore, he is captivated by the idea that tutors, teachers and student teachers are all linked within a greater community of educators. In this sense it is the experience of working in teacher education which has been a major influence on the development of numerous aspects of his practical knowledge. When he arrived at the School of Education he was committed to a limited form of social reconstruction which he thought would precede *a fortiori* through the adoption of particular practices, however, his early work with students made him re-think his position as the following extract illustrates.

I remember vividly telling my students over and over again in my first sessions to be child centred; can you imagine that, actually telling them forcefully to be child centred. The realisation of what I was doing only dawned on later. I was adopting the very approach I was attacking! I remember one point very clearly because the students were sitting quietly and there I was telling them how to be child centred and how to develop autonomous learning; looking back it sounds ridiculous. But I slowly began to realise that teaching, that helping student teachers is a far more subtle process and that exhortation was not the way. From then on I began to think of students as learners in the same way as pupils I suppose and my practice became more sensible - but it took time, it wasn't immediate. The longer I worked with them, observed them and reflected on my practice the more I began to change'

As universal learners

The experiences recounted above and others like them did not blunt Philip's enthusiasm, instead they forced him to adjust his pedagogy so that his students' learning would be more profitable and his practice more effective. This gave rise to his second image of student teachers as 'universal learners.' He gave voice to this image in the statement outlined below,

Student teachers are very much like other learners - whether it's learning to drive a car, to draw or to arrange flowers - the basic elements are the same; they are what I call the universal elements. I know I'm dealing with adults who are on the whole motivated, intelligent and articulate, but essentially situations have to be set up so that they can learn. Being in the classroom has given me a reservoir of knowledge, experiential knowledge, that is vital to my work. Whether it's recalling an incident from my teaching, or whether it's drawing on my experience to outline a more general issue, the point is that it is not enough. In the early days that's all I had now it's the foundation with much more built on top.

Two elements are crucial in understanding this image. The first is Philip's notion of nurturing which is given substance in the data by his use of the parenting metaphor. Throughout the transcripts, he continually made reference to 'being a parent to them,' and 'being a father figure' or 'helping them grow up'. These not only draw attention to the ethical aspects of tutoring, in particular the pastoral and personal, but also highlight the need for tutors to be positive professional role models. The second element can be described as discovery. This was well defined in the data and is linked to his image of teaching and learning as being active and autonomous. In the interviews, Philip moved back and forth between his own experiences as a teacher and his present role as a tutor, drawing parallels between his thinking about language learning and that of the learning of his students. At one point he insisted that,

both kids and students find problems, uncertainties and complexities when they are in the act of learning, so in many ways they are discovering new things. My students crave solutions to the immediate problems they face - just like kids who want the answers quickly. I can understand this and given my own past I can see their frustrations but we don't have the answers, they have to find things out for themselves. I can help and nurture their learning so that it is as trouble free as possible but sometimes it's damn difficult convincing them that it's good for them, to be pondering and confused - when I started this job I used to be very prescriptive until I realised that there were too many of their needs ever to be answered.

The nurturing and discovery elements are also present in Philip's description of the essences of teacher education.

I don't see the technical elements as being the most important part of teaching or learning to teach. Classroom management, lesson planning, and the various methodologies of language teaching can all be learned in a fairly straightforward way. I'm not saying it's easy but with exposure and guidance they can be acquired. I prefer to work on the philosophical level, the ideas level. Teacher education in universities is about helping student teachers become part of the wider community of modern languages teachers. It is also about influencing pupils and passing on the nobility of teaching. In this job I can touch the lives of children, albeit at a distance, and through others I can reach a wider audience. That's one of the main reasons why I entered teacher education in the first place.

In trying to stress the technical and the philosophical, the vision as well as the practice, many tensions accrued. For Philip the situation has not been helped by the demand to inculcate the essential competencies and skills that the government feels makes up effective practice while at the same time trying to reconcile these to the realities of learning to teach. Here the uncertain nature of classrooms and the inability to narrow teacher education down to simple technical processes, often led to him to pander to the 'students' worst excesses.' He went on 'they (the

students) demand quick solutions to classroom problems and they look to us to provide them, if we don't then we are being irrelevant or not helping them, but we don't have the 'Holy Grail' of teaching, because if we did then it would all be simple - just do this and that and the children will learn. We have to show them the complexity and that is sometimes hard for them to accept.'

Helping them gain independence

Philip's continued commitment to schools and learning heavily influenced the creation of his third image of his students, that of 'helping them achieve independence.' Again the past, the present and the future merge in a synthesis of experience, however, his sentiments are qualified by a feeling of the unknown. A factor which might be indicative of wider uncertainties about the current situation regarding initial training as well as showing his thinking to be still in a state of transition.

This job is all about teaching pupils at a distance and it goes on perennially. I didn't start off thinking that, but it has gradually emerged particularly now I can see my ex-students at work in schools. It's a real delight when you see an old student - in fact I've now got two generations of students out there and I see them doing some of the things I've taught them and influencing people. I then think back and say to myself I did that. This is what I try to do - get them to take forward an enthusiasm for the job, an interest in languages and pupils. Often this is done at a semi-conscious level but it becomes more conscious as you gain experience both in teacher training and life in general. The problem is that we don't know what is going to happen in the next few years; we don't know whether they or we will be allowed to develop innovative practice. The whole enterprise might become hidebound and very technical then the job would be sterile and the students would be technicians.

During his first two years in the job, Philip felt he embodied all the elements of good practice and that all his students needed to do in order to succeed, was to emulate him. 'By copying and understanding me, the master teacher, I thought they would automatically become good teachers.' He has now moved away from this position and sees his role as encouraging in his students 'a sense of independence.' With the benefit of hindsight he would have liked some training and some mentoring during the first few years in the job because he felt that too often tutors were plucked from school environments and placed within teacher education simply because they are good practitioners, but without the necessary training and very little guidance. As a result he learned 'on the job by the very methods we now abhor when it comes to our own student's learning - it was sink or swim.' The following extracts outlines this problem in some detail and the ways in which Philip came to terms with it. The first is a confessional piece while

the second emphasises the difficulties encountered when trying to encourage independent thinking in his students.

When I first took on this role I was very dogmatic - I told them this is how you should teach and all their ideas and beliefs were crap. I believed I was a super teacher and I relied heavily on my school experience. I constantly used anecdote and examples from my teaching because that's all I had to go on. You get very little guidance and you have to use your past for ideas and actions. Looking back it was all wrong because I was working from back to front. I didn't take their differences into account, I saw them all as potential me's. I wanted them all to have a similar approach to me, I wanted to see myself in them. I used to get frustrated by those who couldn't or wouldn't take this on board. I didn't want to push them too hard but I felt I knew what good languages teaching was about and I embodied many aspects of it.

I still get cross and it's difficult not to feel hostile to student teachers when they are resistant to the vision behind my course - but as you go on, more and more adopt the ideas. Some slowly at first but I now know that independence of thought and action doesn't happen overnight, it can take years. Most are only just perhaps beginning the journey of discovery that I and many like me have been on. We just have to be patient with them and take it bit by bit. They have to go on the journey to independence - you can set them up, but some will revert to type and rely on their own conceptions of teaching. It is then they begin to flounder around like I did for all those years. It's then they realise why so many schools have abandoned the old methods. So they have to go on a mini-pilgrimage of their own and it is my job to smooth their path and help them understand the processes they encounter. But when it all comes together it's really satisfying to see student teachers putting into practice the ideas you have talked about and presented to them. That's when I get real job satisfaction; That's what I came into the job to achieve. Because these students will be in turn influencing teachers in their departments and taking forward ideas and ways of working. It's great to hear teachers comment that it's good to have a student that they want to go and watch and can learn something from. That's influencing the future, I just hope that all the changes to schools and training won't stop that happening because it makes it all worthwhile.

IMAGES OF SITUATION

Being on the margins

During his time in Birmingham, Philip was seconded to study for an MEd in psychology, language teaching and Information technology. The experience proved to be an auspicious one. First, it was the first period of extended training Philip had undergone; and second, his teaching was to be directly informed by the reading and thinking he was required to undertake. At last he felt he was able to understand his practice and realised that 'theory and practice could be integrated if experience was matched with a structured theoretical input.' This approach became an important precept for his work with students and has subsequently influenced his thinking and practice in teacher education.

As head of department at an inner-city boys comprehensive school, Philip admitted being absorbed by the experience while the MEd nourished his hunger for direction. But it was, he confirmed, 'a subsuming experience' because the children were 'amazing but wearing; they both drained you and consumed you'. After completing the MEd, he decided to leave the school 'in order to survive' and applied for the post of lecturer in modern languages education at the University of Bristol, although he confessed,

I didn't expect to get the job and I was surprised when they offered it to me. I applied I suppose because looking back I felt it was a way of making my views prevail to a certain extent. It was an opportunity to influence people the way I thought about teaching and learning and about education as a whole. When I got it, I was nervous but I saw it as a challenge, a way of extending good practice to others who in turn could influence children, more children than I could ever teach single-handedly.'

When he arrived at Bristol in 1989, Philip admitted he underwent a number socialisation problems. He felt different, out of place and became suspicious of what he witnessed and experienced.

I was concerned when I arrived not to stand out - I didn't want to be seen - so I hid myself. This is what I did when I went to grammar school for the first time. I felt intimidated everybody had grand titles - Dr. Meadows, Professor Hoyle and they all seemed to have an upper middle class accent. This wasn't really me especially after having come from Handsworth. It was a real culture shock. So in my first year I was concerned not to stand out; I didn't want to be seen. It was part of the process of adjustment and was linked to the whole process of moving, leaving the inner-city and buying a house in suburbia. The house move exacerbated my feelings of being on the margins, I just didn't fit in.

His early understandings of the job were straightforward. He saw it as being responsible for the training of teachers, to develop their skills and to pass on 'good practice' which he felt he embodied.

When I arrived I thought the job was about 100% training modern languages teachers. It wasn't until after I arrived that I slowly began to realise the job was about more than this. The publishing and research element became clearer the longer I stayed. However, I did arrive with a mission I suppose: to do something about the needs of black-city kids. However, I soon realised that the institution was not geared up to it and I sometimes felt I was walking into a brick wall. Nobody was interested and many didn't know what I was really talking about.

One meeting of the PGCE tutors is clearly inscribed upon his mind, he recalled the event with some unease,

I remember in one of my first PGCE meetings I brought up the issue about why we had so few black student teachers and what we were going to do about it? The Professor said the reason was that very few black people took degrees and therefore we didn't get many applications. So I asked could we have an active policy which was designed to encourage more black students to apply and which worked to their advantage. The answer was emphatically no! Because he said that would be discriminatory and we are not allowed to discriminate in our admission procedures. In other words shut up Philip! There were a number of similar instances and my questions were greeted with similar contempt.

Philip explained the problem in the following way:

There is simply a complete lack of understanding here about the real world of education. I think it's because schools are such a long way from schools of education. I also think it's because universities have a different agenda from schools and people who enter a university are sucked up into the research or theoretical field which gives the institution its academic power and force but it doesn't necessarily help schools in any way. Sometimes I feel the place is doing a disservice to schools by creating a science based on nonsense. I mean the idea of the emperor having no clothes often goes through my head at this place. The trouble is that there is an element of self preservation. I know if I want to stay and get on in this institution I have to produce the goodies - research papers and the like. It's a real tension because I entered the job with the sole view in mind to teach teachers and yet if I am to survive and to succeed I have to adjust my beliefs and priorities so that I can get recognised by the institution. This ambiguity and the position of PGCE just tutor pushes you to the margins in the institution.

Despite the ambivalence, Philip was still totally committed to the PGCE programme which meant that research inevitably become subsidiary to the job 'fitting them in where there's time and space.' This situation was aggravated by the fact that for Philip 'there was no real debate in the institution about the nature of research and what sort of research might best serve teachers and practitioners.'

Two years into the job Philip was appointed joint co-ordinator of the PGCE course, an experience that helped him to put many of the institutional issues mentioned earlier, into perspective. He realised that the split between the researchers and the practitioners in the School of Education was more complex and that the knowledge PGCE tutors possessed, whilst more relevant and practical, was less valued than the theoretical knowledge produced by the researchers. He remarked:

Even though most teachers never read the stuff produced by researchers they seem to have all the status. We are the ones closest to practice but we have difficulty within the institution getting our message across. It's all about status, the place has an academic image and so we - the

practitioners - live in a limbo land always on the margins - neither fish nor foul, neither vegetable or mineral; we are here, the most important people, but our ideas are marginalised.

Initially, Philip was enthusiastic about the coming of partnership because he felt it might bring the ‘two sides closer together’ and that the ‘academics would be forced to play a more direct role in making research more accessible for teachers.’ He soon realised, however, that partnership was seen ‘by those upstairs as a bureaucratic problem, one that had to be solved so that they could continue their writing.’ In fact he expressed the opinion that one of the ironies of partnership was that it made the academic - practitioner split even more marked. ‘They (the academics) soon dropped out of any PGCE involvement altogether, except the odd lecture or seminar and we became a separate group. They didn’t want to know and with the coming of the Research Assessment Exercise (RAE) things have got even worse.’

Lastly his image of ‘being on the margins’ was further elaborated on when he recounted a number of experiences related to the demand for publications. He had been told to research but without being given any methodological training. He recollected a conversation with a senior member of staff about the issue. The event had clearly been stamped on his memory ‘ Despite having no background in research I was told to write for an academic audience and then if I felt the need, I should simplify it for teachers.’ That piece of advice, Philip pronounced ‘was an insult and showed the arrogance of some of the so-called academics of education.’ He also felt that there was no real debate within the School about the nature of research and what was most effective in terms of helping and influencing teachers and student teachers. This was related to his concern that practical or personal knowledge gained through experience in the classroom was less important than research validated knowledge, even though few people read it except ‘those with similar research interests and only then so they can further themselves in the institution or elsewhere. How many PGCE people, and I mean those who stay with it, ever go on to become professors -very few I should imagine.’

PRINCIPLES AND PRACTICE

The key to understanding Philip's subject sessions is his attempt to strike a balance between the 'technical and the philosophical' elements of languages' teaching. This thread was discernible in both the interviews regarding his working principles and in the observations of his practice.

An environment for experimentation

Philip's desire to create for his students a secure seminar environment which might encourage experimentation and exploration was a fundamental to his working principles. He declared,

I try to provide an environment in my seminar room that is generally safe; a protective and protected environment where they can explore some alternative strategies and where I can help them to try them out. They may not always be usable but I am continually surprised how often I see things we have suggested or covered in method work being reproduced at some point, with minor modifications of course in classrooms in the Autumn and Spring terms.

This protected seminar was also important in allowing the students to give feedback to each other on the success or otherwise of the various approaches suggested both in and out of the seminar room. In one session entitled: 'Managing the language class', Philip began his introduction by stressing the importance of 'particular organizational strategies to that we know help to create a positive learning situation.' Drawing on research into the communicative classroom, Philip explained some of the issues to the group who were then shown a video of a successful teacher using such methods. The group were asked to observe and look for the links between the ideas and strategies suggested in the seminar and the practice of the teacher; in particular, Philip asked them to look closely at the arrangement of the tables; the teacher's organizational skills; the use of the seating plans etc. The group were then asked to compare what they had seen on the video with their recently completed school based observations. Many had not witnessed such strategies first hand but expressed a willingness to use such approaches if given the opportunity; a small number had observed such methods in action but considered them to be less than successful. Other students in the group regarded the strategies as being too dependent on the type of teacher and the ability level and enthusiasm of the class. Further issues were explored and Philip tied the session up by outlining the criteria by which the success of such an approach might be judged. Throughout, the students were encouraged to comment and criticise from a variety of positions. After the session, Philip outlined the importance of the session,

They had an opportunity throughout to express their concerns and they can do this without fear of recrimination so eventually they develop confidence in one another and in one another's views. The seminar also helps to even out the differences between schools and helps to combat

the stifling atmosphere of some subject departments. A further aim is to illustrate to the students good and bad practice as well as helping new ideas to seep into their consciousness. I play the devil's advocate at times and sometimes I play the neutral observer trying to place everybody's comments into context. Sometimes I put up my own practice for inspection and invite comments - this can be difficult because criticism hurts but in the long run it increases their confidence in you because they can see you practice what you preach. Too often we ask our students to be reflective practitioners but how often do we reflect on our practice especially in front of them?

This attempt at being critical about his own practice was part of Philip's attempt to explore with his students the underlying philosophical elements of language teaching. The whole process, according to Philip, was to open up for debate the style and underlying principles he used in his own teaching. This he inferred helped the students not only to pick up the sorts of skills and abilities that might be necessary for successful language teaching but also encouraged them to look beyond the technical in trying to understand that there were a series of strategies that 'the community of modern languages teachers have deemed to be worthwhile and successful, it is these very same strategies are underpinned by a particular set of principles, some of which are based on research.' The approach of encouraging students to take control of sessions while simultaneously putting himself under scrutiny, Philip believed would lead them to 'analyse practice and learn to see the complexity beneath it' although he declared that going through the process was sometimes 'like exposing yourself in public.'

He also added that in many of his sessions his students were encouraged to be frank and open about what they had seen or experienced and that he encouraged them to 'express their feelings, ideas, fears and to share practice with one another.' This was important, 'because they forget all too quickly that they are a marvellous resource in themselves.' In one observed session there was a feedback forum from the serial visits and all kinds of views were aired. In another, students were placed in groups and then asked to come up with as many different ways for teaching different aspects of languages as possible. The results of their brainstorm were simultaneously written up by a student using a Personal Computer. The final draft was printed and handed around as a record of the session as well as a useful 'selection box' of ideas. This ability to pool intellectual and practical resources was vital and Philip claimed that 'only university based PGCE courses could do it because of their unique position and independence.'

Learning by vicarious experience

At another level of abstraction, this principle of providing a safe arena for practical experimentation and discussion, is captured in Philip's description of the seminar room as 'a classroom by proxy' where the activities, structure, tasks and delivery were 'deliberately set up to model particular ways of working.' For instance, during a session on classroom management and control, Philip deliberately set up the seminar room so that his students had to take account of the arrangement of the furniture, the sorts of pupil groupings, the audio visual equipment and resources to be used as well as the seating arrangements. To add drama and piquancy, Philip deliberately placed the video and screen in an awkward position thus restricting viewing, additionally, the grouping of the students did not reflect the usual language balance, the resources were poorly written and the overhead transparency was barely recognizable. Within a short time the students began to complain and to act in a way that mirrored a disgruntled group of children. The non-specialists (the session was carried out in French) began to complain that they could not understand and were not getting help; some complained about being unable to see the video and that the worksheets were difficult to follow. Philip ignored them and continued with his session. Before long a vociferous group began to demand some changes with some asking 'why were things so poor today compared with the usual sessions?' Philip gave a lame excuse and continued for a few more minutes.

He then explained his purpose, and a discussion ensued which focused on the key elements of lesson structure and lesson planning and the effect they can have on discipline and control. Whilst recognizing the de-contextualised nature of the situation, Philip felt that such sessions can have a powerful impact on students' professional understandings and learning. These approaches he described as 'learning by vicarious experience'. He also pointed out that although this session was 'deliberately staged' nearly every one of his seminars did have an element of evaluation built into them. In the observed session, this was carried out informally through an end of session discussion, and more formally through the use of checklists based on criteria; the same criteria used by the students to evaluate both observed lessons in their placement schools and lessons or parts of lessons already planned and/or taught.

These checklists were combined with a variety of other strategies designed specifically to help students make sense of what they came across on school. In one short seminar Philip used 'vignettes from experience' to help his students understand critical moments in lessons, 'points at which learning can go astray and the teacher can lose the plot,' he explained. The students

worked in groups using the vignettes and were required to come up with answers to some of the problems presented to them. These problems, Philip was at pains to explain, were taken from real classroom incidents. The solutions offered were then shared with the whole group using a spokesperson. The ideas were then placed on the display board for future reference and use.

Loosening beliefs

Another powerful strand running through Philip's work with his students was in his attempt to 'loosen their latent experiences of being taught....experiences which create a set of beliefs which often guide their teaching.' When he entered teacher education, he admitted to having only a very limited understanding of student teachers as learners, and his practice was based on 'simply telling them how to teach.'

It took Philip a number of years before he began to realise that students had their own learning agendas often structured by their own experiences of being pupils and from what little teaching they might have done. Addressing the problem was complex, however, a situation he confessed that was made worse by the lack of guidance and training given to new tutors. Now he felt more confident because over the years he had picked up a number of strategies for combating the problem. This strategic input had been fostered mostly by discussion with colleagues 'such as you, and through the experience of working with students – a sort of trial and error process.'

One such input took place early on in the first term. Here all the students were asked to prepare a short 15 minute lesson using a target language; the lesson could be on anything Philip instructed 'from origami to playing the violin.' The 'short takes,' as he termed them, were then analysed by the rest of the group in terms of learning style and what methods best encouraged 'real and long lasting learning'. The follow up discussion addressed the students' own experiences of learning languages as pupils and undergraduates using an autobiographical approach. The students were asked to write summaries of their 'best and worst teachers' and were then asked to explain the sorts of ways they had been taught languages at various points in their educational histories.

In another session on the same theme, Philip invited each student to prepare and teach a lesson to the whole group using the 'grammar translation' method in Swahili. Each student was given various resources and vocabulary sheets to help them plan. Particular individuals were then chosen to deliver their lessons. The result, to the interested observer was fascinating. Many made a complete hash of the exercise and some in the group began to act like typical disgruntled year

seven children. At the end of the presentations, Philip returned to the various language learning theories that had been discussed in previous sessions. In addition, he carefully moved the discussion into an analysis of cognitive style and its relevance for teaching.

Philip considered this approach to be one of the most useful because,

most of the students come with the grammar translation method stuck in their heads. Many also fail to see that the children they are likely to teach are not all like them - high achievers often from good schools. This approach helps them to experience what it might be like to learn a language through that method when you have no cultural help. It also raises the issue of underlying rationales for teaching and that the grammar translation method is not usually appropriate and forms only a small part of the National Curriculum.

In the next session, four video tapes of teachers using four different approaches to language learning were shown. The students, in groups, were then asked to compare the video footage with their own experience of learning at school. Finally, the students were required to teach the others in their small groups using the target language method.

Learning from practice

Central to Philip's thinking is the idea that although student teachers can learn by being exposed to practice, the method is too haphazard and instead they should be steered to learn from it. Since the coming of partnership this process had become essential given the students early entry into schools and their longer stays. 'Getting the most out of school experience' was therefore a recurring theme in Philip's subject work although he still recognised some of the drawbacks: 'some teachers are not always the best role models and their (the students) experience can be inconsistent and fragmented. Despite a closer union with departments and schools through mentoring and partnership, there is still a lot of luck involved - who the school nominates as its AT, the culture of teaching in departments and the way the kids respond. All of these things influence the students' perceptions.' Thus he is convinced that all tutors should,

help students see beyond the immediate image of teaching as simply a constructed act and no more. Their thinking and practice requires nurturing and developing. They need to see good role models regularly and to observe best practice as often as possible. We are educating them for the future not just the present; they have to be innovative and take on the mantle, if they simply copy or reproduce what they observe or think then the community of language teaching will stagnate. But an important starting point is understanding what they see and do - that's where we can help although their ATs need to be on the same wavelength.

Philip therefore encouraged his students to interweave their observations of experienced teachers into their own developing understandings. To achieve this they were given guidance on how to interview teachers using a structured schedule; the questions Philip stressed, had to be 'non - judgemental and should be aimed at uncovering the classroom thinking of their mentors.' The transcripts generated by the interviews were later used in various seminars to explore the practical and philosophical implications of teaching languages while at the same time providing students with 'a data bank of ideas and practical examples for use in the classroom'. Furthermore, the teachers' craft knowledge, as expressed in the interviews, was later compared to some of the guidelines offered by research and theory. The overarching purpose being to help the students' develop a personal style within an agreed framework for practice. He declared,

Some students and teachers have a higher tolerance level say in terms of behaviour and classroom noise I try to encourage my students to develop their own personal style and to be pragmatic because ultimately the final decisions rest with them and their growing sense of professional judgement. That's why it is important to help them explore different techniques within a set philosophical framework. These techniques are offered to try to redress their craving for instant answers, for set lessons to put into action and to make them more pro-active in their thinking. Learning to think for themselves and to be critical as well as trying to get at the craft knowledge of teachers is one way I try to develop their judgement.

Encouraging innovation and reflection

Throughout the interviews concerning his principles and practice, Philip continually advanced the belief that students must be exposed to as much good practice as possible. It is this process, he asserted, which in the long run helps to create 'innovative teachers; teachers who are not afraid to experiment and be on the cutting edge of practice'.

To help his students achieve this Philip often modelled various styles of teaching based on task based learning. The sorts of activities he set out were closely related to the sorts of tasks that were 'bang up to date in the thinking in the subject.' In this sense he wanted his students to become 'active constructors of their own learning...so they become autonomous learners. I want them to work with their own pupils in the same way as I work with them.'

In a session on the use of such task based learning in modern foreign languages teaching, we are given a glimpse Philip's ideas in action. One group had to prepare two menus in French: one for beginners and the other for more advanced learners, thus stressing mixed ability teaching.

Another group had to create a travel route through a region of France for tourists from Britain,

Germany and Italy. Throughout the sessions the students worked in mixed language groups. In so doing, Philip was hoping that his students would 'improve their own language ability, generate ideas for teaching, learn to learn from each other as well as understand the problems involved in mixed language and mixed ability settings.'

In many ways the coming of the National Curriculum had proved to be a helpful heuristic in his quest for greater innovation. He was of the opinion that the document 'was a conglomeration of good practice - a summary of the best approaches to teaching languages.' This he felt was an excellent starting point and provided an authentic foundation from which new and interesting ways of teaching could be introduced. Interestingly the National Curriculum was presented to the students in an unproblematic way; an approach which contrasted markedly with the way the topic was dealt with in English. Philip agreed that this was due to the fact that,

there was no real debate surrounding the construction of the document compared to say history or English because I think there already was agreement that to teach languages effectively the mother tongue approach was central. The document is useful because we can point to it and have our views reinforced as well as helping us to guide students through their experiences and give them new ideas. Even when they don't see it being enacted in school we can still say this is what is universally regarded as good practice.

The introductory session on the National Curriculum was therefore very formal and straightforward. The document was discussed and its main tenets were exemplified by clips taken from the accompanying video. Students were given clear exemplars of the types of teaching that best represented the document and indicators of what to look for in schools' particularly in relation to schemes of work and assessment structures. In the second part of the session Philip used the document to explore the terminology 'that was commonplace in schools and more importantly in language departments, and the session ended with the students being given a glossary of terms, as Philip put it, 'to help them understand the language they were likely to encounter.'

In the discussion immediately after the seminar, Philip admitted that the session was 'less active' than many of the others, but it did provide 'useful information and gave the students a vocabulary to express and understand the common parlance of teachers in the era of the National Curriculum.....You also probably noticed that many of the terms we discussed went beyond languages teaching because schools now have a new language and the students will be disempowered if they can't communicate or understand'. He did stress in the interviews, that

most other sessions went beyond the National Curriculum because ‘ If we are not careful we can become tied to teaching and learning in a rather staid way instead we must take students beyond enacting the formal curriculum and to look at teaching as a wider vocation involving relationships, pastoral care and informal learning.’

As has been shown, at the heart of Philip’s practice lies the concept of group or collaborative learning. The group nature of many of the exercises and sessions observed was unmistakable; very few activities took place individually. In a follow up session on conceptions of language teaching, the students worked in mixed language groups and were required to think about the sorts of ideas they had encountered during the earlier session and then created a poster that expressed that diversity. One member of the group then had the responsibility of presenting their findings - in one presentation a multi-linguist did it in three languages French, German and Italian.

Activities such as these, Philip claimed, helped the students to come to terms with their own deep seated understandings and enabled them put such ideas up for public scrutiny. He felt that the university was the ideal place to do this given its tradition, he explained,

schools are too incestuous they just reproduce themselves and debate tends to get lost beneath a welter of activity and bureaucracy. We can sit back and give the students time to think and diversify. If we weren’t here then I’m sure schools and classrooms would become dull places and there would be no innovation because I see my students as providing inset for experienced teachers as well as learning for themselves - it’s a two way process. I know that might sound odd but I do believe it. They (the students) have been exposed to ideas that are ahead of some schools and that’s important if we are too improve as a profession.

To illustrate this, Philip often used up to date computer technology to show the students how to help slow learners in French and German. This was done using specific word processing packages, an adapted form of scaffolding technique in the form of a writing frame, and the use of constructed lexicons. This approach was further illustrated by the use of video footage (often made by Philip himself) of a number of student teachers using the techniques in different language classes. This use of ‘typical and innovative models of practice’ as he put it, was central to his work. He further affirmed his commitment to this principle when he stated that ‘it is incumbent upon us to be innovators and to think out new strategies to improve learning in the classroom - who else does it these days? Advisors are virtually non-existent or have become

inspectors; OFSTED just judge rather than innovate - so we are the only ones left and we have access to research so we are ideally placed.'

Whilst being fully in favour and supportive of partnership, Philip still sensed that his role was diminishing and changing. He already had to compromise some of his principles and was being forced to prepare teachers 'instantly for work in the classroom,' a demand that was being 'fuelled by the need to ensure that they had the basic techniques at hand.' This meant that many sessions were becoming 'truncated to fit the new serial visits and school experience patterns. Departments are also demanding more of us in terms of lesson planning and the basic competencies. This is because they are locked into an action mode while we still stress the importance of reflection and deliberation.'

Philip was then asked to elaborate on his ideas regarding reflection and how they fitted into his practice. At the outset he saw reflection as vital to professional learning and encouraged it in his students at a number of levels. When asked for a definition, Philip came up with the following:

the ability to help the individual teacher define and re-define his or her practice so that it becomes more effective over time. but I do think out that too much reflection can be dangerous particularly when people talk about reflection changing social structures and so on, I call that the bullshit level of reflection where you are so concerned with other things that you lose sight of teaching. Reflection should and must only be concerned with helping the teacher improve practice and the learning of their students and should be structured so that it mirrors the learning cycle of students.

The first cycle he termed 'evaluatory reflection' whereby 'they (the students) must learn to recognise good and bad practice, both in themselves and in others.' A central aspect of this 'evaluatory reflection' was the lesson plan. At the bottom of each pro-forma, his students were given criteria for evaluation; this criteria changed as the year progressed but for Philip it was a device that remained central to their learning. Additionally, his students, in the first term, were required to make a video of themselves teaching a group and had to produce a structured personal critique. Both the lesson plans and the video were then turned into evaluatory assignments. According to Philip, these methods allowed the students 'to systematically examine their practice and to focus their thinking onto the learners as much as themselves. Throughout there are two guiding questions: am I being an effective teacher and in what ways am I helping my students to learn?'

The second cycle of reflection was given the rubric 'professional reflective practice'. This meant that the students had to complete a variety of activities, for instance, evaluating a piece of software for use in the classroom; analysing the departmental curriculum and schemes of work; exploring in depth a series of observed lessons and developing alternative strategies; collecting documentation related to wider professional issues regarding the codes of practice used in departments; giving accounts of departmental meetings and their purpose and constructing and evaluating resources and materials. These 'professional' reflective activities took place in the Spring term and were rooted in the school experience aspects of the course.

In terms of the third cycle, Philip was less sure. This he stressed was more personal, and the reflective activities were aimed at helping the students to plan their futures 'not in a career sense but in terms of the sort of teacher they hoped to become.' Activities included emphasis on personal style and the ways in which pupils' learning could be improved. One example was a 'pupil learning audit' whereby the students had to observe and check the learning of three types of pupils according to criteria derived from the research literature on language learning. Once again such material became part of the Summer term assignment. Philip commented thus,

It is pointless giving them this sort of assignment in the first or even second terms - they are too bound up with understanding and trying out practice. It's only when they are competent in the broadest sense that they should be given this sort of exercise. Some subjects give this to the students in the first term - but how can they understand learners when they are just novices themselves.

CHAPTER EIGHT

STEVEN

Biographical synopsis

Much of Steven's early life was spent abroad, particularly the Far East, where his father was a captain in the army. At the age of nine, in order to avoid continual disruption to his education, Steven was placed in a boarding school in Hampshire. His nearest relative was an uncle who lived within ten miles of the school and remained his closest family contact for a number of years. At school Steven excelled at the literary subjects and after completing his 'A' levels, in 1976, he took up a place at the University of York to study English. The choice of university was very much his own given the fact that he had been encouraged to apply for Oxbridge entry.

After completing his degree Steven was asked to stay on and study for a PhD; he declined preferring instead to move to London to 'experience real life.' He soon got a flat in Hackney and began working in a series of temporary labouring jobs on local building sites. During this time Steven decided to apply for a place on the PGCE English course at the London Institute and his career began in 1981 when he took up the post of teacher of English at Homerton House school in Inner-London. By 1988 he had risen to become temporary Head of English at Hackney Downs school and had completed his MEd at the Institute of Education.

He joined the staff at the School of Education in 1990 and since then has taken full responsibility for the English PGCE course.

IMAGES OF SUBJECT

English as identity creating

The presentation of concrete images in relation to his subject, described initially in terms of specific events, helps to explain much of Steven's current thinking and practice as a PGCE English tutor. The roots of the first image, 'English as an identity creator' can be found in his

early education in a boarding school in Hampshire, however, it developed further contour and definition through a number of personal and professional experiences.

In the interviews Steven's recollections of his childhood education focused on the enforcement of a traditional public school curriculum which combined 'the compulsory study of classics with the usual science and maths.' The teachers, he recalled were similar in terms of background and approach, and invariably came from public schools; their teaching, he said, belonged to the 'classical humanist tradition whereby learning - if they ever consciously thought about such a concept - came about simply by coming in contact with the teacher and the subject.'

Despite his retrospective cynicism, he admitted that at the time he enjoyed the lessons, firstly because he had nothing to compare them with, and secondly because 'he liked the tight structure'. He was regarded as a bright pupil and not troublesome. 'I fitted into the patterns presented to me; I knew no others and was certainly not rebellious in any way'.

At the age of eleven Steven transferred to the senior section and continued to 'impress his masters'. He was particularly good at languages and the arts and made a name for himself in creative writing and drama; he was prominent in school productions and edited the school magazine. His life as a boarder had become a routine one, and he took advantage of the facilities to involve himself in various areas of interest, this immersion, however, was due in part to the lack of a clear family identity, which soon emerged as an on-going issue in his narrative. He referred, with regularity and some gloom, to the fact that he was far away from his family for long periods and his only real contact with them was through his uncle. There were occasional end of term visits to his parents which usually involved travelling abroad. The school therefore became his home and his main contact with adults came through his teachers.

This experience of living apart from his family was significant for Steven in other ways. Since he spent so much time alone he filled it with reading and swimming. He claimed that 'his reading was driven partly by loneliness but also by interest, and he remembered vividly never being formally taught to read. 'It was something I just did' he claimed. This had an important residual influence on his thinking about literacy and learning and it is here that we find the origin of Steven's image of 'English as an identity creator.' In numerous interviews he constantly claimed the importance of 'reading as the basis of literacy' and that 'learning to read was a personal

process and defied the application of controlled method.....That's the way I learned and as I've developed as a teacher I now know that there is no magic formula. Reading was for me part of my own identity; it separated me and gave me a hold, a window on myself and the world. That's why it's so important in the lives of children, particularly those whose identity is denied by the system.'

A brief extract taken from a transcript illustrates the link:

S - Learning to read is about exposure; literacy is coming to know your place as a reader and the relationship you have with writer. It's no good giving black Afro-Caribbean kids or Dickens to read, they have no relationship to the text, the culture or the language.'

I- Well Dickens at the height of his writing, was a 'high Victorian' and his language reflected the period and audience. But surely his stories and the themes within them are universal - love, betrayal, family discord, corruption etc., and therefore they speak to almost any audience, hence their popularity abroad. Come to that are you arguing that Shakespeare shouldn't be taught either - his language is even more arcane - it's Elizabethan?

S - I know what your saying and in a way I'm not convinced that that Shakespeare should be compulsory - I wouldn't ban it if that's what you mean, I'm just saying that there has to be a link between reader and author and that comes through context. Why bother with the canon when there is so much good black or alternative writing available; so many good stories for kids that relate to their experiences. To me the purpose of reading and the choice of literature in schools simply reinforces the white, racist hierarchy? That's because I believe literature and language are based on identity, and literature is identity reflecting and identity forming. It's about giving black and working class kids confidence in their culture. I suppose I feel strongly about this because I had no real identity as a child and I want them to cherish theirs.'

In competitive examinations Steven excelled and gained an excellent clutch of 'O' levels allowing him to move smoothly into the sixth form to study English, French and History. He remembered becoming more difficult in the sixth form, less patient with his teachers as he began to question the accepted positions. In fact it was the choice of books from the canon of English literature that stimulated Steven to begin his rebellion. This was, he claimed, due in part to his own 'critical powers which were becoming more finely tuned as well as being a teenager of course.' When he was asked to apply for Oxbridge he had the confidence to refuse, claiming that,

I didn't want to continue to study outmoded literature for another three years, so instead I applied to a new university in York, partly because it was in direct contrast to the older, outdated Oxbridge and partly because it offered a new course in English which was based on linguistics. It also offered continuous assessment which was a rarity even in the 1970s and the choice of course reflected the new strains of textual analysis that were becoming popular - post structuralism and

the like. It also appealed to me because it reflected my attitude and I was interested in language. Perhaps looking back it was here that I began to get new ideas and began to see that language and its use was the basis of literacy and identity.'

It was at York that he began, in his own words, to 'create an identity for himself.' He became more bohemian and deliberately cultivated an 'outsider alternative image by dressing and talking differently. I wasn't satisfied with the language of textuality and always strove to offer an alternative in and out of seminars. I was always vociferous and complex in seminars and I began to develop my own style of analysis and expression.' He remembered either being 'loved or hated' by the tutors and some students. Many followed his ideas and he thought of himself as 'a bit of a guru.' His social life reflected his new identity; he lived with a group of like minded students who would often read critically and have endless discussions way into the night.

The course at York was important in other ways. It was the first time Steven had come into contact with new ideas about literature and language and also a new way of expressing ideas about them. He enjoyed the atmosphere and the seminar approach to learning. However, he was keen to point out that 'he still had no clearly defined philosophy of language just a mish mash of ideas and thoughts but no clear epistemology. I was a fledgling post-structuralist I suppose but I couldn't label myself that clearly at the time. I can now and these ideas permeate my practice and thinking as a PGCE tutor'

Despite gaining a first which he said was 'a fair reflection of my effort and ability,' he declined the offer to stay on and do research. He felt he had had enough book learning and wanted some experience of 'the real world.' He moved to London with some friends and took various labouring jobs in Hackney while he pondered his future. The move was to prove an important one in terms of Steven's future development; not only did it bring him into contact with new social and ethnic groups which had hitherto remained distant but it was also seminal in deciding his future career. He commented,

For the first time I began to really understand the richness of the language and the various meanings it had. Hitherto I had been only an academic observer but now I was part of the group and I began to shift my accent to become accepted, I suppose I wanted an identity. I also became more aware politically and hovered around fringes of left wing groups. I started going on marches and became interested in the ethnic communities where he I lived.

I was forging a new identity, I suppose, through exposure to a new language and culture. I was on a journey to find myself; I had crossed the rubicon and was comfortable in my new environment; I could relate to the people. I began to shift my accent and I moved into a flat on one of the estates. I began to notice the racism and the antagonism there was to blacks in the area and how they reacted. I was also active politically marching in favour of refugees and trying to stop deportations. All this coincided of course with the coming of Thatcher, in fact she and her successor have haunted my professional life. It was here that I began to formulate my ideas about language and the role it should play in people's education; that's why I decided in the end to do a PGCE.

English as empowering

It was during this period that Steven decided to apply to do a course of teacher training; he claimed he came to the idea after speaking to friends who were teachers in the area. He also now had an educational and political objective. His experience in Inner - London had fired his enthusiasm to do something about the situations he had encountered. He therefore entered teaching with a vision - 'to improve the lot of the people with whom I now lived particularly the ethnic minorities and to use my role as a teacher of English to empower them.' He continued,

I wanted a job where I could influence events and people, where I could have some effect. I chose the Institute because it seemed to be the best place it also had some radical lecturers and that was what I wanted. I remember being interviewed and having a discussion about literacy. My ideas were very raw but they were there and they were gathering momentum and meaning. I now realised that grammar and accepted forms of expression were disempowering those from other social groups and races. It was and remains a form of exclusiveness, its discourses were alien and it is the job of the teacher to re-focus language and literature and make it more relevant.'

The PGCE course was enjoyable and intellectually stimulating but not helpful in practical terms. The course was based on psycho-linguistics and I had a great time exploring issues to do with language development and construction, second language learning, and so on. It was also very radical in places and many students found it difficult to swallow. We were surrounded by some really important figures Harold Rosen was there, I remember his sessions on narrative and knowing. So it gave me some radical teeth but there was a hole - how do you transfer that oppositionalism into a pedagogy of empowerment when schools and the system were formal and hidebound?

During the PGCE year many of Steven's current ideas gained ground but during the teaching practice elements he felt ill-equipped to teach the children in the school to which he had been assigned. Nevertheless, he passed the course easily and gained his first job at Homerton House School, a multi-cultural inner city comprehensive. At the school, however, he soon realised that his radical and empowering vision of English would be 'stymied' by what he felt were a 'lack of pedagogical techniques.' He was prepared to take on the establishment and had a vision of

changing the curriculum and practice to counter what he regarded as 'the reproductive nature of the subject and the prevailing culture it reflected' but he lacked the pedagogical tools to do the job properly.

I was extremely alternative and oppositional during my first year. The way I dressed, the way I talked, it all explained my anger at the system. I've always shifted accents but now I began to adjust my speech to suit the way many of my pupils spoke. I felt I was adjusting for their benefit, I was trying to empower them by expressing my solidarity with them. What lay behind it was a missionary zeal and I suppose, I even wanted to translate the Bible into the indigenous language - I just had this image of myself carrying the word regarding my subject. But after a while I found I didn't understand the classroom register of most of my pupils - particularly the black ones. It took me a long time to adjust and it was painful. It meant that although I listened to their patois and dialects, I was for a long time an outsider looking in - I had no real power. Here I was trying to empower kids using this arcane knowledge and language. Here I was in a school that was proud of its multi-culturalism, but whose culture was really being represented in the curriculum especially in English? In effect there wasn't a multi-culture but a mono-culture, and I was a stranger and an intruder. Perhaps looking back I liked the romantic image of being accepted by the alternative group but however hard I tried there was always this distance between us.

The urge to identify with the local culture combined with what he termed his image of himself as being 'oppositional' meant that Steven soon came into conflict with the power structure of the school. He tried to learn some of the local dialects and some of the Nigerian tribal languages in order to teach the growing number of refugees at the school, but it was difficult, and he always felt outside because he was white. In the interviews, he outlined several battles in the staffroom when he tried to get a Nigerian boy's work to be placed on the same levels as those writing standard English. The conversations around this event led Steven to exemplify his image of his subject in some detail and with greater clarity,

For me if you accept the logic of language then all that's important is audience, context and culture. All of these things were deeply embedded in that boy's writing. Literacy should not be judged or based on the learning of conventions. It should be based on the undercurrents of language. Most of the children in that school could see no correlation between standard English and their own empowerment. In fact such conventions spoke the language of oppression. I want English to do the opposite I have an image of the subject which is empowering and liberating not oppressive. Even with my PGCE students I use this example and I even use some of the writing he did in my interviews for selection onto the course. It sums up what I'm trying to do in my practice and how I want students to see the subject.

Challenging the discourses of power

His enrolment as an MEd student in English education at the Institute in London, gave rise to what might be termed his third image of his subject: that English should 'challenge the discourses of power.' He had always considered himself to be an academic and he enjoyed scholarly discourse. At the Institute he also came into closer contact with Harold Rosen and Margaret Meek, both of whom were to become important figures in his professional life.

The more sedate atmosphere of academia did not quell Steven's appetite for conflict and change, on the contrary, it inspired and triggered it. Within months of arriving at his new school Hackney Downs as second in the English department and later acting Head of English, he was pressing the senior staff to change the curriculum and alter their teaching methods. He felt there was far too much underachievement from ethnic minorities and it was the direct result of the 'stifling atmosphere of the content driven curriculum.' It was here that he met his future wife who was also to have a major effect on his thinking and practice. 'She was a humanities teacher with similar radical views and had wide interests both politically and educationally.' They set up a new alternative group in the school which aimed at 'challenging the prevailing discourse of power which were sustained and driven by a content and canon based curriculum.' As a result of this new formation, courses were re-written and alternative practices were developed, sometimes in the face of considerable opposition.

Having gained a base Steven soon broadened his attack. He began to question the whole curriculum and gained a reputation for being oppositional. 'I always wanted to make waves and I was always dead against certain things because I knew I could do better with these kids than most of the teachers there, especially those who purported to be successful.' To develop his ideas and have a sounding board he set up a post-structuralist group which had regular meetings and seminars in the school with invited speakers where 'practice was always being tested according to theoretical principles'. Looking back, Steven felt 'they were exciting times but things were being said about me - that I was arrogant, militant and generally unacceptable to the profession just because I wanted something better for the kids.' He also completed his MEd and got a distinction which he admitted boosted his ego even further.

In one interview Steven described his thinking as it related to these concrete experiences of teaching,

English was there to challenge the system, the canon through which power was being wielded by the hierarchy of the school and above them by the system itself. The whole purpose of teaching English was and remains about getting children to speak for themselves and the feeling that learning should be a continuation of a culture not the delivery of a set of standardised rules hence the need to challenge that discourse. I suppose I had this image of being a crusader - and in many ways looking back I played up to it and enjoyed it - I still do.

During the discussion he also explained what he meant by this challenge. 'It found expression' he said 'as a young teacher but of central importance was my reading.' At York he had encountered the ideas of Labov and since university he had come under the influence Paulo Friere. In addition, his reading of psycho-linguistics had given him a clear theoretical framework; one which dovetailed with his experiences as a teacher. In particular, he drew attention to the notion that language should express meaning equally and that 'all languages have an equal capacity to mean but that should not prejudice the creators of language.' For him then 'language in its present form and the way it is applied through the canon of texts is institutional dictatorship,' and the purpose of teaching, both then and now, is to challenge 'the sufficiency of this dictatorship so that the discourses of power they represent are challenged and overcome.'

Steven continued to expand on the way his images of English overlapped with his work as a PGCE tutor. He regularly mentioned his debt to Peter Medway's book *Language in the Classroom* and saw himself increasingly as a 'language specialist rather than a teacher of English.' He recalled the success of many of his methods and his ability to motivate and succeed both conventionally, through exam results, and in preparing teachers for the classroom. The following extract from a dialogue between us illustrates this succinctly,

S - When they (student teachers) leave my course I want them to have a vision; one that is close to my own obviously. I want them to go out and challenge the canon, to see language as culturally derived, to see the possibilities in the subject for empowerment.

I - But what if they don't share your vision and have alternative approaches?

S - That's when there can be problems. Some will accept the vision on the surface but continue with their own underneath; some will collude with the school and pretend and do the right thing to satisfy me - I have to accept that, but at least they will have come into contact with the ideas and even going part of the way is enough. Because once the seed is planted then in years to come they will remember and may take the ideas on and continue the struggle.

IMAGES OF TEACHING AND LEARNING

At the outset of one interview, Steven was asked to describe himself as a teacher, he replied without hesitation, 'I see myself as an inspired teacher, a poetic teacher, one who is more interested in learning than teaching.' From this point two images emerged; both were based firmly in Steven's experience as a teacher at Homerton House and Hackney Downs.

The process is the product

Steven recalled his teaching practice in Hackney Downs, a school to which he later returned as a teacher and head of department. 'It was a place with an enormous reputation but despite the new curriculum and some innovation in exam courses the remnants of the old system remained.' The school it seemed 'had failed to adjust to its new intake and social environment' and 'held onto too many of its academic pretensions'. Steven recollected thinking what the school was doing for the majority of its pupils.

The curriculum was underwritten by the cannon and grammar - the kids could write reasonably well in good prose style but there was no creative spark. There was very little good practice. The use of the media was good and most classes were mixed ability but there was too much bad practice. Things which we had been told were bad at the Institute were there for us to see; so how could you put your ideas into practice when the school was not adjusted to it?

It was at this point that his ideas regarding good and bad practice in terms of the teaching and learning of English were discussed. Steven had very definite views clearly shaped by events during his time as a teacher.

Well good practice is all about the reduction of syntax; its also about moving children away from pen and paper; it's about socio-linguistics and language variety; it's about using pupils as a resource. Look at Afro- Caribbean literature, it still isn't mainstream on our shelves and children's literature as well, it's distinct but equally valid. Bad practice, on the other hand, is all based on the academic tradition. For me this is all about the supremacy of syntax and grammar and the content of courses delivered through didactics. Both of which have very little to do with linguistics or psycho-linguistics. For me, the most powerful image I have of teaching and learning is that the process is the product.

When asked whether there was a place for grammar, syntax and formality within the teaching of English and elsewhere in the curriculum, he replied, 'yes, I suppose so but only in a limited sense in that it must take its place alongside other discourses and not be in a position of supremacy.'

Steven recalled spending years working on the distinctions between different forms of standard English, 'all of which were divisive and not levelling.' He continued,

To put it crudely, the traditional system is based on the grammar school curriculum and method of teaching, which is itself dominated by universities; my role is to find an arena of language for different cultural groups outside the standard reference. I suppose I am a bit of a zealot in that respect but during the time when I was teaching and since being here, I've realised that there is an on-going struggle partly to dismantle any achievements that the approach may have brought and partly to re-situate the canon and the formality of teaching method. It is a struggle against those who cannot see. Mainly because they themselves are the product of that ideological elite where the product was all important.

I - But aren't you also a product of that group?

S - Well yes and I was taught by Jewish and Asian teachers and I couldn't understand why people like that often referred to non-standard English as damaged. Looking back, I couldn't see the issue at the time because I had no other models to work from but now I can see the problem clearly and have developed strategies and a vision to challenge that supremacy.

However, he readily admitted that his first years in the classroom were a struggle. He remembered having to learn the 'fundamentals of teaching on the job'. His practice was embryonic because 'he had no handle on the classroom management issue and had very little help because the whole system seemed to be dependent on the individual and you either went down or survived.' Looking back he could see the flaws in the PGCE with its emphasis on intellectual disputation and vision but very little guidance on the reality of teaching, and he stressed that his PGCE course is based on a creative dialectic between the two - 'Where the vision goes hand in hand with a methodological approach. There may be friction between them but students have to be given a model of how to develop the vision in a practical sense.'

Education as emancipation

Steven arrived in Bristol in 1989 as a PGCE tutor. He had already completed his MEd, a process that fired his imagination and gave more substance to his thinking about teaching and learning of English. He now believed he had the intellectual basis for his practice. This was verified by his burgeoning reputation as a popular and powerful leader of in-service training, as a guest lecturer at the Institute as well as being a highly regarded school based tutor to numerous student teachers. Beneath this progression and achievement, Steven continued to rage against the establishment.

Some of this coincided with staff changes at Hackney Downs but it was also associated with an anger against the system as a whole and the way he felt his methods were not gaining the reward they deserved despite being made acting head of department.

In 1988, a new, charismatic black teacher arrived at the school and his presence caused problems. He was both militant and combative and hated black under achievement, but his approach to teaching and learning was the very opposite of Steven's. He set about turning the maths department around and got many black pupils to identify with him and his traditional methods. His success caused many schisms within the school. Steven recalled the events:

Many black children opposing white teachers and departments becoming over competitive. Our methods in the English department came under increasing scrutiny and pressure was applied to channel and set children to improve results and standards. There was pressure to end mixed ability teaching, re-introduce homework and formal methods were encouraged. There was also pressure to change the syllabuses and bring back the great white Shakespearean tradition. I went ape shit! We had also employed a black supply teacher to cover some of my lessons so I could be a roving teacher helping children across the curriculum with their literacy. But she had problems; she couldn't contextualise our methods and she didn't believe they were helping black children - that's what I couldn't take, she was black herself. She wanted to educate the children not emancipate them through the power of their own culture.

It was during this turbulent time that Steven applied for the post in Bristol. He felt he was ready for the move because he had gained the necessary experience and was looking for a new challenge.

I was dead keen and when I got the interview and then the job, I knew it was for me - I was ready for it. I always saw myself as an intellectual teacher and now I could put my ideas into practice, the only problem was that when I arrived there was no course to speak of. My predecessor had kept it all in her head.

He conceded that the first years had been difficult and only now was he finding his feet after nearly five years into the job. Initially he had trouble focusing the course on what student teachers needed to do and know in order to teach? 'This question haunted me', he commented somewhat eerily. Initially he built his course on two foundations: the first was his own experience of PGCE and MEd work. This involved creating themes as a basis for setting readings and expressing ideas about teaching. The second was his own craft wisdom. He believed that because he was a good teacher he would be able to inspire his students to succeed 'just by coming into contact with me - all I had were my practices and examples. So the course was a

mixture of readings combined with suggestions from my own experience of working in the inner city. In fact I entitled it education as emancipation - emancipating them from the stranglehold the canon had on them, and helping them emancipate kids - and I suppose I had this idea of emancipating teaching and learning in schools and eventually in the School of Education.'

Since then his course had become more rational and based around clearer theoretical guidelines, nevertheless, he still made reference to the images of teaching and learning that had been inculcated during his days as a teacher which had now become embedded but with greater conceptual clarity. 'The English PGCE,' he said 'was now based on Vygotsky's 'Zones of proximal development,' and he saw himself as 'providing scaffolding for students' learning which they can take into their classrooms as a method of emancipating kids.' He went on,

my sessions are built around this image of teaching and learning, its the glue that binds my experiences to a rational position. I see myself as educating them to emancipate others while at the same time emancipating themselves. I create an 'approximate classroom' one where their learning is central. Sometimes we'll be doing different activities in the same room, sometimes they'll be working as a group, at other times they work independently in the library or elsewhere. There are no hard or fast rules. But underpinning the whole thing is this idea of scaffolding - everything they do is carefully guided and structured by a clear rationale. I'm not eclectic - I don't believe we should be. Our job is to take them on, to encourage them to be active learners and to shift their emphasis in their teaching and visions of English. In a sense I'm still the teacher from Hackney and I always imagine how things would go down there.

Despite this very clear credo, many of his sessions in the first few years did cause problems. His personal experiential orientation of good practice dominated his choice of readings, his methodological suggestions and his assessment. He recalled some students feeling pressurised into his way of thinking and many being confused about the extent to which they had to conform. To complicate matters, some complained about not really having been prepared for teaching practice in the Spring term. Steven felt both angry and defensive about this charge. He tried to explain that he was himself a learner and that they were all learning together. 'But this was difficult for some of them to swallow,' he remarked, and in a somewhat apocryphal manner, he recalled that at the end of the first year before the final session, the students had placed on the blackboard a list the terms he had frequently used in sessions 'the word crap seemed to appear a lot particularly when I was talking about certain forms of teaching and learning.'

IMAGE OF STUDENTS

Seedlings waiting to sprout

An important place to begin exploring Steven's images of student teachers is in an interview which took place at the end of Summer term in 1995. He explained that during the recent end of term evaluation one student had said 'that I hadn't taught him enough'. The idea that many students enter courses feeling they should be taught was neatly captured in Steven's reaction to the student's barbed criticism.

A lot of them, most I'd say, enter teacher training with a view of learning that is still predominantly academic. They see universities as places of learning and research where teachers or lecturers deliver knowledge and they have to learn it, make sense of it and then be assessed on it. The problem is that learning to teach is not like that. He (the student in question) clearly thought that what he knew about teaching added up to the sum of his professional knowledge at the time. His desire to be given pieces of knowledge about teaching and about how to teach typifies not only his but the thinking of others too. Fortunately the majority leave this notion behind as their learning progresses but most of them certainly arrive with it. You see learning to teach is for me a fundamentally different form of learning to any other they are likely to encounter. Instead of seeing them as empty jugs waiting to be filled I have an image of them as seedlings waiting to sprout, it is my job to do the tending, I provide a healthy environment for them, sometimes the schools can be good or bad and can stunt their growth but essentially I have to help them grow in a particular directions - upwards and outwards and inwards.

Steven also realised that many students did not fully recognise or understand the importance of the PGCE until later in their careers. 'It's almost like being on fast forward for a while and then reverse and then fast forward again. I have to open their eyes for them give them the tools to see and to develop and grow.' At one point Steven compared his role to that of a novelist 'teaching in many ways is like the construction of a text - a complex text which can be read from different perspectives depending on the reader and the author.' He understood their frustrations about teaching and the problems they encountered, and accepted that early on they wanted 'ready made answers to their immediate problems but solutions can only be found by seeking them actively and for themselves. If I gave them tips and they didn't work what use would that be; they have to discover and deliberate - I just show them the way and give them some tools.'

In many ways Steven's image of his students as learners resembles many of his views regarding children and frequently during the interviews numerous analogies were drawn. 'Children' he disclosed, 'were confronted with the same sort of alien learning environments, ones that do not recognise difference and are contextually disjointed as student teachers. Teachers throw things at kids and expect them to learn by accident or osmosis. In so many ways they are similar to

students at school, they are expected to pick it up, that's why I get angry with some schools and departments and with the Educational Studies programme - it's just not suited - it's not good learning.'

Moreover, Steven felt that too many of his students were hindered by their undergraduate education. By this he meant that most have degrees in English literature of various types but very few had a background in linguistics or psycho-linguistics. And yet he feels it is these disciplines that are more useful in the teaching English than a 'degree in Victorian Literature or in whatever courses universities provide'. He also expressed concern that learning to teach was 'an emotional experience, one that is too often forgotten and ignored by mentors and others in schools.'

Students as evangelicals

The idea of difference emerged at regular points in the interviews and Steven emphasised that as a community of learners students' differences must be recognised. He described the process in the following way:

They are not homogenous but the exact opposite, they are more heterogeneous than even the most varied classroom, but I still want them to end up with a collective vision and in a way I do want them to be evangelical in taking the message into schools. I realise that schools are all different and of varying quality but the student teachers must have a unifying vision otherwise they will be reproducing what's out there not challenging it.

His attempt to reach the lofty aims outlined above were, he considered, being limited by the coming of partnership and the increasing influence of central government and its agencies. Even after five years in the job he was concerned that the space between developing reflective practice, being innovative and the need to conform to particular teaching styles was getting narrower. He remarked, 'The students now get shown some of the 'dance steps' of teaching early on at school and that gives me the space to concentrate on the underlying complexities but in some schools the dance steps are so poor that the students aren't getting anything near the training they deserve and warrant and I'm getting less time to deal with the real issues.'

To understand the importance of this 'dance step' metaphor we need to take a brief look in through the door of one of Steven's first sessions in the Autumn term. Here you can witness the way the metaphor gains symbolic power in terms of the evangelical image that guides his work. The following was taken from observation notes during orientation week in September 1995,

At the end of the day it's your own dance steps you have to create and you have to use them as you see fit. What I do is explain those steps and why they are important, I help you place them correctly so that you understand nature and character of your partners - the children. You will have to come to terms with the reasons why you are taking certain steps. What your partners are going to do and why, the sort of musical accompaniment you will choose and what your frame of reference is going to be. I want you to see how complex an apparently simple thing like teaching actually is.

IMAGES OF SITUATION

In the transcripts three situational images emerged which structure Steven's feelings and understandings regarding his position within the School of Education and the University as a whole. The first is expressed in the term 'feeling trapped'; the second is encapsulated in the metaphor 'living in no-man's-land,' while the third articulates his professional frustration at the tensions and ambiguities he has to contend with and finds expression in the term 'being narcissistic and schizophrenic.'

Feeling trapped

In order to gain insight into the origins of this image we have to return with Steven to his first few weeks at the School of Education. He revealed in awesome detail the first lecture he gave to the PGCE group in the lecture theatre during the introductory week of the Autumn term. His searing descriptions of the event are imbued with a sense of cold theatricality. The following extract gives only a brief flavour of that traumatic moment,

I was under extreme scrutiny; Eric and the others were sitting at the back of the hall and I felt I was being watched I was on trial to see if I could lecture. It was very early on in my first weeks and I'm still ashamed nearly four years on in that I failed. And yet looking back the event was really important because it made me realise what this place was all about and what it represented....So there I was stuck in the catacomb of a lecture theatre, it all reminded me of Frankenstein - the technology as so unfriendly, I had an edited video because I wanted to make the lecture interesting by using a mixed media approach. It was a disaster because the transmission was so poor. I had some excellent ideas but none of them came off. I tried to divide the group into smaller groups but in the room it was impossible and they became antagonistic towards me and this simply reinforced the stereotypes.

The didacticism and formality inherent in the lecture mode undeniably conflicted with the images of teaching and learning espoused earlier. He believed that for him, and others in a similar

position, 'teaching and learning are mutually constructive acts whereby the teacher and learner engage in a discourse about the subject or parts of it. This discourse is created within classrooms and through dialogue not through the formal, traditional epistemology of the university.' He persisted with this line and felt that,

for student teachers this can also be problematic. They have all come to see knowledge as being part institutionalised transmission. They enter courses likewise trapped by certain expectations and this can conflict with the alternatives they are offered in subject work and the experiences they encounter in schools. This fundamental conflict of pathways does not make higher education always the ideal place in which to locate teacher education.

From then on Steven vowed never to be trapped again in 'such a chamber of horrors' and that the experience motivated him to begin the process of creating an alternative classroom for his students 'one where they could examine competing discourses of teaching and where learning rather than teaching was paramount.'

Living in no-mans-land

Despite feeling 'dead ready for the challenge' Steven was apprehensive about some aspects of the job because he had no real conception of his role. He literally made the move from inner-city comprehensive to academia in one leap. He was also conscious of having no mentor or role model to work from. His first year were therefore marked by a continual search for guidance but the quest remained elusive. The culture of the institution, as he saw it, necessitated against any sort of support being available. 'Everybody' he remarked, 'appeared to have their own separate existences; they went about their job in isolation, there was no communal understanding; no sense of place and situation.' His first contact with the other PGCE tutors provided him with some fixed points of reference but this was short lived as the term began and everybody 'retreated to their own subject enclaves.'

Early on Steven also got extremely angry with the management of the School. For him the institution had,

far too grand an opinion of itself and there were too many distinctions drawn between certain individuals in the place. We were and still are seen as the lower species compared to the researchers and the so-called academics. I believed foolishly that because the place had greater academic purpose then it was likely to be better managed - nothing could have been further from the truth. I also felt that my practice was not respected because it did not carry any academic underpinning. I was the new boy and I would have to go through some sort of rite of passage.

Meanwhile I was living in no-mans -land lost somewhere between the lines drawn between schools, PGCE and research.

Steven's frustration concerning his residence in academia while simultaneously trying to keep faith with his practitioner roots was a recurring theme in the interview data. He constantly referred to his inability to respect those who wrote about practice and teaching and assessment, and yet had no idea what it was like to actually do it. He also resented being moulded or pigeon holed. During the interviews he elucidated further on the issue of research and practice. For him it was 'a pain - pleasure split.' He realised it was an institutional function that it is part of the job but he was expected to become a researcher without any real training, or any real discussion about what research was for and who it was aimed at. It's so ambiguous - who or what is it all in aid of, is it just about fattening the CV like David or is it about practice or what?'

Being narcissistic and schizophrenic

At times, Steven divulged, he felt narcissistic and schizophrenic because 'the institution devalued practitioners and their experience despite being labelled a School of Education.' For him the academics 'did not understand or care about the load of the PGCE tutor and this ignorance undervalues us.' He recalled during his first week in the School of Education 'when the two professors called the group of new tutors into a room and asked them to outline their research interests. He hated the atmosphere and the stress. 'None of them asked about our practice and how that could be harnessed for the good of the institution and the profession'. For Steven they were simply 'showing off and parading their power, lauding it over us novices'.

The following extract unmask the complexity of this image in starker terms,

The job is narcissistic and makes you schizophrenic. Time and the uses of time are central. I've been told to close my door to my students and to use the time to research and write. To be honest I think, to use a black expression 'that's fuckery!' The kind of advice that is designed to fuck you up. They don't understand the job. You can do that with Masters and EdD and research students - see them once every month or so, but we are dealing with a different set of students going through an emotional learning experience. They are my constituency, my clients. If I close the door on them they might close the door on their pupils. Students often walk up and knock on my door every half an hour or so. If I close the door on them I am lost. They articulate who I am in this institution and I am more interested in the way I am serving them and understanding their needs than I am in research. Every student teacher who walks through that door and starts a dialogue with me is swapping an experience with me. I have to try to get into their heads to understand their crises and concerns - all that takes time. There is a huge difference between

people who teach PGCE and those who teach on other courses and supervise and engage in research.

From this detailed exposition we get a real sense of Steven's frustration. As a practitioner he realised the value of personal contact and as a PGCE tutor he is sympathetic to the concerns of his students. And yet after nearly half a decade in the job, he still found it difficult to come to terms with the variegated demands of the university environment. The interviews also highlighted the cultural splits in School of Education; schisms which according to Steven, 'had become more marked since partnership and the arrival of the Research Assessment Exercise. Both events had taken training in opposite directions and left us struggling, even more janus like than before.' He continued,

For me research and the issues surrounding it are huge problems. You see too often research conflicts with other aspects of the job - the fundamentals of what should be going on. We are expected to do five people's jobs. The figures just don't add up. I look at those on the third floor and in the centres and I say - I have no respect for you - I can't get on with you. You are trying to persuade me to do things in three or four years that many haven't, as far as I'm concerned achieved in twenty years. PGCE is more than a full-time job. School burnt me out and I don't want the same to happen again.

Steven also feared having much of his 'own practitioner narrative re-written by the positivist discourse' which he felt was 'all powerful within the institution.' He was concerned that the 'very soul of his teaching may get written out in the quest for scientific answers to teaching questions.' He was adamant that he wanted to place his own discourse of research within the classroom and contrasted this to the mindset of one researcher whom he had got to know in recent months.

Take David, for instance, when we work together with teachers he does it in an academic way. He sets up the programme and he has an agenda which is the generation of data for his research. He has no thought in his head but that objective. Teachers and pupils are there to serve his purpose. And when teachers mention some of the contextual problems that might arise he doesn't want to hear because they can't be controlled. But he also knows nothing about these problems because he has never been a teacher. That's the problem too few people here have been teachers or they were in classrooms so long that they have forgotten what it was really like.

It is quite clear that many of these issues stem from an epistemological tension. The traditional role of a university is the production of knowledge; this knowledge is often seen as objective and created by the application of pseudo -scientific approaches. However, as Steven pointed out, so much of the knowledge that informs teaching and other socially useful professions, is personal,

practical and highly idiosyncratic based on an understanding of professional in context. This knowledge often defies rationalisation in the scientific sense and instead gains its validation from its expediency and utility of use. The tension between these two forms of knowledge and others goes to the heart of Steven's images of his situation. As a tutor trying to straddle both camps he felt trapped in 'an educational and epistemological no-mans-land where my experience tells me one thing but the institution and its demands tells me another.'

PRINCIPLES AND PRACTICE

Early in the interviews Steven defined his role as 'triangular': first as a university tutor, an important aspect of his job was to remain close to his constituency - student teachers, the world of English teachers and schools in general. Second, residing in a university department gave him the opportunity to think and to read about the subject and the teaching of it and it was his duty to digest, analyse and synthesise this knowledge to help students improve and learn. Third, the job offered a 'widening of context' as he called it, by allowing him to go to conferences, to contribute to professional debates, to visit schools and see students and teachers teach, the job gave him a unique insight into practice in its broadest sense. How does this brief description of the job find expression in Steven principles and practice? And what sorts of learning situations are created for his student teachers in his subject work?

Transplanting the classroom

For Steven creating a classroom context one step away from school is a vital but complex process. That aside, he felt that student teachers needed to have this context because 'without it they will be lost in the hub-bub of practice', however, he recognised the problems inherent in this enterprise given the 'powerful and all embracing effect of university culture.' This culture is represented in Steven's metaphor of delivery. He claimed that traditional university based teaching and learning has embedded within it 'an expository model which disempowers learners at the expense of their knowledge' and felt that in initial training the emphasis should be placed on 'the process more than the product of learning.'

To counteract the negative effects of this university tradition, Steven had created what he terms 'an alternative classroom within the institution'. This he saw as a form of 'a counter culture

whereby his students could begin to see themselves as learners while at the same time experiencing learning as pupils might experience it.' Creating this 'decontextualised arena where students can feel comfortable and independent, ready to explore issues associated with the teaching and learning of English' is central to his practice. Student teachers, in this sense are analagous to school pupils, except their learning is located within a 'different set of narratives and a variety of institutions and cultures.' He further elaborated on this by declaring that,

students are not really different from school children. Their learning processes and some of the situations they encounter are similar. So I still see myself as a teacher just as I did at school except I'm one step removed. But working at a distance does give me advantages. I am not bound up with one culture and way of working. I am not part of the micro-political world and most of all I can give them (his students) a widening of context based on a distillation of my experience combined with my reading and research. That makes me - um... us - something special in the educational world.

Steven also talked at length about the ways in which the job gave him the opportunity to influence and teach more children than when he was a teacher. He felt that by helping student teachers and developing their practice he was 'still teaching and reaching children...many more now that I ever did when I was in schools -but now it's through others, I'm teaching through others.' This sense of working through others is a distinct strand running through much of his work, nonetheless, he continually talked about the heavy burden such a responsibility placed on him and he talked openly of his struggle with his vision and image of himself as a 'super teacher' and the need to prepare students for a variety of schools and departments. He also mentioned the demands of the National Curriculum and the demands from some schools for him to 'produce a certain type of teacher - one that sometimes, in fact often - conflicts with my own version.'

However, he was emphatic that 'he didn't want to create lots of little Stevens but as the following extract shows this problem has never been laid to rest and recurs frequently in his thinking and practice.

S - I don't want to create lots of little Stevens but there have to be some givens; some immovable positions otherwise you just shift ground all the time and you give the students nothing except tips and recipes. The way I organise my teaching space, my relationships with the students and my intellectual underpinning are all reflections for my positioning within the on-going and competing narrative that English teaching is. But I don't think I'm pushing one ideology at the expense of others.

I - So what would happen if a student teacher did not agree with you but lacked the experience to back up his claims?

S - I would say put up or shut up - I suppose - but like I said, I'm not pushing an ideology - the discourse is about education and the teaching of English within that and if they enter that discourse without any basis for their thinking then they have to be challenged to come up with something more substantial. I probably would end up by saying look this is what I believe and I know that for me it worked so I offer it to you as evidence. There may be some truth in what you are saying but nothing is ever black and white.

I - But that response was very different from your opening line.....

S - Yes that's because that was just a gut reaction - In reality I would say that these issues are rhetorical, discursive and epistemological in origin. That would probably shut him up!

I - Absolutely!!! (laughing)

The weight given to the re-creation of an alternative classroom is ubiquitous in Steven's narrative. He found himself drawing heavily on the experience of being a teacher and continually used anecdotes and moments 'to provoke, to illustrate, to challenge their (his students) thinking.' This he proclaimed was 'his own narrative of learning... one that is still vital in underwriting my work with student teachers'. Before sessions and during seminars he often deliberated and intellectually returned to his practice in order to check out his sources and re-inforce his thinking. These experiences were not transferred directly into his practice but were re-visited in order to make them explicit and moulded to fit the exigencies of the present.

Building a shared experience

This re-visiting helped Steven to live what he termed 'a shared communal experience' with his students. It helped him to get an improved and more grounded understanding of their needs and predicaments. It also, he insisted, fostered a climate of trust between him and his students while simultaneously bonding the group. Lastly, the process allowed his voice to be heard not in a 'preaching academic way but in a manner that is underpinned by real experience so they can look upon me as a reservoir of understanding,' which could be 'tapped at any time. Also the whole point of the seminar room is that experiences are shared and theirs are just as valid as mine. They have to have such a place; a secure base where they can be critical and feel open about their feelings and thoughts.'

During an observed session on aspects of literacy, an incident occurred which threw these principles into sharp relief. During part of the morning, the issue of spelling arose and one student asked 'So what is the best way to teach it? I've seen three ways already: one during my

primary school experience, and two in my current placement school.' Steven replied, 'Let me put the issue into context for by telling you about my practice.' This was prefaced by the following comment 'look whatever I say you at the end of the day will have decide for yourself within the limits of acceptability' He then continued,

There is no objectified, unified, translated, removed, systematic way of knowing how to teach spelling. Can I reinforce that in two ways: first that teaching is not scientific, it's an art or a craft with complex problems attached to it. Academics especially the cognitive psychologists try to narrow spelling all down to behaviours or through patterns all neatly tested and controlled. But teaching isn't like that, its not about control groups and experiments, classrooms are human constructions full of emotions, words and tensions. Second, we as teachers see all the gremlins at work but psychologists try to ignore them - in fact for me its the gremlins that make the job interesting. So to answer your question there is no foolproof method to teach spelling but don't get seduced by those who say that phonics is the answer - literacy and spelling are bound together, make a context for literacy learning and spelling will come naturally.

Creating a narrative of progression

Linked to the notion of the 'problematics of practice' as Steven defined it, were two powerful metaphors that represent much of his thinking as well as underpinning his practice. The first is captured by the term 'opening doors'. This embodies much of his vision for teacher education in that it sees inspiration as central. Steven works on the assumption that the effects of his teaching cannot really be understood in the short term, instead he sees his approach as,

opening doors for them (his students) so they can see through the simplisms of much of classroom life. To help them reconceptualise their thinking within a set of discursive practices that are personal and yet public. They have to be helped to open the door and to see the path behind it; they will then have a vision of English teaching that will sustain them through the agonies of their first year and beyond. That's why I've started an FPS (Further Professional Studies) course to support them next year to help them keep their vision, to encourage them to problematic their practice and to maintain that approach through the difficult times

This process is based on what Steven designates as a 'narrative of progression' whereby students are taken through a curriculum which is underpinned by set of values and principles, however, he sees himself as a guide helping 'them to create their own narratives so they can articulate and defend those beliefs and practices.' He also realised that in order to understand this vision, his students needed to confront many of the givens of constructed professionalism in teaching, such as the of the survival of the individual, the embeddeness of traditionalism, the fear of change, the stress on the teacher not the learner and so on. For him the only answer to this singular, power

dominated teacher centred approach 'is collaboration, true collaboration whereby collectives of teachers find not only support but also a base form which to challenge the status quo of schools and society.'

In the middle of the Autumn term in a session on the uses and abuses of Shakespeare, Steven was discussing the relationship between coverage of the curriculum and understanding of the text. He was stressing the need for children's experiences to be the 'first stopping off point in your narrative of teaching.' The following exchange arose soon after this introduction,

Stu - How might you present a Shakespearean sonnet or any sonnet for that matter so it connects to their experiences?

S - Well it's very similar to a love letter, I'd start there - what would you say in a love letter? Well it's private, but it could be made public and it is usually lyrical some way - perhaps I'd bring in a love song and explore the lyrics in more detail and the rhythm behind it. There are so many ways of getting beyond the cannon, beyond the approach the cannon encourages - use their experiences, use their culture, don't be afraid to challenge the conventionality of the National Curriculum or that of some of the teachers in your department.

In the third term, Steven re-visited this issue in a collaborative session entitled 'Ways of learning Shakespeare: building on experience.' At the outset he reminded the group of the seminar in the first term and reiterated the basic premise upon which the session was based. The students then moved into groups based on their school types and began the process of 'brainstorming' in order to pool their ideas about teaching and learning. Two students explained that they had used the love story approach in their teaching and others had adapted the idea to suit the topic.

After the session Steven commented that their reaction and practice illustrated the importance of giving them some fixed points of contact in the first term, so that when they felt confident enough and had thought through the ideas and vision he was presenting, they would be able to incorporate certain methods into their practice. He claimed that this was 'part of their narrative of progression, it's part of their learning - their *rite de passage* - they have to go through it and sometimes you only see the fruits of your labour months or even years ahead. We are just planting a seed, the tree will only grow over time, so we have to be patient and believe in our principles even though the temptation is to be eclectic and over pragmatic.'

This second metaphor, 'planting the seed,' further contextualises Steven's vision for teacher education. Throughout the interviews he repeated this metaphor which encapsulated a great deal of his thinking in terms of his aims and goals. He commented,

When you're learning to teach things are never stationary. Your conceptions ideas and understandings are always being challenged. I have a long term agenda. I am trying to plant the seed two or even three years before it bears fruit. Eventually practice begins to catch up with your intentions and these are my totems. I therefore try to plant ideas and discourses that challenge and sometimes shock, but the whole package is about long term change.

Reconsidering teaching

One key process in achieving these objective was Steven's attempt to get his students to reconsider their positions on the subject and the teaching of it. He pointed out that,

First and foremost I want them to consider the notion that language is the foundation for everything that goes on in a classroom; second I want them to understand teaching as praxis - the way in which theory and practice can be intertwined to empower students (pupils). Basically, it's about empowering trainees to feel they are in control of their practice by underpinning it with theory; not theory preceding practice but seeing both as symbiotically connected and as a result of the emergence of this praxis students will be helped to become language experts and able to develop a literacy curriculum rather than being seen as English specialists.

Of crucial importance here is Steven's understanding and use of reflective practice. He related his application of the concept in his work to his days as an undergraduate when he first 'really began to reflect on ways of approaching and reading a text'. His conception of reflection was repeatedly expressed in terms of a process and is captured by the following description 'I see the reflective process as something like a tape playing in the head of the student. It's a way of getting them to think not only about what they have done but how they are doing it.' He claimed to use this approach when teaching in subject sessions ' I'm always going over things; sometimes I think out loud to the students can see what I mean when I use it with them. I am explicit about my thinking and reflection because only then will they follow suit.'

In one observed session entitled: 'Reading material: encouragement and choice', Steven stopped in mid-flow and openly said 'I'm not sure whether I'm getting through? Am I complicating it too much? Are the divisions I've drawn too complex and are you able to see that reading is not about recognising words or symbols it's culturally specific - how many of you could read some of the

Afro-Caribbean poetry? I'll be honest when I started I couldn't. Do we need translations, if so I'll read them aloud for you.'

In this snippet from his practice not only do we get a sense of Steven's own reflection-in-action but also a powerful sense that his version of reflection does not stop at the here and now. In fact it goes further, and is an attempt to situate his practice and his students' thinking in order to move them into another realm - 'the sphere' as Steven put it 'of social change, social improvement and greater equality.'

A key question Steven continually asks himself and his students is - what is reflective practice for? Is it just to improve effectiveness in the classroom or does it and should it go further? For him it is a 'tool for raising consciousness; it's about changing practice and learning also that society itself eventually gets entangled and begins to question itself.' However, he also admitted that too much practical reflection can lead to a 'sclerosis of action' whereby practice loses its flow because the 'whole is greater than the sum of its parts.' Steven would rather that the 'empowering kind of reflection' was stressed more often than the 'practical' and used at keypoints to exemplify and challenge practice.' He went on,

In a practical sense reflection it is about distancing yourself from your practice; it's about being able to see the implications of your actions within whatever context you are working. This positioning is vital if we are to generate thoughtful intellectuals rather than simply technicians. For me reflection lies somewhere between cognition and meta-cognition; it is a conscious inner voice exploring the relationship between the two types of thought. Students in my seminars are always encouraged through written work, through questioning and through their own practice to reflect in this way. I don't want to see just as a check list of good and bad points at the bottom of a lesson plan I want them to see it as a whole; to see how the bits fit together and how learning and empowerment can advance together. I want to create friction in their thinking and action. I want their learning to be frisson whereby they see the unusual and the unexpected in the ordinary.

To facilitate this, a great deal of Steven's practice was based on group and collaborative ways of working. In a session entitled: 'Language in the curriculum,' the day started with a brief introduction concerning the place of language in terms of the National Curriculum, this was followed by brief description of language variation theory. During the session Steven said 'I have taken this particular line in order to create a critical perspective on language. If you follow this it will give you a good grounding for your work and will help you sort out the complex field of language use in the classroom - which of course means many things to many people.'

The group was then set a task in groups of four based on their experiences of language learning both as observers and pupils. They were asked to 'reflect about knowledge and language within the framework of their own experience and try to place that knowledge within a series of contexts: within what they had observed in their schools, within the schemes of work they had collected from their various departments, and within the wider literature they had been set to read and the whole debate about language, culture and social change.' They then had to create their own schemes of work using the National Curriculum, the literature on language learning and their own emerging ideas and beliefs. The results were an interesting mix. Many students created radical interpretations of the curriculum within their schemes - some were an outright challenge to the orthodoxy of schools; others were more measured and located their schemes within the National Curriculum guidelines.

In our discussion after the session, Steven was asked about the results of the task. He said they responded 'pretty well as expected. At interview I can tell the ones who will develop a radical approach to language teaching, the others need more time and are more of a challenge. It's about trying to move the whole group forward - but I realise that in any mixed ability setting, some are going to be further down the road than others.' He also felt that the task was a 'way of getting them to look at the principles of curriculum design using their own experiences but at the same time using the language variation theory as a conceptual lens. This was an attempt to integrate research knowledge with practice as well as helping them model a crucial practical activity - the creation of schemes of work.'

The feedback component of the session indicated a number of difficulties the students encountered when trying to tie together accepted and radical approaches. A number of tensions within the group soon became apparent: for some students, the theory of language variation was difficult to understand and even more onerous was the demand that they use it as a platform for building a scheme of work. Others were outright antagonistic to the sorts of language used to explain the theory and felt that the readings and explanation confused the issue even more. A smaller number were more positive and believed the theory had helped to challenge their ideas as well as encouraging them to critique the practices they had observed. Most agreed that the experience in itself had been useful because it did open up new ways of seeing language and the curriculum, particularly for those who were located in schools where a fairly conventional

curriculum was in operation. After the session, Steven said he was happy with the way the seminar had progressed and it proved to him 'that they (his students) needed challenging' and that this could be done by 'fracturing the discourse of consensus and experience.'

In the afternoon Steven followed up the morning session with a practical workshop using prepared materials. The groups were given language linking materials which included four texts of different types. The students were then given the task of creating models of practice that might link with the text for mixed age and ability groups.

Before the activity Steven gave three short illustrations of the sorts of practices that could support some of the readers he had chosen; these were based on lessons he himself had used gave as a teacher in Inner- London. Although summaries, the personal exemplars gave the groups of students a direct feel of how such materials could be adapted. When asked about the purpose of providing such illustrations, Steven replied that it was necessary for two reasons: the first related to the fact that some students found such tasks difficult to understand and modelling the process 'gave them a kick start'. The second focused on what Steven called giving them 'visions of the possible'. He added that 'too many students feel that what is offered to them can't be done but I'm showing them directly that such things are possible.'

This modelling process was also evident in other subject seminars. In a session focusing on the 'Understanding and use of poetry', Steven used a whole morning on an approach he himself had used as a teacher. Again many of the fundamental principles underlying his work were visible. At the outset he gave the students an envelope full of chopped up lines and asked them to reformulate them. This was a tactic Steven had used when he was a teacher in Hackney, however, the poems had been chosen on a different topic and were deliberately arranged 'to shock them out of their complacency about poetry and its use in the classroom'. Many of the poems had been written by survivors of the Holocaust but the words and lines had but edited in order to create an impact as well as to help the students re-think their conventional understandings of the genre. Steven was, he admitted later, trying to get the group to create their own poems while at the same time understanding both the 'form and substance of poetry as a personal and emotional act.'

He was also offering the students a teaching strategy which could be used in a variety of contexts, however, what was central to the session was that 'they actually experience the impact

through the act of reconstruction and deconstruction for without that the lesson is simply a recipe with no meaning or direction.' At the end, various individuals were asked to prepare specific lessons using the texts and to explain how they might be integrated into their practice during school experience.

In another session dealing with 'Constructions of language' in relation to spelling and grammar again a number of Steven's principles were evident. After a brief outline of some of the debates surrounding the place of English in the National Curriculum, Steven used an historical framework to chart some of the changes in the language over the centuries. The group was then split into pairs and each were given a piece of writing dating from the 18th century. They were asked to read it and to try to explain the content to their partner. The task was extremely difficult because the punctuation, register and language was alien to most of the group. The feedback then linked back to the mini-lecture outlined at the start of the session which had stressed the importance of meaning in language and the ways in which English, through various historical and cultural influences was 'a living language which created its own rules and syntax in relation to its historical context.' Remember, Steven said emphatically, 'the English language is a historical construction.'

As a follow up the pairs were given various extract from the post-nuclear novel *Ridley Walker* and were asked to read and comment on the language used in the book. Again Steven stressed that meaning could only come about in relation to context and that this was vital when they set about selecting and creating lessons on language, grammar and reading.

This latter point was equally evident in a number of other sessions. In one observed during October on the 'Use of set reading texts in the classroom,' Steven began by outlining his aims for the day.

We are going to focus on two issues: first phonics -no I'm not turning Tory, I simply want you to see it as an approach which is rooted in a tradition. We will examine this tradition and try to analyse the ways, if at all, phonics works within language learning. Second we will examine the uses and abuses of class readers, in particular children's literary and non-literary texts. The purpose is to challenge some of your ideas about language use and the role that certain texts play in supporting reading and language development in classrooms. Hopefully the session will help you come to position on the issue; one that will eventually guide your practice.

The morning session was then split into two. The first part consisted of Steven rehearsing the task which was to be completed in the second part of the morning. The students were required to write a review of a particular class reader they used at school. The review had to be completed using a set format, it had to be aimed at mixed ability year nine children, and had to be accessible and not written in an academic register. He said, 'the point is to help you develop a voice that relates to children of fourteen to sixteen years. It is also about encouraging you to develop this approach to a text when you start teaching; to see it as a resource and a method - both process and product rolled into one.'

Prior to that Steven spent the next forty-five minutes outlining a number of issues surrounding the class reader concept, its origin as a learning method, and various ways of using them in classrooms. This was done orally with the aid of an overhead transparency which was structured around definitions and examples, to which Steven continually referred. The exposition was laced with anecdotes and ideas for practice but all within a set of theoretical guidelines. He also took questions. The extract below is taken from a tape recording of an exchange between Steven and a student:

S - (reading from an OHT) The univocal or singular method is very common. It is a approach based on the single copy and you take children through the text either by drilling or through textual analysis. It is now back in fashion with a vengeance and is based on the cannon. Schools have literally been forced to put Shakespeare and pre-20th century text into their schemes.

Then there is the multi-vocal or differentiated approach, which is, unlike the singular method, not a one level response. It is based on diversity of text and reader. When I taught at school I pioneered the use of ethnic literature so that all backgrounds could be catered for. This approach can be structured according to genre: I used post nuclear novels, historical novels, science fiction - it depends on how you want to handle it. The purpose is to break the distinction between reading for school purposes and reading for enjoyment. You use the background and provenance approach to structure your choices.

Stu - At school some teachers say that the singular text can be used to differentiate by outcome - is this possible and advisable?

S - You can create differentiation by input as well by giving choice. So then you negotiate the differentiation. This is vital. Differentiation is about getting the best deal for the pupils in terms of their needs. The book box approach is really effective. But differentiation using the singular text is almost impossible because of the variety of readers in any class.

After the session Steven commented on the need to broaden their horizons in order to challenge their thinking and practice. His sessions, he claimed were about 'opening students up to new ideas; about giving them ways of thinking that they may not have encountered before.'

Understanding the complexity of practice

The coming of partnership had given added importance to the process of 'enabling students to see what was going on in classrooms.' This related to Steven's attempt to get his students 'to understand the complexity hidden within the simplicity'. He accepted that most students, particularly early on in the term, viewed the classroom from the perspective of the pupil or undergraduate student. His job was 'to equip them to see behind the curtain; to look backstage; to explore the scripts and the discourses at work in every single lesson.' This strategy, he insisted, was not aimed simply at the teacher but was equally focused on the way pupils learned in classrooms.'

During the first few months of the Autumn term, Steven designed what he called 'mini-training sessions' whereby his students practised observing teachers and pupils. Often video clips were shown taken from his on-going personal research into literacy across the curriculum. This involved giving his students his own recently constructed theoretical framework for the research as well as the observation guidelines he had created for his investigation. This he believed orientated them to the four main styles that teachers used. At various points, Steven also gave his students a number of pro-formas so they could gather data on teacher talk, questioning, movement as well as tasks related to children's discourse and discussions.

This material was then brought back into the seminar and various issues were discussed. Steven was also keen that his students gain an insight into how children learn language. His 'portrait of a learner' exercise was central to the first term's assignments. This was a structured observation of a particular learner chosen according to various criteria - 'slow learner, dyslexic, high achiever, behavioural difficulties'. The portrait had to be based on observational material but a variety of data gathering techniques could be used. The assignment dovetailed with the observation guidelines given to the students. Steven went further after the session and outlined the purposes hidden within the task,

The purpose is to get them to see learning from the inside, from the pupil's experience. Too often teaching is seen as external to children's needs and so many students come from a tradition

where they just accepted learning as a given. I want them to get on the inside - to see in detail what can happen when poor teaching takes place or where there no relationship between context, resource and learning; all these things are fundamental. I also want them to become researchers in a small way to think about how as a teacher they might find out about their effectiveness as teachers.

The coming of partnership had also brought about other subtle changes in Steven's practice. He had been, he said, 'forced against his will, to stress the National Curriculum more than he would like', schools he continued 'often saw the National Curriculum as a tight structure' and they were often,

frightened to move outside it. I want the students to have a critique of the it - to see its historical base and the political elements that made it up. I want them to see that it did not come out of thin air but it is an ideological construction and one that needs to be understood. Otherwise they will just go to schools and reproduce what's in the document.

In his session on the National Curriculum, Steven gave his students a long and detailed lecture on the origins of the concept and the way English had become politicised. The session came with extracts from earlier documents, press cuttings, quotations and other evidence. Some students questioned some of the assumptions behind the critique and were concerned that Steven should give a balanced account. Steven countered by claiming that there was 'no true account and that this was his view based on both personal experience of the changes and his reading of the literature.' For Steven the English document and the surrounding debates were 'texts and should and need to be deconstructed' only then he felt could his students begin to see 'the National Curriculum as a guide but not a Bible.' At times there were some confrontations and Steven admitted that at times he does come over 'a bit heavy but that's part and parcel of a critique some you lose some you gain, the important thing is they now have a perspective to bite on whether they agree with it or not.'

At a more pragmatic level, Steven saw the National Curriculum as 'quite useful in that it provides a focus for teaching and learning...It also provides a vocabulary,' he said, 'one that had become almost pervasive in schools,' although, he added that his role was to provide students with a larger vocabulary than that contained in the National Curriculum. 'Teaching and learning' he claimed 'can be expressed in a number of forms and I think it's important that students learn quickly from my sessions so they have ways of articulating and understanding their practice.'

Partnership had also meant that a greater stress had been placed on lesson planning, lesson structure and classroom management. In one such session, Steven concentrated on the uses of the blackboard. He began by outlining a traditional approach for note taking, for the giving of instructions for the passing on of information etc. He then explained how a blackboard might be used in a more meaningful way. He started with the following statement, 'A blackboard is a notepad - used well it is a place where the students and the teacher can have a say; you've probably noticed that I use the board differently from many teachers in school (some of the group nodded in agreement).' He then set the group a short reading task from typical class reader and invited them, when they had ideas, to come up and write them on the blackboard. At the end of the session the board was full of comments. Steven then guided the discussion and re-created the lay out, editing and re-writing, so at the end the board was 'an expression of the collective thinking of the whole group.' Finally, he explained how as teachers they might copy down text from the board and then create a sheet for the children 'as a reminder of the lesson'.

The group then compared his use of the board with the typical one prepared at the start of the session. Steven pointed out that 'one was an expression of the learning of the class, the other an expression of what was in the teacher's mind.' A sentence that seemed to sum up Steven's vision of what good teaching and learning in English really meant.

Despite the profusion of such sessions, Steven was of the opinion that partnership despite its advantages in getting teachers closely involved in the community of practitioners, had begun to turn English teaching into a 'value free zone.' He commented,

I feel that if we don't address teaching in this way as an expression of particular values and positions, then we are in danger of creating dull teachers. I realise this can be controversial at times and political but if you can't express your views and values in a university where the bloody hell can you express them. Schools are too bound up with the action, the expression of policy and the management and politics of control to really explore the issues - so we have do otherwise its a dereliction of our duty.

PART THREE

Analysis, interpretation and discussion

CHAPTER NINE

ANALYSIS AND INTERPRETATION

Preamble

This chapter offers a cross-case analysis (or interpretative survey) of the case studies presented earlier. The approach taken relies on the ideas outlined by Lincoln and Guba (1985), Atkinson and Delamont (1986) and Glaser and Strauss (1967) who argue for comparative analyses across cases. This analysis develops the case studies into a more general framework by characterising features, problems and issues common to a range of different concrete settings. Atkinson and Delamont (1986) talk of analysis where I would wish to speak of both analysis and interpretation, but the principles are the same.

THEMES

Intentionality

The phenomenological notion of intentionality points out that we carry out a basic (and invariant) interpretational step of translating the unknown stimuli of the world into things, or objects. Intentionality then, can be seen as the focusing of consciousness on a particular object in the world, in this case the way in which the tutors focused on the professional learning of their student teachers. Husserl (1929; 1931; 1948) suggested that every act of intentionality was made up of two experiential foci, or, correlational poles, he labelled them *noema* and *noesis*. The former, which is used primarily to guide this theme, refers to the directional element of experience; it is the 'what' that we direct our attention towards and focus on. In this sense the goals, (longer-term aims) and intentions (the more immediate purposes) of the work of the tutors in this study. *Noesis*, on the other hand, is the referential element of experience; it is the 'how' - the process through which an object is eventually defined. Again in terms of this study this can be evidenced in the ways in which the tutors try to realize their goals and intentions. This latter element will be dealt with in more detail under the second theme entitled 'practicality'.

We have seen from *Circulars 9/92 and 14/93* and the Education Act of 1994, that Initial teacher Education has become more school based. The creation of the TTA and the formation of new standards for Qualified Teacher Status (QTS) indicates that successive governments view the goals for ITE to be the production of effective teachers who can deliverer of the National Curriculum in the classroom (Edwards 1992; and Hoyle and John, 1995; Furlong and Smith, 1996). Against this backdrop, most HE staff, and no doubt many teachers who are involved with ITE, irrespective of their specific views about how to achieve this, would argue for the former (the creation of effective teachers) but would see the latter (delivers of the National Curriculum) as narrow and restrictive. Instead they would claim that future teachers should understand the deep educational issues which ought to inform their practice rather than being drilled in skills and competencies which they then have no knowledge of when and how to use. As Schnur and Golby (1995) say, they need to understand teaching:

as an activity of social and moral significance, encapsulating 'know how' by placing it in its cultural context. Thus teachers need to know, and are entitled to know, how their work affects pupils, families and communities, how it concerns social justice, how it contributes, in short to the good life. (p.64)

The five teacher educators in this study all argued strongly for the preparation of a professional by means of improving students' capacity for professional judgement and decision making rather than by providing extensive practice of skills in a single classroom - or even several. They also called for the exercise of insight, strategic understanding and critical thinking rather than effective performance of learnt skills. Additionally, they desired to develop practical wisdom in their students rather than endlessly refined but situation-specific instrumental knowledge. In short, they saw the aims of ITE as transforming the awareness and understanding of students in respect of themselves, their knowledge, the nature of teaching and learning and of their practice.

These, of course, were the long-term aims, however, it was clear from the case studies that tutors regarded the process of learning to teach as a complex enterprise, one in which students need to stand back from practice and enter into on-going informed deliberation and reflection. It was here that the tutors regarded their work as central and that the role of the university as vital. In this conception, the development of professional practice is achieved by gaining an in-depth and understanding key professional issues, together with engagement in

an on-going conversation related to a variety of practical activities. Carr (1993) expresses this most succinctly:

even the most basic and routine of classroom tasks and skills cannot be happily disengaged from wider considerations of a philosophical, moral or evaluative kind about the precise nature of the benefit which we are trying to provide for children through education and about our larger purposes as educationalists with respect to that benefit. (p.20)

And later again he says that skills:

acquire their real significance as enmeshed in a wider context of aims and objectives which are defined by reference to a complex network of public, social and moral duties and obligations which the teacher owes to children, parents, employing authorities and society at large (p.22)

When questions about the ends of teacher education are asked in relation to the case studies, a sharp awareness of these issues were to be found. Beth, for instance, talked continually of 'professional growth' and commented often about preparing students for the delicate relationship with other adults and children both in and out of the classroom. Philip, on the other hand, stressed the importance of developing student teachers' understanding of the nature of collaborative teamwork in the language teaching while Edward talked openly about the need to interrogate practice and reflect upon experience. In a similar fashion, Steven mentioned many times the need to develop students' practical knowledge, that is thinking on their feet, together with more deliberative reflection on their practice and its wider social implications. Furthermore, he wanted to establish firmly the principle of experiential learning so that his students would be in a position to gain insights into pupil achievement in English teaching as well as their own personal and professional development. All five explicitly eschewed a simple apprenticeship style of training in favour of an approach which aimed to encourage students to generate a range of teaching styles. Peter was not alone in stressing the need for the students to have a vision; one that provided a basis for their chosen teaching method. Finally, they all felt it was vitally important that students come to know themselves as people and professionals.

If these were the overall goals, what were the individual intentions associated with the tutors' specific practices?

In many instances the case studies show that the tutors were seeking very different things from the government's narrow concern to offer skills training and the achievement of

competencies and standards, however, there was no consensus on such matters. Some academics in their writing have argued for the application of formal theory to practice, for example, Stones (1981 and 1992) who recommends the application of protocols gained from psychology to classroom situations. Hargreaves (1993) has likewise called for educational research to be made more user friendly thereby creating a knowledge base for teacher educators to use in their practice. In the USA a number of researchers, particularly Gage (1978) and others, have written extensively about this knowledge base and how teacher educators might make use of it. In the case studies the tutors instead sought to develop their students' ability to engage in practical discourse with research based theory regarded as just one source of enlightenment amongst a host of others. Instead they were seeking to involve students in on-going conversations and activities that helped them to:

- to find their voices;
- to construct their own theories;
- to transcend the specifics of one classroom;
- to travel confidently between theory and practice;
- to handle thought and action in specific and general terms;
- to disentangle the normative (what ought to be) and the operative (what is);
- to harness critical thinking.

The threads outlined above were an attempt to detail the underlying goals, intentions and assumptions underpinning the work of the subject tutors as portrayed in the cases studies. The following theme picks up on some of these issues and complements this initial interpretation by attempting to characterise the tutors' practical professional knowledge at a higher level of generality.

Practicality

A second powerful theme across the cases relates to what Doyle and Ponder (1977) have called the 'practicality ethic'. Put simply this means that those who are charged with nurturing the learning of young people have a deeply rooted belief in the power of practical action to bring about the desired changes. Although referring ostensibly to teachers, the term can equally be applied to the work of teacher educators. Furlong (1996) is correct in his assumption that teacher education courses became practical at least a decade or more before a crisis was deemed to have occurred, however, as he points out, this slow revolution took place behind closed doors and was directed mainly by institutions of Higher Education

through colleges and departments of education. Despite the coming of partnership in the 1990s, we still know very little about the nature of this 'practicality ethic' and what it actually means in principle and practice.

Before embarking on an elucidation of this theme, the following brief philosophical introduction offers some useful distinctions upon which to base the interpretation. Aristotle's term *phronesis*, roughly translated as practical judgement is an important one. Aristotle distinguishes it from *techne*, which is seen more as instrumental reason with a scientific flow (Smith, 1996), by stressing its flexible character and attentiveness to the details of the particular and unique elements of a case. *Techne* in many ways mirrors the technical elements of teaching, seen by the tutors as important but not necessarily the central. Smith (1996) reminds us that *phronesis* is similar in many ways to 'situational awareness' made famous by Kounin's (1970) notion of 'withitness.'

This important distinction between technical and practical reason lies at the heart of much of the practical professional knowledge of the tutors described earlier. In fact Carr (1987) goes further and claims that deliberation is the mark of *phronesis*, thus highlighting the importance of the development and nurturing of systematic reflection amongst student teachers. The ways in which the subject tutors went about developing the professional judgement and reflective capacities of their students, was evidenced in the manner in which they engaged them in practical discourse (Bridges, Elliot and Klars 1986; James, 1989; Gitlin, 1990; Carr, 1993). Put briefly this is defined as the consideration of beliefs, values and assumptions about teaching; it is also about deciding between alternatives, about weighing up current circumstances in order to take new and improved action. Essentially it is about being able to justify a range of practices in moral terms.

Practical discourse is achieved through dialogue, although it must be stressed that not all dialogue between tutor and student teacher is of this variety. James (1989) claims that what distinguishes this form of discourse from others in ITE is that it is a dialogue which is 'an epistemological activity concerned with truth and understanding' and whose objective was not agreement or consensus but a clear perception of the evidence or grounds for belief and a richer view of the valuation or interpretation which might be set on that evidence.' Gitlin (1990, p.76) similarly claims that such a dialogue makes any 'pre-judgements apparent' so that their critical testing can empower participants 'to challenge taken-for-granted notions that influence the way they see the world and judge their practice.'

Following this definition Carr (1993) constructed a simple taxonomy of questions that students need to be encouraged to ask themselves whilst learning to teach.

Practical questions: questions about what to do or how to do it - for example 'What do *I* do now?' (This seeks direction on how to act at the moment.)

Procedural questions: questions seeking suggestions about do now?' (What are the procedural possibilities from amongst which I might choose?)

Prudential questions: questions asking for adjudication between procedures and amongst the questioner's own preferences - for example 'What *should I* do now?' (What best suits me and my purpose?)

Moral and ethical questions: questions asking what is right and just to do - for example: 'What *ought I* to do now?' (What ought I to do for the sake of justice and goodness for and on behalf of other people?)

All four types were visible in the case studies. The sorts of activities that brought their students to confront practical, procedural, prudential and moral questions called for the exploration of choices within a safe and open seminar environment. All the tutors in one form or other provided space and structured opportunities for observation, reflection and discussion about aspects of practice in order to help develop a deeper and more meaningful understanding of what it takes to be a successful teacher. Edward, for instance, continually tried to draw in a representative range of views and opinions and sometimes even deliberately set up oppositional voices to create the desired effect. Steven endeavoured to get his students to have an on-going conversation between themselves and their context; this was typified by the 'tape playing in the head' metaphor. The others likewise attempted to develop the technical expertise of the students while simultaneously taking them into the realms of innovation and spontaneity. Both Philip and Beth made the point about the need for tutors to make their own practice explicit both in practical and theoretical terms so that students could not only understand the purpose of the session but could also learn the art of reflection through open discussion of everyone's practice. All the tutors attempted to make their own theoretical and practical assumptions explicit and in so doing provided their students with a

range of opportunities to discuss theory and to tease out the values underpinning it and its relationship to practice.

To achieve this the tutors often took on the role of facilitator producing resources, generating ideas, raising questions, encouraging students to watch and listen, discussing related research literature as well as encouraging them to learn from their own and each other's practice. They were in Nias's (1989, p.52) words getting the students to 'grapple with the construction of new meanings for themselves and each other.'

Steven and Beth showed how they tried to develop reflective discussions stimulated by particular instances from practice and beyond. For Steven, the issue of social justice was paramount and could be seen in his images and in his practice. In so doing he tried to model the possibilities so that his students could have specific approaches which might be used in classrooms. All the tutors were likewise concerned with moral and ethical issues and their sessions were shot through with a concern about entitlement both in terms of the experience of their students and for children in schools. Each tutor also set up learning situations of various kinds aimed at prompting students to ask questions of their beliefs, their choice of teaching strategy, their criteria for effectiveness and the sort of vision of teaching their practice was tied to, however, they went about this in their own particular way. Peter, for instance, was keen to work from the concrete to the particular, from the personal to the professional while Edward and Philip both stressed in different ways, the need to stand back from practice so that their students could address their own conceptions of their subject, the learning of children and how they might best construct their practice.

Throughout the case studies the 'practicality ethic' was paramount and what the tutors tried to achieve for their student teachers in terms of their professional learning can be described in the following terms:

- they tried to increase their professionalism;
- they gave them activities and encouragement that increased their growing personal and professional awareness;
- they tried to increase their insight as well as improve their understanding of children as learners, of teachers as professionals and of themselves as individuals;
- they encouraged them to be reflective and thoughtful about their practice.

Most of the thinking and strategic guidance given in terms of reflection encouraged the emergence of what Schon (1983) describes as reflection-on-action; that is their students were urged to think about and reflect on events from their own teaching, to generate questions, evaluate issues and to create criteria upon which they might judge their effectiveness. Despite stressing the need for reflection-in-action, such activities were less in evidence in the data with the tutors concentrating mainly on a *post-factum* response from their students.

Subject Specificity

What makes the tutors' practical professional knowledge distinct from many of their colleagues in the School of Education was the emphasis they placed on the importance of subject perspectives. For a large part of their careers the tutors had been curriculum specialists in schools and worked in what might be termed discreet subject departments or faculties. Musgrove and Taylor (1969) and John and Hoyle (1998) have noted that by the 1970s academic subjects had become highly organised social systems with heavily defended boundaries. This was as much a hangover from the grammar school days as it was a part of what Bernstein called a 'collection code' type of organisational structure. The specialisation created, both in schools and in each individual teacher's mindset, a close affinity with the subject which became a central part of their professional knowledge and professional status.

Throughout the case studies, the tutors' images of teaching and learning, their ways of working with student teachers and a great deal of their thinking about teacher education, stemmed from this subject enculturation. In discussing their work two concepts in particular were of prime importance: the first was the subject as a paradigm. This refers to their views and images of their academic subject in terms of its content. The second was their notion of subject pedagogy which refers to the system of ideas and images that make up a system of ideas and procedures for the organisation of teaching and learning of that subject both in schools and in teacher education.

The extent and nature of the influence of their images of their subjects and pedagogy to influence their practice as tutors, however, varied. Edward, for instance, despite being a physicist saw science as a collective subject which he felt was more a more appropriate and better vehicle for helping student teachers to understand and develop their practice. Beth, on the other hand, saw mathematics as central to the world and espoused an image of the specialist which was foundational in her experience and practice. Philip saw himself as a modern languages tutor rather than being specifically related to one language (although he

was more at ease with Spanish and Italian than French and German) and students were encouraged to work together in multi-language groupings.

The way their subject influenced their practical professional knowledge appeared to stem from their personal, educational and career histories and could be differentiated according to:

1. The ways in which they saw their subject differing from others.
2. Their perceptions of the relationship of their subject with others (this was particularly noticeable with Edward in terms of science and Philip in terms of languages; but not so noticeable with Beth or Peter or with Steven).
3. Their perception of their role as mediator between their subject and both pupils and student teachers.
4. Their own personal relationship with the subject which was biographically founded.

The images of teaching and learning displayed by the tutors can be classified as being on the progressive end of the teaching and learning continuum. All had reacted against a content based or knowledge driven view of their subjects; in part this was a reaction to their own educational histories but was also related to a gradual transformation during their teaching careers, during which there had been a series of 'watershed moments' which had proved significant in shifting their perspectives. Interestingly, their images of both subject as paradigm and subject as pedagogy had moved into teacher education virtually undisturbed and therefore formed a central part of their practical principles and rules of practice. This was perhaps best illustrated in the way the tutors tended to view their students as being similar to children in terms of learning. Here their understandings regarding professional learning and development, were often drawn from sources which were subject specific and based on a distillation of the theoretical literature and their own personal experience.

Whilst reflecting on the tutors' images of their subjects and pedagogy, the reader will be undoubtedly struck by the considerable cross-over between their images of their subject and their images of teaching and learning. In many ways their time spent working in school environments had created not only their subject identity but also what Shulman (1987) has termed pedagogical content knowledge. This is a form of knowledge which goes beyond the subject matter *per se* and incorporates the subject matter for the purposes of teaching. Within this category, Shulman (1987) includes knowledge of,

the most regularly taught topics in one's subject area, the most useful forms of representations of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations - in a word, ways of representing and formulating the subject that makes it comprehensible to others. Pedagogical content knowledge also includes an understanding of what makes the learning of specific topics easy or difficult; the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning of those most frequently taught topics and lessons. (p.9-10)

While the term is new, the concept of pedagogical content knowledge is inherent in Dewey's (1902/1964) admonition that teachers must learn to 'psychologise' their subject matter for teaching, to re-think disciplinary topics and concepts to make them accessible to pupils. McEwan (1987) describes pedagogic interpretations in which teachers interpret specific content in the light of what they know about the prior knowledge and interests of students, as the central activity of teaching. The term pedagogical content knowledge then describes the tutors' knowledge as it relates to their professional experiences as school teachers, however, their experiences as lecturers in higher education had transformed their subject knowledge and understandings further, creating a new blend of subject matter and pedagogy into what can be termed knowledge of teacher education pedagogy; a concept which will be more fully exemplified in the next chapter.

Ethicality

A third common theme running through the case studies was a pervasive sense of ethicality. Freidson (1970) describes this as a set of behaviours and dispositions embedded within the thoughts and actions of professionals; usually supported by what he terms 'good intentions' and often written into a code of ethics. Despite teaching and teacher education lacking such a descriptive code, the definition is useful when scrutinising the cases for common themes. Three forms of ethicality came to the fore: the first can be described under the rubric pluralist ethics; the second was termed professional ethics; while the third relates to the ethic of caring.

Pluralist ethics

Since teacher educators work in environments which are public and their students' display an array of personal and professional beliefs, ideologies and practices, it is perhaps inevitable that many of their ethical considerations are likely to be pluralistic. Not only do students have diverse positions about a number of issues including their subjects, pupils, the role of the teacher and the role of education in general, but they also encounter a range of moral and ethical dilemmas and issues in their school experiences. In the case studies there were

numerous examples of the ways in which the tutors handled this diversity and adjudicated and directed students to use their own principles and experience as a guide. This form of ethicality was built on logic and reason, was usually rationally applied and often consensually arranged.

Furthermore, this approach was underscored by the development of criteria for action; here the guidance given by the tutors aimed at allowing students to develop their own independent criteria for decision making. This discursive strategy helped the students to understand the conflicting language of practice and the diverse set of interests and beliefs that made up particular aspects of teaching and learning. Although often working from their own positions, the tutors in the cases encouraged students, through various reflective and deliberative strategies, to make their own decisions using a set of principles that they are simultaneously encouraging.

Professional ethics

This second type was based less on dilemmas and rules but more on the adjusting the realities of the concrete world of schools. Here they were passing on sets of traditions, often implicitly learned during their own teaching careers, and observed in their peripatetic role as supervisors of student teachers during their school experience placements. Here the language used was more figurative than in the pluralist type outlined above, in that it provided answers to broader professional questions which the student teachers were encouraged to take on. In particular: what sort of teacher do I want to become? What sort of ethical position will I have to take in order to achieve this? And how might I justify my position and action both privately in terms of my own values and principles and publicly in terms of my responsibilities? The approach taken by the tutors was likewise rational and systematic despite the dilemma strewn nature of the exercise. All in all the tutors tried to stimulate the students delve into a deeper exploration of professional motives, ideals, intentions, feelings and values.

The ethic of caring

The final thread in this theme relates to the ethic of caring. All the tutors exhibited, to a greater or lesser extent, the importance of caring in terms of their own behaviour towards their students and in turn for their students to care for the children they encountered as teachers. For Peter and Philip, for instance, it was related to metaphor of parenting; for Steven and Beth it was about 'being there' for the students who in turn will 'be there' for

their pupils. Tom (1984) Vandenberg (1990) and particularly Noddings (1991) have all argued that teaching and teacher education is a moral activity requiring tutors and students to weigh up the ethical implications of their behaviour. The teacher educators in the cases reported in this study encouraged their students to develop sound ethical standards that might serve as touchstones for the difficult decisions they will have to make as teachers. Noddings (1984, 1989, 1991) believes that such decisions have to be grounded in an ethic of caring.

Although all the tutors expressed this ethic in a number of different ways, all believed fundamentally in its value and considered themselves to be living models for their students in this respect. For instance, Edward mentioned the job was about being available in a pastoral sense and acting in a particular way so that they (the students) would in turn learn to behave in a similar way toward their pupils. The tutors' experiential images also revealed that good teachers are caring teachers. Throughout the notion of being sensitive to students' needs was paramount even if it conflicted with other demands from the university in terms of research and writing. There was also evidence that this ethic of caring related to the craft of teaching; good teachers, claimed the tutors, cared about the learning of their pupils and constructed lessons that were meaningful, well planned and engaging.

Nevertheless, some divergences did emerge. All were aware that recent attempts at countering the apparent inadequacies of courses of teacher preparation too often focused on the weaknesses of students as well as leading to an unhealthy obsession with increased technical virtuosity as the only yardstick stick for competency. Whilst recognising the importance of basic skills and standards, the tutors felt that the stress on technical competence bought at the expense of more humanistic concerns, might eventually bury the notion of teachers as professionals and lead to mass defections in later years. For them, caring went beyond personal liking or regard, and was an integral part of professional standards that underpinned many of the daily decisions made by both new and experienced teachers.

Generativity

A concern shared by all of the tutors was with the quality of the pedagogical interaction both with their own students and in turn with the children their students were teaching.. All were looking to develop in their students a form of theorising that clearly had good practice as its ultimate expression. Beth, for instance, in her principle of sharing practice, was clearly trying to point the way forward to the kind of teacher she hoped her students would become; Philip

also saw his own teaching and the principles underpinning it as central to the creation of a 'thinking teacher, one who would enthuse but also have an impact on children's learning.' Others also expressed the desire to touch the lives of children through their work with student teachers.

How might we theorise this so-called desire to touch the lives of children and what does the theme signify?

In one sense it perhaps reflects a professional need to contribute to the future in terms of education and learning. Erikson (1963, p.10) refers to this interest in establishing and guiding the next generation as generativity. Extending this concept, Kotre (1984, p.10) speaks of generativity as 'a desire to invest one's substance in forms of life and work that will outlive the self'. Although he does not discuss the teaching profession or teacher education directly, he outlines two kinds of generativity that could be related to teacher education and teaching: technical generativity and cultural generativity; both types according to Kotre (1984), are not mutually exclusive.

Through technical generativity the tutors appear to want to pass on certain skills to their students whom they consciously or unconsciously view as their apprentices. By identifying with their students in this way, the tutors appear to have found a way to relive past experiences of self-mastery, and of extending those experiences into the future through their students. The skill itself is important, because as Kotre (1984, p.11) puts it, 'the craft must be kept alive and its potential developed'. A number of examples of this concern were evident in the case studies: for instance, all the tutors wanted their students to develop the necessary classroom skills and many had discrete subject sessions dealing with lesson planning, classroom management, questioning techniques, the teaching of reading and practising the starting and ending of lessons.

In contrast to technical generativity which focuses on the craft elements of student teachers' learning, Kotre (1984) alternatively focuses on what he terms 'cultural generativity.' This he views as being more directly concerned with developing a particular way of thinking, a mindset that is underpinned by a set of principles and values which can be passed on from generation to generation. In fact all of the tutors expressed a sense of delight and satisfaction when they their students, both individually and collectively, had begun to grasp a particular way of thinking or were in Beth's words 'making the change' or in Edward's terms

‘responding to the challenge.’ Thus by attending to who they are as people and by carefully nurturing ideas and practices, all the tutors felt they could offer their students a vision of teaching that authentically takes the learning of children into account; this vision was based on the passing on of a deeper set of principles that went beyond practice and therefore stayed with the students throughout their professional careers.

Efficacy

The construct of teacher efficacy also proved to be a useful and constructive paradigm for understanding the practical professional knowledge of the teacher educators participating in this study. This theme entitled: the tutors’ sense of efficacy, refers to the extent to which they believe that they have the capacity to influence and improve the effectiveness of student teachers in the classroom. The case studies highlighted a number of dimensions to this theme. In the first instance the tutors felt that their work with the students was important and meaningful and as a result they had made and would continue to make a positive impact on their professional learning. They also expected their students to progress and for the most part fulfil the majority of the expectations they had for them; when, however, they experienced problems in this regard, they examined their own performance and tried to find new strategies in order to overcome the blockage and thereby continue to influence their students’ development.

Peter and Beth, for example, narrated instances of problematic students who either refused to shift their ground or who found it difficult to do so. Although they operated on different tactical lines both saw it as their duty to continue to work with the students in order to bring about change. Beth in particular, was tenacious in this respect, always looking for ways to challenge her students’ thinking and to ‘take them on’ once they had ‘reached a plateau.’ Peter, on the other hand, worked at the biographical level and tried to tease out the origins of their beliefs thereby generating the impetus to change. Steven and Philip were similarly resolute in their handling of ‘resistant students’ as they were called, and both worked at a number of levels in their attempt to change and improve their practice.

The cases also revealed that the tutors planned their sessions very carefully basing them on a number of varying theoretical and experiential assumptions. Steven for instance, saw his course as being base on the Vygotskyian concept of scaffolding combined with ideas culled from psycho-linguistics and language theory. Edward had what might he termed ‘a

constructivist turn of mind' and tried to base his sessions on similar principles. All the observed sessions had clear goals (both long and short term) and the tutors identified strategies and approaches that they felt would be efficacious and bring about learning and achievement. This sense of having a positive impact reflected on their own confidence and was more visible with students who had exceeded their expectations.

The tutors were also confident about their impact even in cases where the student's learning had been limited. Their sense of efficacy was therefore pervasive and linked to the fact that they considered themselves to be part of a joint venture in which they all (students, themselves and colleagues in schools) tried to achieve common goals. Of central importance was their view of themselves as 'agents of change;' people who could influence not only the their immediate constituency but also have an impact on the wider educational world particularly as it related to their subjects. Philip's comment perhaps sums up this theme most succinctly, as a teacher he claimed 'he saw and influenced only a limited number of children' now through his students he said he was 'teaching hundreds or perhaps thousands every day. That's what makes this job so important and worthwhile because you know you are having an impact.'

Ambiguity

It is well documented that teacher educators inhabit an ambiguous cultural world (Hazlett, 1982; Ducharme and Agne, 1989; John 1993; 1997). Their multiple mandates requiring as they do a number of differing commitments, make the job complex and difficult for outsiders to understand. The friction created by the competing demands put on tutors by state intervention, university requirements, school partnership structures and by the students themselves, create a number of ambiguities which go to the heart of the enterprise of teacher preparation. Part of the problem lies in the fact that teacher educators sit at the intersection of two competing cultural worlds: the world of the university often characterized in traditional Newman type terms with its emphasis on the intrinsic value of learning, research and scholarship leading to the discovery of new knowledge; and the world of practice often seen in more pragmatic terms, where action and outcome are more closely related. Goodlad (1988), p.109) saw schools or departments of education as something akin to a city state into which were compressed competing value systems and symbols. Tutors, he posited, therefore developed a confused mindset which often resulted in outbreaks of 'occupational schizophrenia.'

Wilson (1992), Cole and Knowles (1995) Gideonse (1989) and others, have all pointed to the fact that tutors in schools and departments of education in universities are given less time for research, teach longer hours, invest more time, energy and personal commitment into their students than other of their academic counterparts both within the department and throughout the university. Knight, Wiseman and Smith (1992) have called this a 'trilemma' whereby tutors are trapped within a university culture which values and now demands scholarship and research; an initial training culture which values the application of knowledge to practical situations; and a school culture which values action and experience. In a recent study of a college of education, McGuire (1995) found similar tendencies and saw tutors facing fundamental dilemmas related to course content, theory and practice, funding and the nature of knowledge and its delivery. Living in this 'no-mans-land' has led to some fundamental problems which the passage of time has done little to address. In one sense it has laid them open to censure from a number of quarters especially those critics of initial training who have exploited their vulnerability in their quest for root and branch reform (Phillips, 1996; Lawlor, 1992; O' Hear, 1988). In another they have become the targets of some the academics of education who believe their research and scholarship is sub-standard (Pring, 1994; McNamara, 1996). Finally, the increasing round of OFSTED inspections has laid them open to new attacks based on their performance in terms of meeting externally imposed standards.

It is small wonder then that the case studies should reveal a profession under pressure; this manifested itself in a continual concern about the competing demands being placed upon them combined with an anxiety about the future direction of initial training which was expressed in both professional and personal terms. All the tutors were therefore vociferous in their descriptions of the ambiguities they faced in their day to day work.

The term ambiguity is favoured over the more popular concept of dilemma because a) it matched the experiences of the tutors outlined in the data, and b) during the process of participant verification of the constructed case studies, the tutors themselves felt the term better represented their position.

According to the *Concise Oxford Dictionary*, the term ambiguity is defined thus: 'an expression or act capable of more than one meaning.' A dilemma, on the other hand, is defined as: 'a position that leaves only a choice between equally unwelcome possibilities; an

argument forcing an opponent to choose one of two alternatives.’ Despite its widespread use in educational literature, springing in part from Berlak and Berlak’s (1981) seminal study, the term is not as useful when trying to conceptualize aspects of the teacher educators’ experience and practical knowledge. Instead the term ambiguity, with its multiple dimensions, better reflects the predicaments that the tutors describe mainly because it concerns situations in which the choice of one or more courses of action might sacrifice the advantages of an alternative route, if chosen. In sum, ambiguous situations are those in which no perfect solution is available and both negative and positive outcomes might accrue, although at differing levels of intensity.

With this definition in mind a number of common ambiguities will now be discussed.

Practice

All of the tutors outlined in detail their images of good practice in terms of the teaching and learning of their subjects, however, some ambiguities emerged when they tried to apply this to the more complex world of teacher education. They admitted that despite curriculum change and the coming of the National Curriculum, there was still a wide diversity of approach both within departments and across schools. This was accredited to the endemic uncertainty of classrooms and schools and the resulting equifinality of teaching methods (Hoyle 1974). As a result, although the term ‘good practice’ was ubiquitous in their images and espoused principles they all conceded, to a greater or lesser extent, that various approaches could achieve positive results. The term ‘effective practice’ was often used interchangeably with ‘good practice’, however, the latter often carried with it a value judgement and was expressed more in ideal terms.

Some felt that in presenting the students with ideal models they were letting themselves open to criticism in a number of ways. In the first place, if the ideal did not match reality, some students would quickly shut down and dismiss the sessions as unrealistic. Second, some tutors were aware of being too critical of their colleagues in school because their practice did not resemble the models they were presenting to the students in the university. Third, if the methods suggested in sessions were tried and were seen to fail, for whatever reason, then the students were less likely to experiment in the future and be more cynical of the approaches.

In terms of the application of 'good' or 'effective' practice to teacher education, the tutors agreed that a certain amount of uniformity of practice was necessary in order to create and support a consistent experience for students across schools. It was their job to provide this anchor even though it highlighted the lack of consensus within and across schools. This sometimes caused problems particularly when students returned with a wide range of experiences. Throughout the case studies we find the tutors commenting about students who were vocal about the unrealistic picture of practice they were being offered in the university, a position often based on the fact that they saw little evidence of the types of teaching advocated as 'good' practice in their placement schools. Some of the tutors felt that such diversity was not only inevitable but also essential. Beth, for instance, despite having firm images of good teaching and learning encouraged her students to try to understand the complexities and to work with them while simultaneously stressing the underlying principles and values that made up her coherent vision of teaching. The National Curriculum, it appears, had for some subjects helped to weld a consensus. In Modern Languages, Philip stressed the importance of the convergence of practice and felt the document and its creation had decreased divergence although he admitted that personal style still left a lot of room for variation.

A further component of this sub-theme is linked to varying amounts of ambiguity concerning the distinction between the demand to prepare students for schools, departments and classrooms as they are, and their urge to think beyond the present and to prepare their students for teaching as it might be in the future. Inevitably this was associated with the National Curriculum which was itself seen as a double-edged sword. As one tutor commented: 'should I be preparing my students to deliver the National Curriculum or should I be preparing them for schools as the might be or should be; schools and teaching are more than the sum of their parts and much more than the National Curriculum.'

This ambiguity inevitably led to the issue of innovatory practice and its role in teacher education being raised. Most tutors were committed to the inculcation of novel ideas and practice, but only within certain limitations. In science, for instance, Edward, was keen to take his students beyond the present reality and to help them become independent thinkers and users of new ideas 'thus taking forward science education while at the same time taking new ideas into schools so that experienced teachers could improve their practice.' However, this desire was matched by a concern that students were novices who were still adjusting to

the complexities of schools and classrooms and that too much innovation might run their emerging expertise into the sand because of the lack of experience. The tutors also recognized that schools demanded more now in terms of basic competencies and this had led to a narrowing of their courses and a truncation of curriculum time; space which previously had been used to develop these innovations. Additionally, they realized that schools were having problems implementing what was there and that students had enough problems adjusting to that reality without overburdening them with new ideas.

Theory

The issue of theory, to put no finer point on it, has plagued teacher preparation since it moved into higher education well over a century ago. A full discussion of the problem will not be attempted here as many learned accounts already exist. However, it cannot be ignored because it emerged continuously in the data and is well represented in the case studies. Most of the five tutors were consumers and producers of research and theory, although such activity was confined mainly to their subject areas. In their practice, there were a number of examples of formal theory being offered to the students; it was usually presented in a dynamic fashion and was linked where possible to practice. Edward, for example, used it to structure a session on children's misconceptions and implicit beliefs about science; in maths it was used to show how investigations might develop thinking skills; in English seminars it was used to introduce sessions ranging from the teaching of reading to the uses of Shakespeare.

A variety of ambiguities appeared when the word theory was put up for discussion in terms of its use in teacher education. The resulting data indicated that it was used by the tutors to mean a number of things, sometimes distinct but often overlapping. At times it was viewed purely as a process; one that was closely linked to reflection. In this sense it was seen as a way of getting students to think about their subjects, teaching and learning in a way that helped them to develop new understandings and practices. This use of the term theory signified a shift away from seeing it as public knowledge, defined by Berlak and Berlak (1981,p.157) as 'information that is valued because it is accepted within the traditions of knowledge production.' Instead, the students were encouraged to theorize and deliberate about issues using their personal knowledge and experience as a basis. The tutors likewise used this approach in their own work and stressed their own belief in the power and efficacy of their own personal knowledge and accumulated craft wisdom. At other times, however, theory was seen as illuminative, helping students to see through problems while at the same

time encouraging them to follow a particular approach. Finally, theory was seen as a bulwark - there to support certain pedagogical positions espoused by the tutors and to give empirical weight to their suggestions.

The concern over the application of these approaches to theory left the tutors unsure about its place in teacher education courses. Peter was sceptical about the value of formal theory and always worked from the concrete and rarely moved into the abstract, however, he did express a concern that some students could leave the course never having read a book about education. Steven was more up front about its role but admitted to confusion about its meaning and use in both university and school based contexts, he commented, 'I like theory because it makes sense to me and I like playing with ideas but when it comes to the students it can be confusing; I use a lot of post-structuralist ideas in my teaching but I'm not sure what the students make of it and how it is received in schools. It's this confusion - what if OFSTED heard me - would I be caricatured?' Beth felt that she embodied a number of 'living theories' and encouraged her students to do the same; for her theory was not about 'prescriptions for practice' but there to help students become 'thoughtful and not tied to the bracket name bracket type of research' but instead based on 'a whole raft of sources - personal, fiction, listening, observing, discussing, thinking and so on.' Edward and Philip, on the other hand, were more pragmatic and saw formal theory and personal theorizing as being bound together but were unsure about the balance and how to achieve it in their courses.

Overall then, the issue of theory caused some soul searching and illustrated incomplete thinking and divisions in the tutors' mind regarding both its purpose and role in courses of initial training. Such confusion and an inability to resolve the issue, have led some commentators to call for the term to be removed from courses of training. Such a move would no doubt be a delight to some critics, but as Hoyle and John (1995) argue in relation to professionalism, one cannot legislate a term out of existence, particularly if teacher preparation is to stay within the boundaries of the university.

Reflection

The multiplicity of beliefs and understanding associated with the term reflection and reflective practice, also led to a number of ambiguities. Despite the profusion of papers, guidebooks and reports on reflective practice there is still no agreed upon definition that has

provided a working model within initial training. Such a variety was mirrored in the sorts of views expressed by the tutors in this inquiry. Even though the official documentation revealed the need to create reflective practitioners and that an aim of the course was the development in all of our students the capacity to reflect and deliberate on practice, no such agreement existed among the tutors' conceptions. This is not a new or an original finding (Russell and Munby, 1991, Adler, 1993, John, 1996, Lucas 1993), however, the diversity of views combined with further ambiguities about the nature and character of student teachers learning did highlight a number of issues.

During the early stages of their training the tutors all expressed the concern that the students were fragile learners and that they were all dependent on themselves (tutors) and mentors in schools for adequate models and suggestions for practice. This period characterized in the literature as being self-driven (Fuller 1969) highlighted the demand that their tutors give them more recipes or direct practical examples of how and what to teach. This was often difficult for the tutors who did not want to encourage in their students' a dependency culture, reducing teaching to a set of dance step routines. However, they all recognized *pari passu*, that teaching and classroom management in particular, were difficult processes to master and they wanted to provide useful sessions but not simple 'hints and tips'. In fact, in the observed sessions the tutors were doing both - providing recipes from their personal knowledge of the classroom and from other sources while at the same time, trying to encourage a sense of thoughtfulness and reflection.

The tutors all claimed that it was in the best interests of the students to think about the nature of practice and develop their own position and ideas stressing the notion, as one commented 'that they would appreciate this in five years time.' The tutors then tried hard to balance the current and future needs of the students within the general rubric of reflective practice, nevertheless, more searching questions need to be asked. If there is such a wide diversity of conceptions of reflection what effect might that have on their students thinking? Also, given these differences, even within discrete subject sections, will the coherence of courses suffer? Might the students simply see the confusion as yet another example of rhetoric and reality becoming blurred or are the mixed messages a way of helping novices to understand the complexities of being a teacher? Furthermore as Adler (1994) and John (1996) have shown, the tutors own reflectivity was often hard to see. All too frequently it seems, they were encouraging reflective practice but the extent to which they were practising their creed was variable. These are issues to which I will return later in the dissertation.

Coherence

Whilst all tutors worked within a PGCE course which had particular objectives and structures, they predominantly followed their own professional pathways. In the past this was never seen as too problematic, however, with greater public accountability and increasing scrutiny the issue of coherence has become more prominent. Some subject courses were built on a particular framework and had a strong theme running through them. The English course, for instance, was based on a mixture of Vygotskyian concepts, psycho-linguistics and a range of personal positions. The languages course tutor, on the other hand, was more eclectic, drawing on a variety of approaches all embedded within the National Curriculum. This diversity within and among the subject tutors, combined with the sometimes loose relationship with the programme as a whole, and the variation in experience between school subject departments, created a number of ambiguities in the minds of the tutors.

One expressed only minor allegiance to the objectives of the PGCE programme as a whole, while the others felt it was incumbent upon them to attempt to tie their practices into the bigger picture (even though this was expressed in relative terms). However, even then they all expressed a concern that each subject should follow its traditions. In terms of school experience, the tutors all agreed that partnership had increased inconsistency in some areas while simultaneously improving it in others. Ambiguity arose when solutions were offered: should they put their personal preferences to one side in order to improve surface coherence? Or should they celebrate difference even though it may lead to confusion in the eyes of schools and their students?

Partnership

The coming of partnership had also created ambiguities in the work of the tutors. They all felt that they had become less important in the training equation and that their role had shifted. Despite less time being spent in the university and the demand that students be trained quickly and more intensely for school experience particularly in terms of lesson planning, classroom control and the basic teaching techniques, they all felt that partnership had created new opportunities for inter professional development. New dialogues had been set with tutors and mentors and that this had created a more consistent approach for students. However, this was not uniform and they all stressed their concern at losing control over subject placements

with whole school placements being negotiated often at the expense of long standing departmental relationships.

In addition, the shift in role from being an enabler to being an assessor or moderator was problematic for some. This whole issue reflected a wider ambiguity about their new role in relation to the students' learning in schools. Whereas before they had full control over the examination and assessment process which was built on a high number of school observations and visits, they now felt they were being reduced to managers and quality controllers, and the help they could give to students through their peripatetic knowledge was being incrementally reduced. Their traditional enabling role was therefore becoming more ambiguous and all the tutors felt it was being gradually subsumed by a moderating and management role. Checking on experiences, scrutinizing ATs practices, monitoring the number of observations and confirming or otherwise, that students had reached a set of national standards, now seemed more important than helping students to improve their professional practice.

Research

All of the tutors discussed at length their own position in relation to research and scholarship. Throughout the case studies, the tutors' belief in the service ethos and their commitment to their students welfare and learning was clearly visible. This caring ethic combined with a heavy teaching load, however, put them in a number of ambiguous situations. The ever increasing demand from the School and the university hierarchy for greater research output, placed extra pressure on the tutors. Even the term 'research' caused a number of problems. The University and the School of Education, now buttressed by the RAE, demanded research of an academic quality, based on particular theoretical positions. This often conflicted with what they saw as the real role of research to help inform, guide and improve practice. For many of the tutors, the research they were encouraged to undertake was fundamentally flawed and too far removed from practice. However, because of their perceived institutional weakness they had not been able to challenge the status quo about what actually constituted research in a School of Education.

Many stressed the point that a new form of professionally orientated applied research at least might reach their constituencies while the academic research was incestuous and read only by a small number of influential academics. Furthermore, the realisation that promotion was tied

up to the production of academic research likewise created confusion. A number claimedt hey had already sacrificed their careers in the university rather than jumping on the 'CV bandwagon' as one called it. The demand for research was also problematic in that the tutors were given very little help in developing methodologies and were also given very little time to engage in the act. Some could literally not make room at all and questioned the whole enterprise. Others were faced with a choice of the students or research and that was at odds with their internal sense of professionalism and the powerful service ethic underpinning their work. All were willing to engage in research but felt the whole notion was too ambiguous for them and created in their mind an ambivalence which was even more insidious. What sort of research was relevant? How might it be communicated? And in what ways could it serve the profession? Were questions that were not being asked let alone answered.

Academia

Finally, all the cases were replete with confusion and misunderstandings about their true worth in the university. All entered the university with strongly held views about how they should go forward and felt they were chosen for the job because they embodied good practice and had the ability to enthuse and educate the next generation of teachers. Their socialization into a new and different academic culture created an ambiguous mindset; one that had changed over time but one that was still essentially problematic. The English tutor felt displaced from the classroom and felt more comfortable working with the students and teachers in cooperation. Beth likewise felt more at home in a school environment where practice and its vagaries were discussed. This view of themselves as practitioners in an academic context weighed heavily on their minds. The feeling of being outsiders was clearly identifiable in their stories. For instance, Philip felt that the whole enterprise was akin to the 'emperors new clothes' while Edward still felt that being an academic meant that teaching and the quality of teaching were relegated to levels that were unacceptable in his eyes.

Summary

By means of an interpretative cross-case analysis, then, this chapter has focused upon significant aspects of the tutors' practical professional knowledge as they emerged through the cases reported. In so doing it brought to the case studies a range of theoretical perspectives taken from the literature dealing with such diverse issues ranging from writing on professional development, professional practice, teacher education and teacher socialisation.

The seven themes: intentionality, practicality, subject specificity, generativity, efficacy, ethicality and ambiguity and the relationships among them constitute not only greater theoretical clarity but also highlight the essential elements of the phenomena in a way that further links the research questions to the conceptual framework and data collection. In exploring the case studies with the intention of illuminating the practical knowledge of the tutors concerned, the purpose was to achieve ‘the careful confrontation of principles with cases, and of general rules with concrete documented events’. (Shulman, quoted in Stones 1992, p.309)

CHAPTER TEN

DISCUSSION AND IMPLICATIONS

Preamble

Based on the results of the descriptive case studies and the thematic analysis, the discussion of the findings will be structured according to the four broad research questions outlined in chapter one. Each section attempts to place the findings in context by using a range of literature to amplify key issues. The chapter ends with a summary, the purpose being to challenge some of the myths that have surrounded the work of teacher educators in recent years.

1. To what extent have the teacher educators' past experiences shaped their practical professional knowledge?

It clear from the evidence accumulated in the case studies that teacher educators arrive in higher education much later than colleagues in most other departments or faculties of the university. Such a condition is an important factor in accounting for the ways in which their practical knowledge is described and used in their subject seminars. A related issue is the intensity of that pre-university experience, and the effect of working for long periods in schools has on the nature, development and application of that knowledge. Carter (1984) in a small scale investigation into the phenomenon, discovered that 75% of teacher educators had spent an average of 10 years teaching in schools before entering university. Similarly John (1995) in a set of interviews with 42 teacher educators of various ages and experience found that 67% of the sample had at least 8 years teaching experience before becoming subject tutors.

Given the evidence presented in the case studies, what can be said about this carry over effect? And in what ways does it affect the thinking and practice of the tutors? An important starting point is a strong adherence to the work ethic of schools. Schools are, among other things, places where the pressures of time are felt daily. Timetables, periods, lessons, and the bell are a relentless reminder of particular work patterns. Other aspects of the job likewise create its intensity and immediacy, such as, planning, preparation, marking and monitoring;

all of which make up the professional routines of teachers. These more tangible symbols of school life are supported by the importance attached to the need to attend to children in various situations.

Suspensions about theory and the relevance of research were also discovered in a number of studies. This is perhaps inevitable given the practicalities of teaching. Ducharme (1988) has claimed that such beliefs may be carried over into teacher education and may manifest themselves in ambivalent attitudes towards research, and more particularly a desire to make it relevant to practice.

Throughout the case studies the craft wisdom of the tutors was a significant factor in their work, even those who had spent longer in the university, such as Peter, still felt their school based practical knowledge was of considerable importance. Although as their careers progressed within ITE they developed new forms of knowledge, much of their work was still built upon conventional wisdom, pragmatism and personal style. In addition, because much of this knowledge and wisdom was anchored in the mind of the tutor, a considerable range of practices emerged in various subject based courses. This craft wisdom, defined by Freidson (1970, p.347) as 'a distillate of contemplated experience, embedded in current practices and thinking' was drawn upon at various points in the tutors' practice and played an important role in developing many of the principles which underpinned it. In this sense it is difficult to disentangle it from other aspects of their knowledge gained from their time spent in teacher education. Nonetheless, a key aspect of this craft wisdom is the range of understandings and knowledge which span such diverse areas as knowledge of the subject matter, which includes knowledge of the content area as well as knowledge of the 'syntactic and substantive structures of the discipline.' (Schwab, 1964, p.186), general pedagogical knowledge, and knowledge of the contexts including classrooms and school.

Ducharme (1993), in his study of the lives of teacher educators, shows how this knowledge grows exponentially when teachers enter higher education. He discovered that because of a lack of training for the job, being a good practitioner was deemed the perfect qualification. Too often, the tutors' craft knowledge and school experience became reified long after it had ceased to have any real impact (although Ducharme did admit that as the years passed this craft knowledge had less of an impact and instead formed the principled basis for a great deal of the tutors' work with students).

From the evidence of the case studies, subject tutors also take considerable time to come to terms with the sorts of research that might best inform their work. Even in within their subject specialisms, their knowledge was at times scant and based on a selective reading of particular researchers who reflected their own personal preferences. It was interesting to note that despite stressing the need for students to read and understand the literature on children's learning, the tutors themselves showed a marked ignorance of the current research into the learning of student teachers and other professionals.

The tutors in the case studies also realised very early on that the knowledge which served them well as teachers was not always sufficient for coping with their new role as subject teacher educators. Success in teaching then, although necessary, should not be regarded as a sufficient condition for entry into ITE. This early reliance on the authority of experience (Fenstermacher, 1994) proved to be problematic for the tutors and the case studies are littered with instances of the ways in which their teaching knowledge was in many ways a burden, particularly in the early years in the job. Later on as they gathered experience this teaching knowledge was to play an important role in providing illustrative material for particular approaches as well as giving the tutors an essential empathy with experiences and situations of their students. Part of the problem also related to a perceived lack of confidence; a factor that was exacerbated by their uneasy introduction and poorly supported entry into the School of Education.

In many ways their experience of working in ITE was vital in the creation of this knowledge. The case studies and the thematic analysis revealed a series of developmental trends in this process of knowledge acquisition which mirrored the findings of Kremer-Hayon and Zuzovsky (1995). The first falls under the title, 'an expansion of knowledge' which saw the tutors moving from a here and now position perhaps best represented by Philip's term 'the master teacher approach' to a broader view of 'then and there' equally well understood in Peter's phrase 'enabling them to learn'. (Kremer-Hayon and Zuzovsky, 1995). The 'here and now' denoted a reliance on craft knowledge gained at classroom level and exhortation to teach according to a canon of good practice which the tutors embodied. The 'then and there' was epitomised by a shift to more subtle approaches and the use of a broader array of strategies aimed at improving the learning of the students.

The second can be characterised as a move from dependence to independence. This change finds its clearest expression in the case study of Steven. His journey through a dependency on

his teaching experience combined with curriculum models drawn from his own PGCE to an independence based on specific theoretical constructions is highly representative. The third and final trend can be understood as a continua with the tutors moving from a focus on methods and technicalities to a broader focus on the students as learners, on values and vision, and to a focus on professional flexibility.

In the final analysis, it was the tutors' own personal reflection combined with observation, reading and discussion that contributed to these shifts, and in so doing helped in the creation of new forms of knowledge and a greater understanding of their practice. This process, however, was for some a painful one given the lack of guidance and poor curriculum structure within which they had to work. As a result they learned and constructed their knowledge by the very process they eschewed in their own work with student teachers - trial and error. Perhaps this somewhat ironic situation typified the current predicament of numerous other tutors (both new and experienced) who have faced and continue to face uncertainty in their work.

2. How and in what terms do they describe their experiences in teacher education?

The tutors in the study highlighted focus, tempo, rewards and power as the issues which were of greatest importance to them. In terms of the first, despite feelings of frustration, unease and vulnerability, the tutors in the case studies expressed positive attitudes towards their work. This finding is consistent with other research by Howey and Zimphner (1989) and Ducharme (1984; 1993). However this was matched by an increasing sense of impotence. All were concerned, to a greater or lesser extent, that they were in danger of being written out of the ITE equation and that their expertise was being marginalised. Additionally, they all felt that an increasing frustration with the compression of curriculum time which had come in the wake of partnership. In the university based elements of their courses, there was now undue pressure to prepare students for the classroom resulting in a dash for competencies. The creation of a vision and the careful exploration of pedagogical and subject based issues was therefore being foreclosed. The number supervisory visits had been cut and there was a concomitant change in their role. The careful exploration of practice *in situ* over five or six visits had been replaced by a new approach which meant a perceived shift in their role from being enablers to assessors (although the tutors admitted assessment had always been part of their role it had in the past been merged with the enabling aspects of the job) which involved not only checking on the competency of the students but also that of the mentors.

Furthermore, the moderation element had become more prominent as had the ambassadorial role; the latter being particularly important given the pressure to garner and maintain student placements.

The second issue hinges on the tutors' experience of time in the workplace. All felt that during the past few years there had been a gradual intensification of their work; interestingly, the most experienced tutor in the sample appeared to be most aware of this shift. There were a number of complaints in the case studies relating to increasing workloads and the demands made on their time, particularly in terms of the publish or perish mentality attendant on the Research Assessment Exercise. For all of the tutors the ever increasing demand for publications, appeared to place them at a considerable disadvantage in the promotion stakes because they had a higher teaching and administrative load than colleagues in the School and elsewhere in the University. Research and writing was therefore a 'spare time' pursuit and they all felt a sense of frustration and anger that for many of their non-PGCE colleagues, research was their *raison d'être*.

This was combined with a feeling that there were unequal workloads within the School of Education and that PGCE tutors suffered as a result. Beth was vociferous in her condemnation of the different tempo of life experienced by PGCE tutors compared to other colleagues while Steven was angry at the way teaching time was unfairly distributed. Inevitably such experiences were mixed up with a raft of issues related to rewards.

In the first instance it was clear from the data that all the tutors gained tremendous satisfaction from their work with students and all were totally committed to their job. In this respect their views resemble their earlier selves as schoolteachers. The thrill of seeing a student put into action ideas suggested in seminars, or the sheer excitement of watching a talented student at work was enough to make the job rewarding and worthwhile. However, concern was expressed about poor promotion prospects and the lack of recognition given to PGCE tutors within the School. They were all cognisant of the need to develop the publications side of their CVs but felt that those in authority failed to recognise the unique and different circumstances of those working in ITE. Pressure to research was viewed as more intense and all had problems balancing the research - teaching equation. Additionally, concern was expressed about the nature of research and the impact much of it was or was not having on the world of practice.

A final issue raised by the tutors was that of power and influence. Despite seeing themselves as experts within their fields and working an area which they considered to be vital to education, the tutors felt that PGCE work was marginalised within the School of Education. One went further and felt that with the coming of partnership the ITE section had been 'ghettoised.' This was put down to the fact that some of those in positions of power within the institution had no understanding and very little sympathy with ITE. Consequently, their voices and concerns were continually marginalised and misunderstood.

The issue of gender and power was difficult to appraise given only one of the cases was female, however, she was assertive in declaring that the institution was driven by male values even though the head of department was female. This she put down to something akin to what Marxists term 'false consciousness'. In other words, too many female members of the School either put up with or adopted male postures and positions in order to advance themselves within the hierarchy. This finding is reflected in the small number of studies that have concentrate on this issue. Simeone (1987) in her study of academic women described the deep sense of isolation and difference that pervades the histories of academic women within academia. This she put down to denigrating attitudes from men and informal exclusion from truly meaningful and important decision making bodies. Clearly this is an area that needs further study.

The data analysis also pointed to the variegated cultural patterns that are at work within schools or departments of education. It is not being suggested that those who work within an organisation should share the exact same cultural understandings or values or hold them with the same degree of intensity. Nor is it being suggested that cultural explanations for institutional identity are in themselves explanations for the actions of individuals within such organisations. It is, however, important to recognise that at least two kinds of implicit cultural rules do shape action and identity. The first are the boundaries that mark out the identity of individuals. In terms of the tutors in this study, their actions and identity were seen not only in terms of sub-grouping and task-culture, but also in terms of work load, levels of responsibility and the ability to manage their time.

The second are the sorts of relationships that develop within the institutions. According to Minichun (1984) and Sprenkle and Olsen (1978), the starting point for looking at relationships is the idea of cohesion, in other words, the extent to which this bonding is perceived to structure, in some ways, the identity and the autonomy of individuals within an

organisation. Minichun (1984) goes further and suggests that there is a continuum of cohesion which at one pole sees highly enmeshed groups and at the other disengaged groups who exhibit very little cohesion. The tutors in the cases studies can be placed on the continuum at the point which Minichun (1984, p. 236) terms 'the separated level of cohesion.' This sees them as a group who have a separate identity within an organisation but are not completely disengaged from the overall aims and structure of that organisation. This was most visible in the language used by the tutors, in particular, the extent of shared meaning and common phrasing used to describe their actions and thoughts. Whether the 'mission' and the future management of the School of Education in Bristol (and others throughout the country) will become inclusive enough to bring on board its ITE tutors remains a vexed question, however, the continuation of inequitable workloads and promotion restrictions will do nothing to create a culture of connectedness which is so vital to a flourishing academic department.

Although the tutors in this study used their past knowledge and experience in different ways, all shared a common desire to be culturally generative in their work. This was embedded within a perceived need for technical generativity and reflected a common tension within courses relating to the need to get students to understand teaching while at the same time helping them develop the necessary skills to function competently in the classroom (Calderhead and Shorrock, 1997) Proponents of a technicist view of teaching can be culturally generative to the extent that they themselves are rooted within a long tradition of pedagogy which in its day did have a shared cultural expression (Judge, 1995). We therefore need to know more about these particular forms of generativity and how they operate within courses of teacher preparation.

Finally, no discussion of what it is like to work in a Initial Teacher Education would be complete without reference to the sorts of ambiguities tutors encounter in their day to day tasks. All felt they were caught in the cross-fire of continuing debates regarding the nature of research, institutional reform, their role in partnership, the relationship between theory and practice, the structure of courses, the nature and application of reflection, their status and position within the school of education and the university as well as second guessing national policy changes and the effects that may have on their practice. In many ways this experience created a certain ambivalence in their attitudes and led in some respects to a hardening of attitudes.

All felt their status within the School of Education reflected in many ways the overall status of the teaching profession outside which was itself going through fundamental change. Partnership whilst being viewed ideally as a relatively equal relationship was still seen as imbalance. The greater involvement of mentors and school colleagues had increased the coherence of courses as well as having a positive effect on assessment issues. As a result partnership had eased what Calderhead and Shorrock (1997) allude to, as the poacher turned gamekeeper scenario, however, in other ways partnership was still a source of tension and concern in relation to control, finance, authority, the relationship between subject and educational studies, and the tension, in school based work, between subject mentors and professional tutors.

To conclude, the deep schism that appeared to exist between those directly involved in teacher preparation and the 'academics' of teacher education added to the feeling of isolation. Reference group behaviour is critical to an understanding of this phenomenon and we need to know more about who subject tutors identify with, the sorts of constituencies they feel closest to, and the various strategies that heads of departments might use to integrate them more effectively as well as developing processes that create greater equity in terms of workload and status. These issues are wrapped in the wider cloth of university wide expectations in terms of the RAE, national expectations in terms of the provision of quality courses, and internal attributions in terms of promotion and reward. Perhaps those in positions of authority should bear in mind Edward Boyle's favourite definition of a university 'A place where teaching is conducted in the atmosphere of research' (quoted in Hoggart, 1992, p.122).

3. What is the nature and character of the practical professional knowledge teacher educators hold and use?

It is widely acknowledged that the intellectual problems of attempting to describe, conceptualise and develop practical professional knowledge are formidable. This is due to the fact that practical knowledge is rarely tidy and an appropriate language for handling much of it has yet to be developed, however, since there was prolonged interaction between the researcher and the tutors involved in this study, a tentative attempt will be made to map the both the essential qualities of this knowledge as well as its distinctive characteristics. Before beginning several provisos need mentioning: first, few of the tasks teacher educators take on in their work with students involves one form of knowledge; second, the categories outlined below are inter-dependent in a number of complex ways and might even benefit from further

sub-division; third, it might even be better to map the categories in the form of a Venn diagram as sets of overlapping circles. Nonetheless, two positive claims can be made for the map: it covers a range of territory which has so far remained unexplored and unexplicated; the topology also serves as a powerful heuristic for thinking more deeply about the nature of subject tutors' (and for that matter mentors') practical professional knowledge and how best it might be further developed. The four categories are as follows:

- Knowledge of subject specific pedagogy
- Knowledge of student teachers
- Knowledge of teacher education pedagogy
- Knowledge of professional contexts

Each of these knowledge types is explained below.

Knowledge of subject specific pedagogy

The knowledge of their subject area is highly experiential, built on understanding gleaned from a variety of sources, including their own educational history from school through to university and beyond, the teaching of the subject at school level, their continued immersion within the subject culture characterised by reading and the attending of conferences, and the provision of in-service training to professional colleagues. Embedded within their knowledge about the subject included what Schwab (1964, p. 87) has termed 'knowledge of the substantive and syntactic structures of the discipline.' The former refers to the various paradigms within that field that affect both how the field is organised as well as the questions and methods that guide enquiry; the latter incorporates an understanding of the canons of evidence and proof within the discipline and the way in which knowledge claims are made, validated and evaluated.

Additionally, this knowledge includes knowledge of the underlying historical evolution of their subject and the teaching of it; knowledge of the concepts and procedures for teaching various aspects of the subject; knowledge of how to plan, structure and assess lessons and knowledge of the various ways of organising, monitoring and structuring the learning environment to enable children to learn. These are pivotal in terms of providing the students with a range of experienced and observed approaches to teaching and learning

Knowledge of the curriculum for the tutors extends beyond the National Curriculum and includes the various ways of organising the subject within a variety of contexts, including integrated and cross-curricular approaches. It also includes knowledge of textbooks, audio-visual materials, practical resources, Information Technology and other curriculum aids. In order to help their students structure and present the subject matter in a way that encourages learning in their pupils, also requires a knowledge of how children learn. In this respect the tutors' knowledge is both experiential and research related. All five tutors had an in-depth knowledge of this crucial area, in particular, the sorts of strategies that best produce learning, what constitutes appropriate and effective learning environments, the typical misconceptions and errors made by children and the most appropriate approaches for correcting them.

This knowledge was accompanied by a thorough understanding, both in local and national terms, of the policy framework related to their subject. This included a deep knowledge of the documentation, an understanding of the political and administrative underpinning, and the ways in which the subject and its pedagogy had evolved and may in the future develop. This was acquired through networking, meeting with national bodies, sitting on committees and the provision of in-service training. Finally, this subject based knowledge was enriched by a broader reading of the literature ranging from school improvement through to psycho - linguistics; the choice of area depending very much on specialist interest. The tutors were also producers as well as consumers of research; all engaged at one level or another in research and scholarship within their subject areas. One was in the process of completing a PhD on literacy across the curriculum; another worked with teachers in an action research capacity; a third had produced a handbook for modern languages teachers on the uses of Information Technology; while a fourth had produced a best selling handbook for heads of maths departments. All the tutors were also active within their subject organisations with some holding senior positions.

Knowledge of student teachers

In order to provide a high quality course, it was evident that the tutors considered it important to know their students as both people and as professional learners. This was done in a variety of ways: autobiography and biography was commonplace, although its use varied considerably. In addition, the tutors made efforts to get to know their students through individual tutorials, through personal conversations, by reading and marking their assignments and through observation both in the university seminar and in school based environments. Knowledge of their students was deemed important in the building up of

professional relationships and in the placing of students in schools. It also created confidence and allowed the tutors to build up a store of knowledge related to different types of student; a process that enabled them to home in on weaknesses and play to strengths.

Much of this knowledge was experiential in origin and was based on personal relationships. It was augmented by reports from school based mentors and allowed the tutor to tailor strategies of support according to individual need. In particular, knowing their students as learners gave them the opportunity to provide an overview of their progress in comparison with previous students and here they drew on their rich peripatetic knowledge. That is knowledge which has been acquired through watching student teachers teach in a variety of classrooms and schools over a number of years. Having this as a yardstick helped in the assessment and moderation of teaching performance as well as providing a textured backdrop to their subject sessions.

Knowledge of teacher education pedagogy

It was obvious from the case material that the tutors had a deep understanding and knowledge of the most appropriate strategies for helping student teachers to progress from relative novices to competent teachers. This knowledge was highly specific and developed mainly through experience. Creating situations by which students could learn the craft of teaching both in a decontextualised university environment and the action oriented world of school requires considerable skill and expertise. As a result this component of the tutor's knowledge was the most distinctive in character. Furthermore, this form of knowledge was both subject specific and generic, mirroring in many ways Shulman's (1987) distinction between general pedagogical knowledge and pedagogical content knowledge. The latter being associated with the way subject matter is transformed for teaching thus enabling student teachers to facilitate the learning of the subject by others. The former is more wide ranging and is related to the general rules of pedagogy which cut across subject boundaries, and includes classroom management, questioning techniques, class grouping strategies, to name but a few.

All the tutors considered the creation of a positive learning environment as crucial to their task. The ways in which they used their knowledge to create such an environment will be discussed in the next section, however, it was clear that they were able to create a learning arena that was safe and comfortable, in which active learning was encouraged at all times. Of central importance was that the seminar should be reflective and thought provoking as well as

exciting and innovative. Throughout the tutors stressed the need to create a classroom by proxy so that their working style mirrored that of teachers.

The strategies they used varied considerably but all tried to create a 'connectedness' between the students, the subject and the world of teaching. This was sometimes achieved through the use of illustration from their own practice or from that observed in others. It also meant applying their wide knowledge to the many ways of involving students in activities that focused on particular aspects of practice. At times this meant engaging students in practical discourse at other times it meant giving a formal lecture based on, for instance, research or accepted notions of 'good practice'. Other frequently used procedures for facilitating learning, was the strategy of modelling typical lessons or practices; this often included role plays and various group based activities (this will be elaborated on in the next section).

Some of the tutors had specific strategies aimed at motivating their students to experiment with new approaches to teaching and learning while others relied on the students themselves to generate ideas and guide their own learning. The coming of partnership had also increased the need for tutors to implement procedures that would guide their students' learning in school. In most subject seminars advice and guidance was given on ways to observe and question teachers, methods for accessing their mentor's 'in-flight thinking' and criteria for judging the quality of learning in lessons.

The tutors also had knowledge of specific written and other assignments and tasks that would help their students develop the specific knowledge, skills and understandings necessary for them to become competent practitioners of that subject. The nature and setting of these tasks varied according to the stage of learning the student teacher had reached. In the first term, assignments and session based tasks included the following: lesson planning and evaluation, autobiographical writing, book reviews, personal and professional evaluation, various portraits of learners, resource construction, literature reviews, discourse analysis, academic essays, and classroom management interviews with their mentors and other school based colleagues. In the second wholly school based term, assignments were fewer and more school focused and included: a review of a piece of IT software; lesson observation, pupil pursuits, departmental meeting review. In the third term, there was a shift to more personally tailored assignments such as curriculum development activities, school based resource construction, and small scale empirical research projects.

A key thread running through tasks and assignments was the aim of increasing the students' professional awareness and knowledge by focusing their thinking on practically centred, reflective pursuits which would help them recognise and confront their own beliefs, personal theories and values. Although most assignments were written other forms of presentation were common such as video and audio tapes, and the use of Information technology.

Knowledge of professional contexts

Working in teacher education allows the tutor to visit and become familiar with a range of professional contexts. This peripatetic role creates a form of knowledge which is difficult to replicate. The tutors' knowledge of a variety of professional contexts was distinctive and in many ways unique. Peter, for instance, had spent over 16 years building relationships with, and knowledge of, local schools, departments and teachers. Beth, in a sense had an even deeper knowledge given that she had previously worked in a local school for over a decade and had been an advisor and curriculum development officer for a number of years prior to entering ITE. This knowledge put the tutors in the best position to place students while at the same time enabling them to balance their placements. It also allowed them to locate their students' learning in context, and to compare students of varying abilities in different schools and departments. Knowledge of particular schools and the pupils within them, likewise gave them the ability to gauge the competency of students according to wider criteria. This knowledge extended to a broader understanding of schools as organisations, the micro-politics of departments, faculties and staffrooms as well as an in-depth knowledge of the sub-cultures of schools in general.

In conjunction with the above, the tutors also had a broad knowledge of the networks and contacts within the subject area; these were both local and national. All were involved in such organisations to a greater or lesser extent. Steven, at the time of writing, was chair of the English Tutors in University Departments of Education, Philip had been chair of the Association of Teachers of Languages, and Beth had for a number of years been the editor of the Journal of the Association of Teachers of Mathematics. Additionally, many had been invited to sit National Curriculum Council (NCC) / School Curriculum and Assessment Authority (SCAA) / Qualifications and Curriculum Authority (QCA) organisations and committees. This national networking was combined with local activities which included the provision of in-service training to local consortia of schools, the creation subject support groups, the setting up of school based subject advisory groups, as well as working alongside LEA advisors and inspectors.

Together with this local and national networking, the tutors had all been and continued to be heavily involved in the training of mentors. This gave them a unique insight into the skills, character and expertise of their ATs; a knowledge that they were able to put to use when setting assignments, choosing schools for their students and during the process of selection. Of considerable importance too was the tutors' knowledge of how higher education operates; of course design for professional education; and of the regulation and procedures required by central government and its satellite organisations. Lastly, the tutors had a working knowledge of the resources (both material and human) which their students could call upon within the School of Education and in the wider university. The latter being particularly important for the development of subject knowledge, if a problem or weakness was evident.

Expressing the tutors' practical professional knowledge in this way serves to highlight the breadth, depth and unique character of their expertise. However, it can mask a number of tensions and ambiguities that need to be discussed. In the first place, the tutors were all confused regarding the ways in which their knowledge might be added to and used. In the data, they appeared to be carrying out their reproductive and productive roles simultaneously and felt that a lack of clarity regarding the nature of research and its role in ITE created confusion. All felt that research should have some impact on practice hence their preoccupation with more applied forms of research and scholarship perhaps best illustrated by the writing of handbooks, textbooks and professional journal type papers. This sometimes conflicted with the institution's demand for more abstract forms of research activity best expressed in the refereed article and the academic book underpinned by a theoretical framework drawn from one of the disciplines of education mainly sociology or psychology.

4. How do teacher educators use their practical professional knowledge in the context of their subject work with student teachers?

The case studies were also indicative of the ways in which the tutors applied their knowledge in subject sessions. From the analysis it appears there were five key dimensions to this process.

An emancipatory dimension

The emancipatory dimension of the tutor's sessions was visible at a number of levels. Throughout, the tutors were concerned with developing autonomy and independent thought

in their students through a dialectic of the particular with the general. This necessitated the creation of an arena where listening, talking, thinking and writing freely could be encouraged and where proper weight and space would be given to reflection and deliberative learning. Nias (1987, p.53) points out that individuals often need to be led 'to question the taken for granted' and to understand how it has come about and how it might be changed. She also makes the point that traditional hierarchies have no place in this process and that individuals should not become 'authority dependent'. All the tutors then aimed to create a loose, liberal, flexible and mature learning environment where experiential learning might flourish. At the core of their beliefs was the idea that professional learning was an active process and seminars were structured along what Abecrombie (1953) and John, (1996) call a 'permissive atmosphere' whereby informality and openness were the key referents. Here values, feelings, practices, experiences, critical incidents were described, analysed, discussed, cogitated upon, and evaluated in a relaxed and constructive manner. In this sense the seminars reflected Dewey's (1902) contention that there can be no intellectual growth without some reconstruction, some reworking of ideas. Progressive shifts in the students' personal theories were encouraged and these were regarded as a necessary pre-requisite of their learning and practice.

In many sessions the tutor withdrew from the traditional lecturer position, and instead adopted the role of mediator and orchestrator of the ideas and viewpoints that were being put up for debate and comment. This position as a facilitator of professional learning was in part viewed as a necessary antidote to the years of didactic enculturation many of their students had received at school and in their undergraduate education. Weaning them off this 'dependency culture' as one put it, was vital if they were to become 'independent learners themselves both in and out of the classroom. For Steven, the English tutor, this meant the creation of a critical arena or alternative classroom where his students could be challenged in a probing but sensitive way. The concept of ownership was central to this process and led Steven to allow his students, in the first week of the Autumn term, to 'claim the seminar room as their own with photographs, masks and other items of ownership' which he felt was an important precursor to the sorts of sessions he would be holding. Likewise, Beth, set up the maths base so that the students were forced to get to know one another and to learn to work together in a 'new way; a way that was different from what many will have experienced before.'

To achieve these goals, the subject rooms were living entities compared with the more sterile atmosphere of the more recognisable academic seminar. The furniture was comfortable, there were interesting wall displays and resources were openly available. One room had erudite quotations which highlighted the varying definitions philosophers and others had used down the ages to define the subject. In other bases the walls were covered with posters and examples of children's and students' work. One tutor had enlarged a piece of children's writing and an analysis of it was available for viewing while the modern languages base had grammatical constructions laid out in five languages. Many of the rooms had had personal and professional areas where books and resources were available along with professional journals and relevant papers. One had a press board where 'cuttings' were placed and another had a 'lesson ideas board' where interesting and useful ideas were made visible for fellow students to discuss and use.

The seating arrangements also varied according to the topic or idea under review. This emancipator role was evident throughout the year although its emphasis changed as the students became more experienced and the demands and concerns shifted. Above all the ambience of the seminar bases aimed at inculcating more open minded and reasoned debate, where the sharing of anxieties, concerns, lesson reflections, ideas for practice, and reflections on observations and more wide ranging issues were explored in an adult learning environment where the emphasis was on mature reflection and the considered and safe expression of ideas.

Additionally, the seminars were also places where the tutors were able to express their viewpoints as well as guide and give advice. Central to these beliefs was the negotiation of knowledge whereby activities and practices were examined with the aim of encouraging students to develop a personal style of teaching; one that would not only be flexible enough to be applied in a number of contexts, but one that was also underpinned by a vision. In practice, this meant each student having a set of principles which would act as a platform for their teaching. For some this meant encouraging their students to 'become the sort of teacher you want to be' while for others it was tied to a more specific vision, one that was reflected in the tutors' own images and principles.

This emphasis on getting the students to develop and formulate a personal teaching style within a broad principled framework, which from the data could be loosely described as 'learner centred', resembles the phenomenological and personalistic tradition of teacher

preparation laid out by Zeichner (1983) and Diamond (1993). Steven's position, on the other hand, despite having aspects of this tradition embedded within his teaching, was more comparable to Zeichner's (1987) social reconstructionist conception. In consequence, the inculcation of discovery and active learning methods of teaching and learning predominated, with the use of the mother tongue techniques in Modern Languages, the 'real books' approach in English, and the investigative method in maths' sessions, being fundamental.

To summarise, there was a strong tendency within subject seminars to create a liberal, open-ended atmosphere thus enabling the students to explore aspects of the teaching and learning process while at the same time being challenged to confront their own beliefs and conceptions of the subject and its pedagogy through reflection, discussion and various task based approaches. The stress on the expressive and the creative rather than the instrumental and functional marked out the emancipatory function of the tutors' knowledge. The epistemological basis for this position sprang from the belief that professional knowledge for teaching is composite phenomenon springing from the fusion of a number of different sources and experiences. In this conception, the development of the person was viewed as even more important than the need to understand and digest research validated knowledge, which was in itself seen as provisional, underpinned by a variety of methodologies and often difficult to apply in practice given the complex and contingent nature of schools and classrooms.

A collaborating dimension

In order to enable their students to learn from experience, to reflect on key moments and issues and to take risks in a safe and democratic learning environment meant crucially, working in groups. Nias (1987) again makes the point that that students and teachers need other people's perspectives to make them aware of their own egocentricities. This means establishing a collaborative atmosphere which supports and extends learning. Of basic importance therefore is the ability of the tutors' to set a tone of mutual trust, of humility in exploration, of democratic rights for all, of being open to criticism, of accepting ambiguity, of recognising conflicting interests, of encouraging honesty of thought and expression, and of seeing mistakes as positive.

A growing body of literature on school improvement has commented on the beneficial effects of collaboration (Fullan, 1991, 1993, Hargreaves and Hopkins, 1991, Nias, 1989). This has been associated, particularly since 1980, with the shift away from seeing individual

autonomy as the basis for professionalism, to a conception of teaching as a collaborative undertaking (Hoyle and John, 1995, Hargreaves, 1993). However, the nature of this collaborative professional culture remains highly problematic in research terms, with Little (1990) suggesting that collaboration can range along a continuum from independence to interdependence, nevertheless, all the tutors in the case studies had an abiding faith in collaborative ways of working.

The tutors used their practical professional knowledge to stimulate collaboration in a number of ways. At the purely pedagogical level, collaborative ways of working were ever present from the first days of the Autumn term. Working in groups, in pairs, threes, and more was commonplace in every seminar. Even in student led sessions, group and collaborative ways of learning were customary. In Philip's sessions, for instance, it formed the core of his working principles, rarely was a session observed whereby the students did not at some point get into pairs, groups or otherwise. They were always encouraged to create dialogues and teaching resources or to evaluate artefacts and to create questions around them. In mathematics sessions, the students worked collaboratively on various activities connected to National Curriculum attainment targets, topics and levels of achievement; in English, Steven used group and collaborative methods to help students research articles on psycho-linguistics, to create book reviews and to understand ethnic poetry. Edward, similarly used groups in his 'circus' and always mixed the science disciplines in order to develop fresh thinking.

At another level, collaborative working was viewed as an essential element in development of the students' professionalism. They would, they were often told, be entering a working environment where collaborative working was commonplace, and where resources, materials, teaching methods, syllabuses and schemes of work were decided upon jointly. All the tutors expressed the ideal that their students would, through collaborative working, develop a long lasting commitment to viewing practice as dependent on others, thereby promoting the notion of principled collegiality (Hoyle and John, 1995)

At a third and more problematic level, was the tutors' belief that in getting their students to work collaboratively, they would begin to see its value as a pedagogical strategy which could be used in their own classroom teaching with children. A comment by Philip summarises this approach succinctly 'I aim to get my students to be collaborative learners themselves which I hope will encourage them in turn to use such learning strategies in their own teaching; if they

work collaboratively in smaller teams and pairs in sessions then their learning and emancipation as teachers will be followed by them emancipating their pupils.'

The idea of collaborative working in teacher education is not new. Furlong et al (1988) found it to be widespread in number of courses. Similarly Grossman (1992), Wilson (1989) and Clandinin et al. (1993) saw collaborative processes as an essential element in the success of courses. Nevertheless a number of points need clarification. First, Furlong et al (1988) found that despite collaboration being ubiquitous, the agenda and control of the type of collaboration exhibited lay with tutors. This meant that the flow of knowledge, despite appearing to be more democratic and intrinsic, was still controlled by the teacher educators. Evidence from the case studies supports this finding in general, although a small number of examples of a negotiated agenda were discovered. Second, the relationship between enforced and voluntary collaboration and the effects this might have on the students' early conceptions of professionalism needs monitoring and exploration both in the context of formal teacher preparation and during school experience placements. (Hoyle and John, 1995)

An enquiring dimension

In the subject seminars, the students were given various instruments and methods in order to help them enquire into the classrooms they were observing, the teaching and learning taking place within them and into the nature of their own practice. Through structured intervention they were encouraged to come to an understanding of the contextual constraints that can affect practice, the personal and professional dimensions of being a teacher and the nature of children's learning

The tutors deployed a number of strategies in this respect: video tapes were used in conjunction with structured, multi-focused observation sheets. These aimed at helping students to understand the classroom management routines of a particular teacher, and the question and answer techniques used to open and close lessons. Other strategies were more investigative in origin with students being given guidance on how to question mentors on their teaching strategies and how to collect and analyse a variety of classroom based data, for instance, children's subject based discussions and the nature of teacher - pupil interaction. The purpose throughout was to aid the students' learning by challenging them to look at classrooms, children and schools with fresh eyes; 'eyes that belonged to a learning professional rather than a latent pupil,' as one tutor put it.

It was in this dimension of knowledge use that the language of reflective practice was most in evidence, although very little time was spent examining explicitly the nature of reflection and its use in their students' learning. There was also a divergence of conceptions relating to the nature and purpose of reflective practice. It became clear, early on in the analysis, that the tutors' personal theories regarding reflection were bound up with their professional biographies and rooted in their personal and career histories. In addition, a great deal of their understanding came from a tapestry of beliefs and preferences associated with the culture of their subjects.

In order to discuss the role of reflection in the practical professional knowledge of the tutors and the way it exhibited itself in their practice, the three levels of reflection suggested by Zeichner and Liston (1987) Carr and Kemmis (1986) and Van Manen (1977) have a useful heuristic value.

At the technical level a number of strategies were offered to the students. Some were given questionnaires so they could interview their mentors informally about their 'in-flight' thinking; in English, they were encouraged 'to go backstage' and talk to teachers about the 'whys and hows of their practice'. In all cases, emphasis was placed on the need to be non-judgmental and descriptive. Lesson plans and lesson evaluations were popular reflective instruments with most of the tutors seeing them as the primary tool.

At the personal level of reflection, fewer strategies were in evidence. Beth encouraged her students to keep a personal, private journal, so that significant events could be recorded; some of these events then formed the basis to her Friday sessions on 'burning issues'. Here experiences of significance were discussed using a critical incident framework (Woods, 1988 Tripp, 1993). In science and in Peter's maths sessions, students were asked to trace the roots of their thinking in relation to various topics so as to challenge their thinking in terms of the subject and its pedagogy.

At the third, critical level of reflection, very few examples were found. Most of the tutors claimed that in their seminars issues of race and gender were dealt with under the general rubric of equal opportunities. Only the English tutor introduced what might be termed as a social reconstructionist or critical perspective into his work, whereby reflection was linked to challenging the current 'discourses of power'. Its origin was embedded within a diverse set of experiences and came from a combination of political persuasion, personal reading and

reflection, in particular the work of Paulo Friere and Raymond Williams, as well as being rooted in his own personal history. Others saw reflection in more utilitarian terms and had less of a commitment to social and political change. Instead they viewed it as a purely professional process aimed at improving practice.

Scholars such as Ball (1992) hailed the arrival of the National Curriculum as the perfect opportunity for tutors in ITE to introduce their students to the historical, political and social implications of the curriculum. The case studies revealed that the tutors used their knowledge of the National Curriculum in a very limited way. In most sessions the documents and the policy making framework were presented as unproblematic; only in English were the political and historical settings of the curriculum emphasised. This was undoubtedly linked to the fact that the English curriculum was highly contentious and lent itself to a political analysis. The other subjects - languages, science and mathematics - had more consensus based documents and were seen as syntheses of good practice. Furthermore, the tutors felt that pressures on time combined with a lack of 'cutting edge' to the background to their subjects made sessions more pragmatic and straightforward.

It is possible to conclude therefore, that teacher educator's conceptions of reflection may be linked in some way to their personal and political positions. Lucas (1993), in a study of reflection in one PGCE course, found that it was the tutors' own perceptions that dictated the direction and substance of reflection within courses. John (1996) in a broader study covering six institutions, discovered that tutors' stressed the technical and sometimes personal aspects of reflection but stopped short of the critical stage because of a lack of commitment to social and political reconstruction. Additionally, the case studies revealed that none of the five tutors had read the works of Donald Schon or other theorists of reflection, but instead relied on their own experiential understandings combined with various ideas gleaned from the literature, often but not exclusively within their subject areas.

A reconceptualising dimension

It is now fairly well established in the research literature that prospective teachers enter courses of professional training with a variety of beliefs, implicit theories and expectations about their subjects, teaching, learning and the process of learning to teach. (Calderhead, 1990; 1992; Calderhead and Shorrock, 1997; John, 1995; Zeichner and Tabachnik, 1988; Feiman -Nemser and Buchmann, 1988). As Lortie (1975) suggests, this 'apprenticeship of observation' has been partly created through the thousands of hours spent in classrooms as

pupils. According to the Feiman-Nemser and Buchmann (1988) this 'familiarity pitfall' is closely related to the students' own conceptions of their subject and their personal epistemologies. Often these experiences shape a conception of teaching which is based on the notion that their own personal interests and abilities are generalisable across the school population. In some instances their relatively straightforward understandings of their subject and the teaching of it, also channel them into seeing learning as simply knowledge extension, which in turn leads them to ignore what their pupils might bring to the learning process (John, 1995).

Addressing the latent understandings and beliefs of their students was regarded by all the tutors in the study as vital to the delivery of high quality courses and central to their professional learning. In seminars many strategies were used which tried to challenge these implicit theories.

First, it was observed that in all sessions there was a focus on helping students to re-think their subject for the purposes of teaching. Seminars based on the 'What is.....maths, science, English' were commonplace. Here the purpose was to begin to make inroads into the students' initial knowledge and understandings of their subject as a precondition for helping them re-conceptualise their knowledge and thereby improve their ability to construct and deliver lessons that were focused on the learner. Examples abounded in the data. Peter, for instance, in his 'What is mathematics?' session used various philosophical definitions and puzzles to challenge their understandings; in science, Edward used a workshop on electrical currents to explore his students' misconceptions about circuits while Philip gave a session on the grammar - translation method of teaching using Swahili.

The overt purpose of each sessions was to encourage their students to break from both the accepted academic definitions of their subject and their own experiences of being taught in order to see the potential within their subject for different forms of teaching and learning.

At the core of this reconceptualising dimension was a broad constructivist perspective on learning and learning to teach. The tutors were also trying to help their students develop pedagogical content knowledge, defined by Shulman (1986) as the teacher's ability to make the content of school subjects penetrable for pupils. The creation of this form of knowledge was acknowledged by the tutors as vital and mirrors Grossman's finding (1993) that subject method tutors are a major source of subject specific pedagogical knowledge. However, it

must be emphasised that none of the tutors had heard of the term or used it explicitly either in their sessions or in the interviews.

Various other tactics were used by the tutors to re-conceptualise the thinking of their students. In science and languages, counterparting was popular whereby students with differing first degrees were placed with students of other disciplines. In English and maths specific peer tutoring was used both in the university and schools to encourage re-thinking. Many tutors used methods observed in conferences and ideas gleaned from conversations with colleagues, none drew on the research corpus related to ITE and student teachers' learning, in fact most did not realise that such a body of knowledge existed in any meaningful sense.

A modelling dimension

Although the modelling role of teacher educator is well documented, very little time has been spent trying to disentangle the process in order to understand the subtle variations that occur within it. Oakeshott (1967) draws attention to its importance in achieving an understanding of what such an activity as teaching really means,

In every ability there is an ingredient of knowledge which cannot be resolved into information, and in some skills this may be the greater part of the knowledge required for their practice. Moreover, abilities do not exist in the abstract but in the individual examples; the norms by which they are recognised and the after-thoughts, not categorical imperatives, and each individual example has what may be called a style or idiom of its own which cannot be specified in propositions. Not to detect a man's style is to have missed three quarters of the meaning of his actions and utterances; and not to have acquired a style is to have shut oneself off from the ability to convey any but the crudest of meanings. (p.169)

This definition provides a useful conceptual lens through which to view the sorts of modelling used by tutors in their practice. Repeatedly students were asked to role play particular classes and were required to participate in model lessons from the children's point of view. Here they were taken through the learning process step by step and were encouraged to empathise with the pupils. Such strategies were evident in Beth's maths session on probability and in Edward's data logging and science circus seminars. A central element in this modelling process was the attempt by the tutors to get the students to see the lesson from the point of view of the learners and to also experience it from an alternative perspective. Simultaneously the students were also being offered 'suggestions for practice' (McIntyre, 1992).

This direct modelling was complemented in the seminars by what can be termed as stylistic modelling. All the tutors talked at length about the need for both the form and substance of sessions to carry equal weight in their students' eyes. This led them to model various styles of teaching in their own instructional strategies. In this sense they saw themselves as setting an example, or of being a role model and hoping the students would 'do as they do.' To achieve this a level of internal consistency was important otherwise many were concerned that they would lose credibility in the eyes of their students. A salient feature of this aspect of the tutors' knowledge was that they relied almost wholly on their craft understandings and classroom experiences.

Throughout this aspect of their work, the emphasis was on helping their students acquire practices and ideas that could be put to use in classrooms while at the same time stressing the need for flexible approach. The former emphasised a fund or store of techniques whose function was anticipatory; the latter put the stress on resourceful practice in the face of uncertainty. Feiman-Nemser (1983) outlined the need for tutors to model particular sorts of teaching styles in order to 'help their students examine their preconceptions and work out some reasonable and defensible ideas about teaching for themselves. Adler (1993), from an action research perspective, likewise exhorts teacher educators to be more explicit about their own reflections and practice so that they too can inspire their students through the modelling of successful teaching.

Some final thoughts

To conclude this chapter, it is perhaps easier to make some very clear statements about what the tutors do and do not do. This is important in countering the way they have been portrayed and caricatured in the media by both academics and journalists. During their work with students the tutors called on their knowledge in a variety of ways so as to facilitate their thinking about teaching while at the same time challenging preconceptions. These strategies included:

- accepting and encouraging diversity and divergence;
- resisting artificial resolution of debate;
- being flexible in terms of the format of sessions;
- showing students how to take risks and be spontaneous;
- modeling practice, facilitating reflection and encouraging openness and flexibility;
- recognizing the need for collaboration;
- creating an open, safe and democratic learning environment;
- never seeking, nor trying to demonstrate perfection;
- recognizing that learning, in whatever form, is complex and often mysterious;
- sometimes removing themselves and giving guidance to enable individual learning to take place in a variety of contexts;
- encouraging reflection through various tasks;
- being professional at all times and encouraging similar standards of behaviour.

Additionally, it is important to point out what the tutors did not do. For example they did not:

- tell students how to teach;
- offer them training in skills;
- work at the level of description only;
- offer them simple prescriptions;
- offer them certainties;
- offer simple explanations about, or increasingly sophisticated skills of, 'delivery';
- offer them theory and abstract truth-seeking;
- teach them political ideology;
- offer formal theory to be applied in the classroom.

Despite the wide application and use of the tutors' knowledge in their seminars, a number of concerns emerged. The old chestnut of theory and practice was viewed from a number of perspectives. All felt that theory had been too narrowly defined in the past and had become a

term of abuse used by critics to caricature and criticise teacher educators and their courses. Instead they saw theory in broader terms encompassing formal research validated knowledge, grand theory from the disciplines, personal theorising and practical theory. For them theory comprised both content and process and was best exemplified in their definitions and deployment of reflective practice. In most of the work of the tutors, reflection was simply a process of deliberation aimed at improving practice through careful and considered thought or rather than having wider connotations linked to wider historical, political and social ends. In addition, there was rarely a mention of reflection-in-action, which involved thinking at a meta level about the process in which one is engaged.

There was also an increasing ambiguity in the tutors' thinking and practice in terms of the demand to prepare students for classrooms and schools as they currently are and the need to encourage innovation in terms of how practice might look in the future. Some tutors backed this up by taking an eclectic view of their role while others followed a fairly structured thematic route. This was linked in some ways to problems related to partnership. Schools, the tutors felt, demanded some form of consensus as did many of the students; this was also problematic in that the diversity of schools and the range of practices within one faculty or department could vary enormously. As a result the tutors tried to emphasise the need to understand diversity as well as encouraging flexibility and contingency. Finally, all recognised that most students, at least in the initial stages of courses, desired recipe knowledge. This was viewed as understandable but counter-productive with the tutors preferring to help their students become flexible thinkers with the ability to improvise, although recipes (John, 1999) were provided within the context of the modelling of reasoned practice.

Throughout, it must be emphasised, the tutors worked with their students rather than on them as they sought to enable them to explore choices, to analyse and think about practice and to transform their knowledge. In fact, a deep thoughtfulness about teaching and learning comes through strongly through in the case studies. There is a clear concern to focus on the practical, in that they all start from action and experience, but from there they quickly raise theoretical issues about teaching and learning which lie beneath. Tutors are sharply aware of the need to reach beyond the technical aspects of practice, and in this they were helped by being able to travel comfortably between practice, personal theorizing and formal theory; between the specific and the general and between ITE and INSET activities. Clearly, too, the tutors' knowledge-base and expertise, their personal research activities and their

theoretical and research knowledge (usually related to their subject) were important resources for students, as was the fact that they were able to work with students at a distance from the school classroom while concurrently acting as assessors, moderators and ambassadors within school based contexts.

Furthermore, the tutors' achievements should not only be seen in terms of their students' learning. It should also be noted that they speak too of their own achievements and their own learning as a result of working with students. For example, all acknowledged that it had been a privilege to see students' growth and learning. Also all tutors declared that they had gained professionally from being given the opportunity to reveal their principles and practice to me even though it had been within the context of a research study. They characterized this as struggling to find their own voices and to make sense of their own practice and research. However, it would be mere contemplation to attempt to do so without seeking also to relate their work to a broader view of the tutors' role in ITE, particularly in relation to the sorts of roles they may have to fulfil in the future.

Thus far, the discussion of the findings may appear to many to be bordering on the eulogistic, so some negative points need to be highlighted. To begin with, it was less than clear from the cases how far tutors actually took their students into the moral, social and political realms, or how far they should take them. There is talk in the studies about the importance of these matters, but limited evidence of the content of such strategies and no discussion of any framework that might help tutors decide how far to go in this. But embracing uncertainty is not about shutting out knowledge, but about recognizing the ambiguities in that which is known. It would seem that tutors need an overall broadly shared framework to help them see where their particular contribution - and that of the teacher - might lie. Clearly, there is a concern for and detailed information about how tutors engage students in practical work, but, again, it is not clear how aware they all are of the shared principles upon which they work and the research base that exists that might help them improve their practice and extend their knowledge. Once more there seems to be an urgent need for further investigation of these matters.

There was also discussion and observation of a number of problematic issues: for instance, students failing to grasp the complexity of some issues, their apparent inability to engage in self-criticism, and a refusal to come to terms with new knowledge, also surfaces as a result of tutors' work. Again there is much research to be done in this whole area.

CONCLUSION

Preamble

Casting the final section as conclusions and recommendations is in some senses problematic. It is traditional in most research reports to use such phraseology to help the writer gain persuasive force by terminological and practical suggestion - a form of 'moral compulsion' as Buchmann (1989) puts it. Whilst it is conceded that this section is the most personal, and that many of the conclusions are based on a considered evaluation of the evidence, the purpose is to be suggestive in a practical way.

Some general thoughts

The case studies and the foregoing thematic analysis have highlighted some important aspects of subject tutors' practical professional knowledge and the way that knowledge is used in the process of preparing teachers. However, given the paucity of research in this field this could be considered to be an end in itself and a major contribution to current debates and knowledge - but there is more that needs to be said, for there is a hole in the heart of their expertise as it stands. It is as if in their successful work they have each built a boat - each of which clearly rides the water well; but beneath their individual constructions flows a river dangerous to boats that not only navigate alone but also lack a secure landing place. The lack of proper attachment to the shore is not *these* tutors' problem, but the problem of the role of tutors generally in ITE. Although there is tacit knowledge about the subject tutors' role in ITE, there is no rationale for it which is both public and explicit. Furthermore, there is no overall framework either within which to make sense of their practice. The practice of teaching has long been generally understood to consist of certain commonly performed activities (even though that statement may be accurate there is still a dispute about the balance and emphasis amongst them). But what of the practice of tutoring? The case studies provide us with some particulars - *they* could do no more, but they also highlight the vital need for much more work in this area.

This problem is evidenced, for example, in an absence of common vocabulary and ideas through which the tutors' thinking about complex matters might be extended. There is, too, an ambivalence about how extensive and of what character ought to be the critical dimension

of work with student teachers. For example, the term 'critical' and - more particularly - 'critique' has a strongly ideological association, yet the activities of criticism should surely be open to use by all. Professional judgement provides a striking illustration here. It emerges from the studies as a central matter. Not only are tutors seeking to develop it in their students, but they are concomitantly seeking to exercise, draw attention to, and develop their own. But there is no evidence, amongst the case studies, in the language used to describe these matters or of a shared vocabulary and theoretical perspectives that would take students' thinking further, and enable them to consider such useful distinctions as those, for instance, between strategic, practical and moral judgements.

There have been a number of attempts by writers (mainly from the in the older established universities) to reiterate the importance of retaining a Higher Education dimension in ITE, however, by virtue of their position (mainly academics) they and their arguments have been partially disconnected from the daily cut and thrust of subject work in ITE. We need more from those whose involvement is immediate as it is they who will take the lead in any future developments. Below is an attempt to provide an analytic rationale for the continued presence of the tutor in teacher preparation based on the evidence presented in this study.

Some thoughts on the future role of subject tutors in teacher preparation

Judge (1989, p.vii) has argued that if universities can only do (better or worse) that which other professional agencies can also do (more or less expensively) then there is little reason for them to remain in serious business.'

As has been noted higher education and schools operate within different cultural and institutional histories, they embrace different value structures and address different challenges. Freidson (1970) in his seminal study of the medical profession documents the existence of two cultural milieus - the scientific and the clinical - both of which create different orientations, modes of thought and professional knowledge in those working within them. Although somewhat oppositional in character, the framework is a useful one for delineating the future contribution tutors might make to the enterprise of initial teacher education. Apart from some terminological alterations, the basic concepts remain true to Freidson's original ideas and categories.

Reflection and action

Whatever may be claimed, the first priority for the practitioner is action. Numerous studies of teachers and teaching note that teachers have little time to think, deliberate and reflect; some of their preparation maybe more deliberative but a great deal of their teaching is intuitive relying on craft wisdom and practical knowledge. Furthermore, the National Curriculum and the plethora of structural and managerial initiatives have intensified this process (John and Hoyle, 1998). The pressure to produce and act is immediate; classroom action is hot action; however, where the action is cooler, the consideration of ideas, beliefs, principles becomes more feasible; there is more time and space for trial and error and experimentation; personal style is less pervasive. So if innovation, experimentation, adjustment and reflection are to be nurtured, student teachers need a neutral space and quality time in order to undertake these key activities.

Since higher education tutors' prime responsibility is for their students (unlike teachers whose main responsibility must be to their pupils) they are ideally placed to help students the dive into action. As has been shown the dimensions of activity evidenced in the tutors' practices encourages students to deliberate about teaching and learning as well as addressing their latent ideas concerning their subjects and the teaching of it.

Scepticism and direct intervention

Because they reside in an action orientated environment, teachers must exhibit a certain confidence in the efficacy of their interventions. Given this commitment to practical solutions, often in the face of uncertainty, practitioners manifest a certain will to believe in the value of their practices rather than exhibit a sceptical detachment. Higher Education tutors, on the other hand, because they work in a more neutral environment which treasures autonomy and independent thought, are ideally placed to help their students evaluate and where necessary throw doubt on the efficacy of what they observe and practice, in other words the creation of a critical frame of mind. At the same time, alternative approaches can be offered directly through the modelling of reasoned practice and indirectly through discussion and suggestion; such an approach stimulates the exploration of the discrepancies

between espoused theory and theory-of-action and also encourages the collective sharing of practice in a decontextualised arena.

Theory and pragmatism

According to Freidson (1970), the clinician often judges the success of an intervention on pragmatic grounds, often the immediate, observable effect being enough to justify its use. 'It worked' is a common refrain used by both experienced and novice teachers. Higher education tutors, are often suspicious of such pragmatism. Having a base in a university or college allows them to gain access to a variety of research and professional literature which can help illuminate the basis for a number of practical actions. The way this research validated knowledge is integrated into the emerging understandings of students may be a significant factor in influencing the long term professional development of neophyte teachers (John, 1993).

Furthermore, the knowledge that helps prospective teachers develop a sense of the overarching purposes for teaching their subject and that which challenges the powerful impact of personal and first hand experiences may be highly influential in the emergence of what Hoyle (1973) has termed extended professionalism. Additionally, helping students to gain an understanding of some of the theoretical principles that underscore the choice of teaching style or strategy might also give new teachers the confidence to justify and defend their choices if their practice is seen to run counter to the standard approaches used in a particular placement school.

Scholarly and personal justifications

By allowing student teachers to explore the connections between theoretical knowledge and classroom practice, the tutors can help them to make a number of important connections between theory and practice and vice versa. Being scholarly is an essential pre-requisite of working in higher education and regardless of the extent of its impact, the scholarly ethos needs to be continued and developed if the complementary contribution of higher education is to have any meaning. For tutors this should mean not only examining a wide range of literature including that related to the professional learning of student teachers, but also of finding ways to help students become educated consumers of research. There was some

evidence in the case studies that the tutors saw themselves as acting as filters, sifting the research literature in order to make it accessible to student teachers. Similarly the sharing the findings of their own personal research is not only regarded as good practice in higher education circles but can also provide the link between the more generalisable knowledge developed through the disciplines and the more applied professionally orientated type of research favoured by the tutors.

Teachers, on the other hand, are prone to trust their accumulated craft wisdom as a basis for their practice. Furthermore, it is inevitable that most will lack the access, knowledge and resources to engage students in theoretically orientated discussions about the practical. This is not to say that one form of knowledge should be granted privileged status, instead all forms of knowledge should be valued and complementary.

Universal and particularistic experience

Here the uniqueness of a particular context (a school) is counterposed by the more universal environment of the higher education institution. Often student teachers are so bound up with the specifics of their practice that they are unable to see beyond their mono-locational environment. Subject tutors, on the other hand, operate in a multi-locational world; they visit numerous schools, attend conferences, carry out in-service training, act as external examiners and sometimes influence local and national policy construction. They also have unique peripatetic knowledge gained from hundreds and in some cases thousands of hours watching, observing, discussing and assessing the practice of a wide range of student teachers. This peripatetic knowledge not only allows them to take on a moderating role but enables them to make generalisations about practice and its effectiveness based on a distillation of observation and reflection. This creates a vast database of ideas and suggestions for practice as well as expert local knowledge about teachers, subject departments, faculties, as well as schools, their catchment areas and particular sub-cultures.

Some questions

The issues raised in this study in turn raise a series of questions relating to continuing role, knowledge, position and practices of HE subject tutors. They include:

- *What is meant by the term subject teacher educator?*

In essence this is tied up with the question of identity. Many tutors are 'loners' operating from a discrete subject base with very little support. It is therefore vital that more research be done which seeks to define more clearly the sorts of roles they fulfil, the professional vocabulary they use, the nature of their training and professional development, and the ways in which they dovetail with their school based counterparts.

- *What is to be the relationship between the tutor and the mentor?*

The evolution of partnership had increased the demarcation of roles and responsibilities it is now vital that a clear rationale is established for both roles within the training framework. It also important that interaction, training and dialogue continue for the benefit of both (see comments above and below).

- *What is to be the relationship between the tutor and the student teacher?*

Increasing financial stringency and changing funding arrangements together with greater school based time have led to an increase in student numbers and a compression of subject time within in the university. The consequences of this changed relationship on the traditional role of the tutor need to be examined. Student teachers also deserve a clear rationale for their relationship with their tutors and need to be convinced of the value and place of the subject tutor's distinctive contribution and expertise.

- *What is to be the relationship between subject tutors and other colleagues in higher education?*

Many subject teacher educators already make a substantial contribution to other programmes within both education departments and other subject faculties. In order to understand this relationship, further research is needed that focuses more widely on the workings of schools and departments of education in order to delineate roles and to understand the internal dynamics and culture of institutions. Many tutors are playing a role in staff development and training courses across their institutions as well as linking up with other colleagues in other professionally based departments.

- *What should be the contribution of tutors to future developments in their subject areas?*

The tutors in this study all claimed they were linked, almost umbilically, to their various subject constituencies. In many cases this had led to fruitful applied research, consultancies and editorships. However, we need to know more about these links and the role tutors play in professional development and in-set now that LEA advisors are becoming a rare breed. Furthermore, with the pressure coming from the RAE, it will be interesting to see the extent to which these subject relationships are broken given the demand for more 'academic' research.

- *What is to be the contribution of tutors to research?*

This question follows on from the last issue. Many tutors have kept up and even developed a research profile despite continuing pressure from government and partner schools to deliver high quality courses. However, most of this research has tended to be reliant on individual interest, initiative and considerable effort. It had enabled them to meet the ever growing demand that all HE staff be research active, but their overall contribution to scholarship remains a vexed question.

Some further work

Most studies of educational phenomena are rarely finite, with one inquiry often raising more questions than answers. This study is no exception. The following are just a few of the matters that still need more exploration.

- A sharper more focused study on particular aspects of the tutor's life and work. Such a study might home in on their role in relation to their work in schools or their relationship with other reference groups including departmental and other colleagues.
- A series of investigations of institutional culture comparing departments and colleges with differing traditions, size and foci.
- More conceptual work on the specific definition and roles that tutors fulfil in relation to their institutional base.
- In-depth shadow studies designed to describe in detail the sorts of tasks teacher educators fulfil in a typical time scale.
- Longitudinal studies of the career paths of teacher educators from their early days in the job through to maturation.

The professionalisation of teacher educators - hopeless ideal or achievable reality?

First, given that knowledge constitutes an important part of professionalism, the attempt by critics to portray tutors as lacking distinctive knowledge and expertise has undoubtedly led to their feelings of frustration, increased vulnerability and reduced confidence in their professional activities. This study has shown that this view is erroneous and that subject teacher educators have a highly developed knowledge base; one which is distinctive, experiential, context specific and highly relevant to the task of preparing teachers. However, we should not be too complacent about the future. For it would be a mistake to believe that the struggle for professional recognition and for the continued presence of subject tutors in courses of ITE is anywhere near over.

This study has also revealed that the low status of the teacher education community may be related to the fact that they have thus far failed to take the issue of professional development seriously. Many of the tutors had scant knowledge of the literature available on the professional learning of student teachers and few drew on the ideas and practices that such studies recommended. Their narrow subject obsessions may also be an inhibiting factor; one which stops the creative sharing of practice as well as limiting their professional horizons. If tutors are serious about increased professionalization, then an obvious starting point would be to draw on the corpus of research mentioned above in order to enlighten their work and enrich their knowledge. This process could be part of a local and national professional development programme; one which would bind together tutors while simultaneously developing their professional knowledge and expertise.

Second, this process of professional development must not be confined to the tutors alone. Mentors, both subject based and generic, must be brought into the equation - 'we are all teacher educators now.' Such local and national networks would see the tutors and mentors from all subject areas involved in the active construction, evaluation, sharing and extension of knowledge and expertise. Research could also play a role. There is no reason why mentors either alone or together with tutors, should not collaborate in producing studies that focus on the multiple aspects of the process of teacher learning and development. In fact there are already examples of such collaborative research taking place.

Third, the tutors in the study also saw themselves as specific sources of ideas and as heuristics to stimulate new thinking within their subject areas. Essentially, the cases show how knowledge transformation rather than knowledge transmission is the main aim of teacher preparation and in so doing reminds us how ill-structured the domain of teacher education practice is and the inherent incompleteness of the theories that have been developed to make sense out of it. This is an area which must be addressed both in terms of research and practice.

Fourth, the cases also raised a host of issues that apply to the training and work of school based mentors. The tutors use of a knowledge transformation model of learning combined with considerable expertise in teasing out the residual elements of their students' 'apprenticeship of observation' has clear implications for the practice of mentoring. In the first place, the continuing training of mentors needs to be structured so that mentors have a variety of strategies at their disposal for addressing this aspect of their students' learning; too often it seems, mentors are forced to rely on their own craft wisdom and experiential knowledge because of the incomplete and often narrow training they receive (John, 1995, Atkinson, 1995). This may help mentors to see students as professional learners rather than deficient professionals. Finally, the challenging approach taken by the tutors and their willingness to appraise and open up their practice also has messages for mentors. Of crucial importance is that both tutors and mentors develop together, a shared vocabulary; one that allows ideas, beliefs, and practices to be mutually understood. Creating this language of practice (Yinger, 1988) for teacher education should be at the top of any future tutor/mentor training programme and be high up on the research agenda of tutors and others interested in the field of professional learning and development.

Fifth, obtaining further consistency, in terms of tutoring and mentoring practice, may be an achievable objective if the above approach is adopted, however, it is likely that a certain amount of ambiguity and diversity will remain. This is not necessarily a negative factor, given the attempt by the TTA and various government departments to create an official teacher (Furlong et al. 1996). It might therefore be strategic to celebrate such differences rather than cloud them in technicist rhetoric.

Sixth, the way in which tutors built relationships with their students was highly valued. Again mentors might learn that a sympathetic and committed attitude based on mutual trust, the ethic of caring and support, is an ideal one from which to launch professional learning. Calderhead and Shorrock (1997) found that students tended to be more cautious in their approach when they felt their mentors were either not being genuine or remained distant and remote. Perhaps such skills, as evidenced in the tutors' work, needs to be encouraged and engendered in the work of mentors.

In the final analysis, this study has shown overwhelmingly that subject teacher educators are ultimately concerned to pass on the multiple living traditions which is embodied in their knowledge and practice. The act of teaching teachers viewed from this perspective is not, as some commentators would have it, simply a matter of shaping the student's behaviour, rather it is a process of passing on a set of traditions based on principled thought and action which define the life of the teacher and the taught. In the words of Peters (1963),

The teacher educator is not a detached operator who is bringing about some kind of result in another person who is external to him. His task is to get others on the inside of the public form of life that he shares and considers to be worthwhile. (p 18)

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