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BOUNDARIES, BRICOLAGE AND STUDENT-TEACHER LEARNING

Submitted for the degree of Doctor of Philosophy

**Faculty of Education and Language Studies,
The Open University**

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This thesis explores the learning opportunities that are presented to student-teachers as they talk about teaching and learning with their school-based mentor and part-time university-based tutor. Against the backdrop of endemic complexity in initial teacher education, the study asks what these conversations tell us about student-teacher learning. What each of these participants talk about, the sources they draw on and the levels of agreement, disagreement or contradiction evident in their conversations with one another are issues that are central to developing an understanding of this research problem and to this thesis.

The thesis adopts an activity theoretical approach, complemented by a social learning theory perspective, to investigate the way that boundaries between university study and the classroom as a site for work-based learning are seen as learning assets. The research is in two phases, the first in the form of a scoping questionnaire which attempts to identify the level of perceived contradiction by student-teachers on a PGCE course and the second in the form of four case studies. A variety of data-gathering tools and methods inform the studies and, in particular, content analysis is used to examine and report on conversations which centre around one taught lesson in each case.

The study reveals understandings about the way that learning opportunities are presented to student-teachers. When teaching is presented as a process of bricolage and when provenance is not fully articulated, opportunities for expansive and systemic learning are restricted. The thesis argues that by looking at student-teacher learning systemically, with a focus on dissonance, student-teacher learning can be enhanced. It concludes with recommendations for the Open University PGCE programme team and potential implications for initial teacher education more widely.

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Declaration of candidate

No part of the material presented in this thesis has previously been submitted for a degree or any other qualification at the Open University or any other institution. Parts of Chapter 1 have been published as follows:

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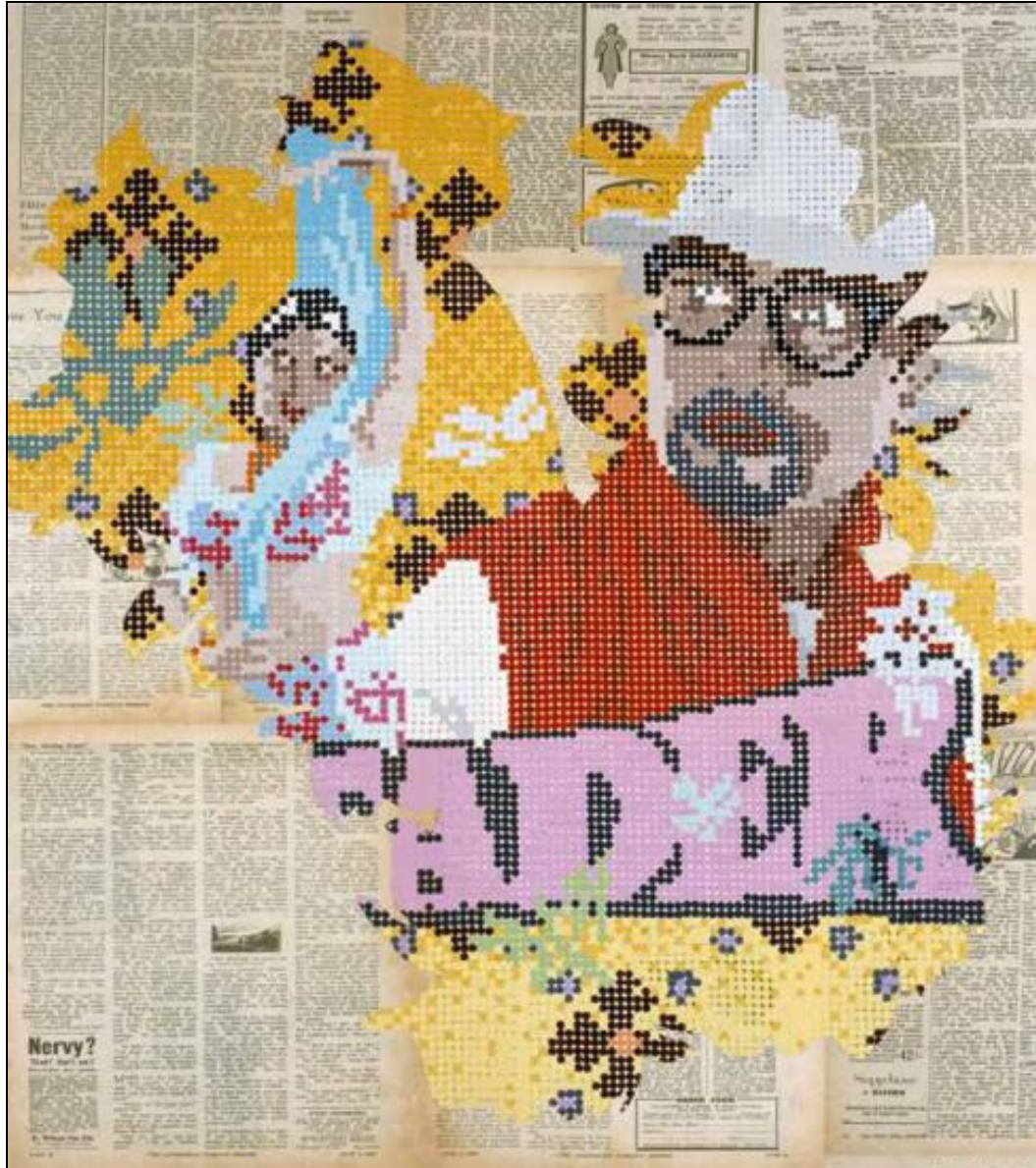
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AT	Activity theory
BEd	Bachelor of Education
Bricolage	An art form, or design approach, where <i>bricoleurs</i> ‘make creative and resourceful use of whatever materials are to hand (regardless of their original purpose)’. From http://en.wikipedia.org/wiki/Bricolage
CHAT	Cultural historical activity theory. See http://www.edu.helsinki.fi/activity/pages/chatanddwr/chat/
Chi-square test	A statistical test that compares actual results with expected frequencies and uses the gap between these results (using a <i>chi-square</i> table) to demonstrate the extent to which correlation between variables is real, rather than a result of sampling variation
Cohen’s kappa	A statistical tool from which it is possible to identify the extent to which a second rater agrees with a first rater ‘beyond chance’
CoP	Community(ies) of practice
DfEE	Department for Education and Employment
DfES	Department for Education and Skills
DES	Department of Education and Science
FirstClass	The Open University’s preferred system for mainly asynchronous computer-mediated conferencing
GTC(E)	The General Teaching Council for England
GTP	Graduate Teacher Programme
HEI	Higher education institution
HPMEC	The Open University’s Human Participants and Materials Ethics Committee
ITE	Initial teacher education
ITT	Initial teacher training
Mentors	School-based members of staff responsible for student-teacher development and school-based assessment
Modules	The Open University taught curriculum
NQT	Newly qualified teacher
NVivo	NVivo is a qualitative software package that can be used to analyse and quantify qualitative data
Ofsted	Office for Standards in Education: an English non-governmental organisation responsible for inspecting government-funded educational organisations

The Open University	The Open University is based in the United Kingdom and specialises in supported open learning
OU	The Open University
Oxford internship scheme	A model of initial teacher education developed at Oxford University
Partnership	The accepted term for the relationship between higher education institutions and schools
PGCE	The Postgraduate Certificate in Education: a pre-service initial teaching qualification for teachers in the UK
PRAM	Program for Reliability Assessment with Multiple Coders: software developed by Neuendorf and her content analysis students at Cleveland State University
QTS	Qualified teacher status
School co-ordinator	A school-based member of staff, usually at senior management level, with overall responsibility for student-teacher development in their school
SCITT	School-centred initial teacher training
SPSS	Statistical Package for the Social Sciences: a software program designed for statistical analysis
SRPP	The Open University's Student Research Project Panel
Standards for QTS	At the time of the study, the standards that student-teachers must meet in order to gain qualified teacher status in England
Subject leader	An Open University full-time member of staff with responsibility for a PGCE subject and all subject-related tutors. A similar role to HEI tutors in conventional HEIs
Subject tutor	In the Open University model, a part-time subject-specific OU-employed member of staff, with responsibility for teaching and assessing student-teachers through their written work (portfolios) and in school. Subject tutors (tutors) are also responsible for mentor development
TTA	The Teacher Training Agency, an English quasi autonomous non-governmental organisation responsible for initial teacher training (ITT) in England. Changed to TDA (Training and Development Agency for Schools) during the research
ZPD	Zone of proximal development: that which, in Vygotsky's terms, a person can do with the help of a more knowledgeable other person

Figure 1: *Leader* (2008) by Hitesh Natalwala, Gallery Barry Keldoulis, Sydney



INTRODUCING THE STUDY

1.0 Introduction

Developments in initial teacher education in England over the last fifteen years have, in respective governments' eyes, attempted to increase teacher supply and improve the quality of teachers overall. Standards, inspection, more 'training' in schools, flexibility for student-teachers as consumers, and enforced adherence to government-prescribed curricula for pupils as well as, at one point, for teacher 'trainees', reflect the dominant discourse in this area. In this context a new pre-service course in initial teacher education, the flexible Postgraduate Certificate in Education (the PGCE), was developed at the Open University. While the new course was highly rated by student-teachers, schools and Ofsted and showed high levels of compliance with these requirements, questions remained about the enduring problems in initial teacher education reported in the research literature, and in particular the issue of student-teacher learning. This study looks at the learning opportunities that are presented to student-teachers as they talk about teaching and learning with their mentor and tutor in the school setting: it attempts to understand better the process of learning to become a teacher and to improve the quality of initial teacher education.

This chapter sets the scene for the thesis and describes the area of study in broad terms. In the first section of the chapter I look at the context that informed developments in initial teacher education at the end of the 1990s, and include a description of the Open University's (OU) flexible Postgraduate Certificate in Education (PGCE) programme that emerged from it. This section finishes with a brief biographical history in which I identify a personal interest in

the problems surrounding student-teacher learning and a commitment to learn more about this process in order to inform OU PGCE development. In the second section of the chapter I map out the thesis, identifying its main themes and sketching out its principal argument.

1.1 Background to this study

The Open University's PGCE team began to develop a new flexible programme in initial teacher education in 2000. The team consisted of a core group of eight academics, four academic-related members of staff, editors, designers and secretarial and clerical staff, as well as eleven regional academic members of staff, subject advisory and regional advisory groups. This was an extensive endeavour, logistically and intellectually, since although the Open University had presented a PGCE through distance education since 1992 (Moon, 1992) the flexible PGCE was in many ways a completely new course of study which aimed to develop a radically flexible distance education programme in initial teacher education with significant consistency across six different subject areas. Well over 100 OU and school-based colleagues were involved in the creation of the course, which attempted to enhance student-teacher learning and to provide maximum flexibility through supported open learning methods in six secondary subjects in England, Wales and Northern Ireland.

The political imperative

Produced at the start of a new century, this developing programme was influenced pedagogically by the research literature in initial teacher education and politically through governmental policy developed in the previous decade. *Pedagogically*, the development of school-based models of teacher education, HEI partnership with schools, mentoring approaches and the challenges facing student-teacher learning were key influences on the

course. *Politically*, the programme was influenced by a decade of significant change, with greater governmental control to promote conformity, the creation of competences, requirements and standards, the inspection of compliance by Ofsted and the need to recruit more teachers into the profession.

A flavour of the kinds of political control and restriction that were to become typical in the 1990s was offered in 1991 by Kenneth Clarke, then Conservative Secretary of State for Education, in a speech to the Conservative Party Conference:

Now is the time to press ahead with getting teacher training right. I meet too many young people who don't go into teaching because they are put off by the length of the course. Or they go on a course and give up because they are put off by the idea of learning too much theory and not enough practice. I want to see students actually getting into a classroom for much more of the time while they train. I want them to learn how to control a noisy class of 30 kids by actually having to do it with the help of an experienced teacher and using their training courses to sort out the problems.

(Clarke in Furlong, Barton, Miles, Whiting & Whitty, 2000, p. 67)

The decade and a half that followed was characterised by a series of policy changes in initial teacher education which supported these objectives:

- Government purchase on initial teacher education was increased through the introduction of outcomes, competences and standards for initial teacher education (DfE, 1992; DfEE, 1997, 1998a; DfES, 2002)
- An inspection process was developed which monitored training against these competences or standards, and the resulting grades were used to allocate further student places or could be used to close down programmes which were not deemed to be satisfactory (Ofsted, 2005; Ofsted & TTA, 1996, 1998, 2002)
- A minimum requirement of 24 weeks in school as part of a 36-week one-year postgraduate course became a required aspect of programme design (DfEE, 1998a).

- Increased emphasis was placed on school-based training, for example with the introduction of the Graduate Teacher Programme in which trainees were employed as supernumerary staff and provided with training by the school, latterly more usually in partnership with a university.
- Increased emphasis on ‘training’ was provided by experienced teachers in classrooms.

This strategy had profound implications for the relationships between universities and schools involved in initial teacher education. It had consequences for the roles that school-based and university-based staff played in the education of student-teachers, for the types of curriculum for teacher education that needed to be developed to show ‘the standards’, and for the management and quality assurance of these programmes which needed to adhere to governmental requirements in order to gain and retain government accreditation.

‘Partnerships’, mentoring, the ‘standards’, inspection and school-based models of initial teacher ‘training’, became significant issues to be considered in initial teacher education at the time, and provide the backcloth to this study.

It was within this overall context that more flexible approaches to qualified teacher status (QTS) were introduced. Designed to increase teacher supply (Bullock & Scott, 1992; McGaw, 2001; Smithers & Robinson, 1998), and to increase social diversity (DES, 1991), and with a desire to explore different models of initial teacher education (Furlong et al., 2000), this was to be a significant yet unresearched policy initiative.

Flexible provision

In February of 1999, the Secretary of State for Education asked the Teacher Training Agency (the TTA) (Millett, 1999) to develop ‘proposals for the structure, coverage and

introduction of new modular postgraduate teacher training' in response to the Green Paper (DfEE, 1998b). The new courses were asked to address the perceived need to increase social diversity within the teaching profession and make an important contribution to teacher recruitment.

In its letter to 'teacher training providers' the TTA (Millett, 1999) stated that:

- The training was to target 'mature candidates in employment seeking to change careers but who (were) not able to give up jobs to undertake full-time training' and for students who needed to match training to their own personal circumstances.
- The new, more flexible, provision should capitalise on the experience and expertise of those in employment and also cater for '[those] with family or other care responsibilities who cannot study full-time'.

The specification which resulted (TTA, 2002a) (see Appendix A) included the following requirements:

- a needs analysis leading to individualised study routes and school experience patterns
- an individual training plan
- self-standing modules with clearly defined outcomes in relation to the QTS standards ... with associated assessment
- flexibility for trainees to combine modules in different orders
- flexible start and finish and assessment times with full- and part-time options
- training closely linked to school experience
- guidance and support in relation to progress against the training plan and towards the QTS standards
- a final synoptic assessment.

Despite the fact that some writers, Lawson and Harrison, for example, (1999) had indicated the benefits of individualised action planning in initial teacher education, the notion of individualised initial teacher education on the scale suggested by this specification was unprecedented and radical, representing what Furlong et al. described as ‘a post-Fordist objective’ (2000, p. 168), a drive towards ‘flexible specialisation driven by the imperatives of differentiated consumption’. There was also an increased emphasis on the individual as consumer, a theme later developed by Hartley (2007, p. 630) who comments that a ‘personalised’ approach ‘draws not on humanism or Romanticism, but on consumerism and especially upon marketing theory’.

Before any major evaluation of flexible provision had been undertaken, features of it were embedded in the DfES (2002) regulations for all initial teacher training (ITT) provision. For example, the revised regulations required ‘providers’ to:

- ‘ensure that training takes account of individual training needs’ (DfES, 2002 R2.3)
- ‘ensure that trainees spend the following amount of time being trained in schools, recognising that a trainee’s former experience of working with pupils may count towards these totals Time in schools may be completed on a part-time basis to make up the full-time equivalent amounts above. Teaching in settings other than schools may also count towards these totals ...’ (DfES, 2002 R2.5).

Flexibility was seen as a way of increasing the responsiveness of teacher education programmes to students’ prior experience, with the claim that it would encourage greater diversity and higher quality. Indeed, the Secretary of State for Education, on the release of the new QTS standards, announced in a press release:

I am particularly pleased that the new requirements will offer greater flexibility, which enables ITT providers to tailor programmes much more closely to trainees' needs. ... Providers will be able to take account of prior experience when selecting and training candidates for ITT courses. This will encourage a more diverse range of people to consider teaching as a career. It will also support our drive to encourage more good quality people into the teaching profession.

(TTA, 2002b)

Aspects of the government's agenda were to resonate with the Open University's PGCE programme team: increasing opportunities through access and increasing diversity in the profession were aims which were declared at the start of course development. More troubling to the OU team, from a reading of the literature, were the ways that prior experience had been treated as an unproblematic concept in the specification which seemed to focus on the needs of student-teachers as *consumers* and not as *learners*.

The Open University PGCE structure

The Open University PGCE programme, which I sometimes refer to as a course in this thesis, is described in more detail in Hutchinson (2006). It has a modular structure with flexible entry and exit points and enables student-teachers to adopt variable study patterns throughout the course, sometimes full-time, sometimes part-time. The PGCE needs analysis process also allows student-teachers to adopt individualised routes through the course and use prior experience to gain exemption from part, or all, of the programme. Within a total time limit of 36 months student-teachers, together with an Open University part-time tutor and school-based mentor, negotiate study patterns that meet their own personal circumstances and which enable them, within limits, to satisfy existing personal, domestic and professional commitments. On this programme in initial teacher education, university subject tutors do not write the PGCE modular materials. These materials are written by a core team of academic members of staff, with individual academics, subject leaders, developing each subject area.

The Open University tutors are qualified teachers in their subject area and they have responsibility for issues of student-teacher progress. They visit student-teachers in school and provide academic support, training and assessment advice to student-teachers. They also conduct end-of-level assessment with the school-based mentor. The roles of all members of staff as set out in the *PGCE Programme Handbook* (Open University, 2008) are included in this thesis as Appendix B and are discussed in more detail in Chapter 2.

The OU PGCE course, negotiated and agreed by six different subjects within the PGCE team, is structured around six thematic strands and three levels:

- Strand A – Your subject
- Strand B – Pupils
- Strand C – Planning
- Strand D – Teaching
- Strand E – Assessment
- Strand F – Wider professional role.

Levels:

- Level 1 – Familiarisation
- Level 2 – Consolidation
- Level 3 – Autonomy.

Figure 2: Open University PGCE overview

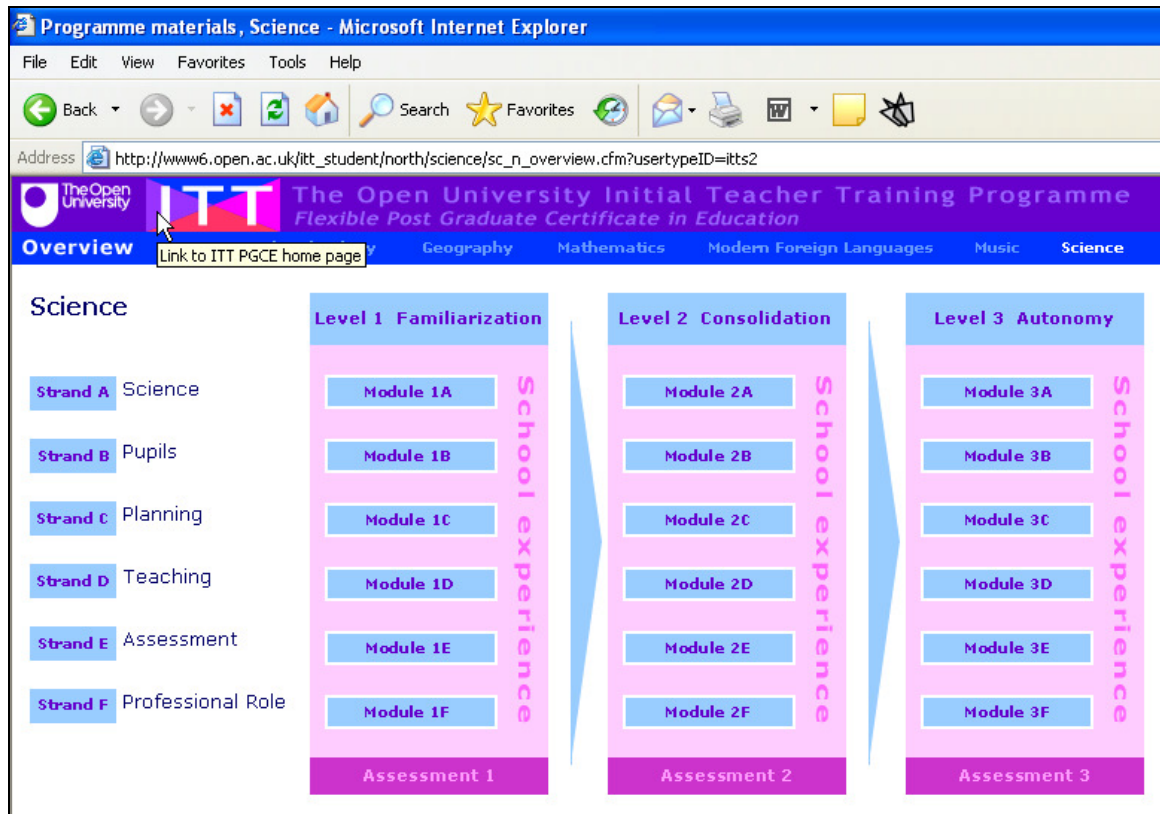


Figure 2 shows how the course structure was presented to student-teachers at the time of the research. This web-page, for science student-teachers, has links to the modules, to School Experience Guides for each level (which contain school-based activities linked to the modules) and to Assessment Guides for each level. Each of the course strands is revisited at each level of the course in the form of free-standing modules located on the web. The modules are linked to conventional print course readers and set books and to video and audio material gathered from schools throughout England, Wales and Northern Ireland.

Key issues in each module are developed by 'in-school' activities, written in the School Experience Guide. Each level of the course is linked with a period of school experience:

- Level 1: four weeks in *Secondary School A* which can be taken flexibly, on a daily basis, where necessary. At the end of this school experience successful students will be able to plan, teach and evaluate a single lesson
- Level 2: seven weeks in a *Secondary School A* and one week in a linked *primary school*. Three of these weeks can be taken flexibly and at the end of this experience successful students will be able to plan, teach and evaluate a sequence of lessons
- Level 3: ten weeks in *Secondary School B*. Two of these weeks can be taken flexibly and at the end of this level successful students will be able to plan, teach and evaluate extended sequences of lessons to the full age and attainment group.

The web-based needs analysis process asks student-teachers to present evidence that might allow them to omit levels of the course. Student-teachers completing the full course are described as ‘Route 1’ students. If they start the course at Level 2, they are referred to as ‘Route 2’ students, and at Level 3, ‘Route 3’ students. Someone who is able to provide evidence that they have met the requirements for the course can present for ‘assessment only’ and complete a set of summative assessment tasks in the context of an eight-week placement in school.

A brief history from a personal perspective

I began teaching in 1984 after completing a music degree at Cardiff University and a PGCE in music education at Birmingham Polytechnic. As a classically trained musician and composer I had wanted to develop a career in music, but thought it would be a good idea to gain a teaching qualification in the event that I was unsuccessful as a professional musician. At the time I thought that teaching music in secondary schools would primarily be about

finding interesting ways of introducing pupils to western European art music. My own recent memories of being taught music in school indicated that this was not an unproblematic endeavour. I remember the PGCE year as being incredibly difficult, as I realised that there was more to teaching music than I had thought. The year was demanding, as I was left to fend for myself, and at the same time exhilarating, as the pupils responded positively. After qualification I taught in various schools in the West Midlands and began to ‘supervise’ student-teachers who were on PGCE and two-year BEd courses at Birmingham Polytechnic. Towards the end of my thirteen years of classroom teaching I began working part-time for the University of Central England as a ‘visiting tutor’, visiting mentors in schools that were supporting student-teachers. I began working for the Open University in 1997, initially as a staff tutor with responsibility for the first PGCE course in the north-west and then, from 2000, as Director of the new PGCE course, which began its first presentation in 2002.

As a student-teacher myself, and as someone who supervised students in my early days of teaching, I do not remember really thinking about student-teacher learning: the job as I saw it then was to engage school pupils through musical activity that was as lively and as interesting as possible. The intention was that pupils should enjoy coming to music lessons and not misbehave. My support for student-teachers, such as it was, helped them to develop teaching skills which would achieve this aim, but largely without regard for pupil musical *learning*. Later in my career, and after ‘training’ as a mentor, I became aware of the need to articulate my own practice, but found this difficult. Somehow, through this articulation, the student-teachers with whom I was working were supposed to become ‘reflective’ themselves. I remember, at the time, thinking that this was most improbable.

These personal experiences, and this personal identity, brought together with the individual identities and concerns of the PGCE team faced with the significant task of course

development, set the context for this study. With one eye on the research literature and the other on the need to create a modular and flexible course in initial teacher education for which there was no research literature, we developed the programme which has operated since 2002. Despite successful outcomes in subsequent inspections, the PGCE team began to suspect that some student-teachers were finding some aspects of the course difficult. For example, evaluations of the course by students, mentors, school co-ordinators and tutors, reports from external examiners and conversations with student-teachers at review meetings seemed to indicate that students found it difficult to relate course materials to practice in classrooms. They also had difficulty responding to sometimes conflicting advice in schools and between the school and the university: practice in schools was sometimes seen as being at odds with the approaches which were being advocated by the university. Through its self-evaluation the team also became aware that tutors were finding it difficult during school visits to carry out anything other than administration tasks: they simply did not have the time to engage in conversations exploring student-teacher learning in the light of ideas from the modules and vice versa.

Tutors were encouraged, through a focus in the staff development programme, to make explicit links to course materials in the school context, and the mathematics programme piloted a project in which tutors could voluntarily offer jointly to plan, teach and discuss a lesson with a student in Level 1 of the course. But this process remained unresearched; the process of student-teacher learning in the school setting, in the context of a programme which used an open and distance methodology, was obscured by a lack of detailed study. This newly established programme, made explicit through a supported open learning design, provided an ideal research opportunity to develop an understanding of student-teacher learning systemically. As a response to Grossman's (2008, p. 17) challenge, we 'entertained the

possibility that the program we had created was not necessarily the best way to prepare teachers' and hoped that a greater understanding of the interactional processes between students, mentors and tutors, in the school setting, would help programme design and improve student-teacher learning. It might also make a contribution to informed debate in the wider sector.

1.2 Identifying research questions in broad terms

The chapter so far has outlined the structure of a new course in initial teacher education that was developed by a team of authors but significantly under-researched. With evaluations indicating that student-teacher learning was not unproblematic, it became important to investigate this particular dimension on the PGCE course. In terms of this particular study, because of my own personal history as a music teacher and in order to make the study manageable, the focus is on music student-teacher learning. In general terms, the study starts with the following broad-brush research questions, which are refined in later chapters:

- What do music student-teachers on a PGCE which includes both school-based and university course study learn from these sources?
- How is student-teacher learning influenced by university materials, university-employed tutors and school-based mentors?

1.3 An outline of the thesis

This thesis is in nine chapters:

Chapter 1 sets out the context of the study in terms of national policy and governmental strategy. It describes the emerging OU PGCE course and provides a brief

personal biography of me as the researcher and Director of the PGCE programme. It identifies key areas of concern and a rationale for further detailed study.

Chapter 2 reviews the literature in initial teacher education and work-based learning, in particular exploring complexity which reflects multiple orientations to the process of learning to teach. The literature exposes a highly contested field of endeavour, with contradictory positions which reflect different approaches to epistemology and pedagogy: different ways of thinking about the teacher's task implying different ways of preparing for it.

Chapter 3 examines two different yet in many ways complementary theoretical perspectives: theories of communities of practice and activity theory. These are brought together with bricolage as an organising principle for teachers' work, a consideration of understandings about identity and the concept of expansive/restrictive environments. The chapter uses these theoretical perspectives and models to suggest that an expansive learning or transformative approach might exploit different perspectives or orientations to develop systemic learning, and by doing so might enhance student-teacher learning. Chapter 3 concludes with a set of research questions which focus on the interactions between the student-teacher, mentor and tutor as they talk about teaching a particular and specific group of pupils in the school's music department.

Chapter 4 identifies case study methodology as the most appropriate research approach and discusses in detail the weaknesses and strengths of this methodology. The chapter discusses a range of data-gathering and analysis strategies, including content analysis, used to support the case study construction.

Chapter 5 sets out a detailed research design to support case study construction as a way of answering the study's research question, and proposes an initial, exploratory, survey-based study to set these in context and to refine the methodology and questions. This chapter

discusses the ethical dimensions of the study and then continues to explore the data-gathering issues and plans for both phases of the research, presenting a rationale for the sample size in both phases.

Chapter 6 discusses the Phase 1 survey findings in detail and identifies significant issues that require further investigation. Despite the complexity of orientation that was discussed in Chapter 2, most student-teachers who responded to the survey did not identify contradictions between their own perspectives and those of their mentor or tutor. A closer examination of these relationships was required in order to understand this process more fully, and this forms Phase 2 of the study,

Chapter 7 provides a detailed report of the content analysis across and within four case studies. These data and some preliminary conclusions are used to inform a more detailed exploration of the case studies.

Chapter 8 addresses the study's research questions from the perspectives of the case studies and concludes with a set of detailed responses to the research questions identified for this phase of the research.

Chapter 9 presents a summary of the study's findings with a focus on the over-arching question initially introduced in Chapter 3. It adds to the literature discussed in Chapters 2 and 3 and then draws some conclusions, theorising about how the issues that emerge from the study might be understood in terms of student-teacher learning, and speculating on a more comprehensive model that might build on this systemically. The chapter concludes with recommendations drawn from the study for the OU PGCE programme team.

1.4 Summary

In this chapter I have identified the broad political context in which the Open University's PGCE programme was developed, and I have set out its structure in some detail in order to provide the context for the study. A confluence of personal biography, PGCE team interest, and internal and external evaluation have joined together to provide a rationale for detailed research in this area which could make an important contribution to PGCE programme development and to wider debate about student-teacher learning. I then outlined, in broad terms, a set of research questions which informed the literature review and which are further revised at the end of Chapter 3.

LEARNING TO TEACH: PERSPECTIVES FROM THE LITERATURE

2.0 Introduction

This chapter is in three main sections. In the first section I take the perspective that learning to teach is a complex and socially constructed process which relates to a personal or institutional orientation to initial teacher education. Student-teachers with their own orientation and identity are, potentially, faced with different and competing views of what it is to be a teacher and how they should become this person. In particular, learning on the Open University programme in initial teacher education is shaped by the student-teacher's own orientation and those of their school-based mentor, university-based tutor and subject leader. This is considered in the second section of the chapter. The final section looks at the difficulties which each of these participants face, as reflected in the research literature, and as they engage in the Open University's PGCE programme.

2.1 Complexity in initial teacher education

The Open University flexible PGCE programme was developed from 2000 following what Furlong et al. (2000) describe as a period of rapid change, with increasing central governmental control and policy changes which, in the opinion of Furlong et al. (p. 3), 'were ... framed with the explicit aspiration of changing the nature of teacher professionalism'. The OU PGCE programme also took into account what Furlong et al. saw as two further policy imperatives emerging from the 1980s and 1990s: the first to 'maintain an adequate supply of well-qualified applicants' and teachers, and the second the desire by government to 'establish

greater accountability for the content and quality of initial teacher education’ . This was a picture which was observed by other researchers. Edwards et al. (2002, p. 3), for example, also remarked that ‘the government reforms of teacher education in England and Wales in the nineties [became] a byword for rapid and radical change’ which characterised the gulf between teacher educators and politicians as a ‘battle between ... simplicity and complexity’ .

The UK government’s dominant discourse for teacher education is one of simple common sense. But teacher education, like any other professional endeavour, is complex. Yet this complexity, when it is expressed by teacher educators, is dismissed by government as just academic, bereft of what works, bereft of common sense. Teacher educators are being forced to simplify what is eminently complex while teachers watch from the sidelines.

(Edwards et al., 2002, p. 4)

In Chapter 1, I briefly discussed a range of governmental reforms, introduced in the 1990s, that were characterised by a ‘common sense’ and simplistic approach, neglected to draw on educational research, and were set in a time of teacher shortage in some subject areas during a period when the government in England sought to exercise more control over initial teacher education. The teacher education literature, on the other hand, points to the complexities that underpinned such reforms and also draws attention to persistent problems in teacher education that such reforms failed to address or exacerbated. These are considered later in the chapter but first I need to ask a fundamental question: what is the purpose of initial teacher education?

Different orientations to initial teacher education

Complexity in initial teacher education stems from its fundamentally contested nature. For example, Calderhead and Shorrock (1997, p. 192) ask whether the purpose of initial teacher education is to train beginning teachers to implement well-known and routinised classroom strategies or whether it is about being educated to reflect on the appropriateness of

teaching decisions in the light of theoretical and contextual demands and professional values. Is it a combination of both? Whose theories, needs and demands count? Who decides what is appropriate? Zeichner (1983) and Feiman-Nemser (1990) attempted to codify different approaches to initial teacher education and identify five ‘orientations’: the academic orientation; the practical orientation; the technical orientation; the personal orientation and the critical inquiry orientation. Table 1 summarises this typology.

Table 1: Orientations to initial teacher education

	Teacher skill	Teacher preparation	University’s role
Academic orientation	Emphasises teacher’s own subject knowledge expertise and quality of own education as a strength.	A sound liberal arts education is seen as essential preparation for teaching.	To provide high quality de-contextualised knowledge which the student-teacher applies in the classroom.
Practical orientation	Artistry and classroom technique are seen as important with the teacher as craftsperson.	Preparation is seen as apprenticeship.	To support extensive classroom experience which enables experienced teachers to pass on their skills and knowledge to student-teachers.
Technical orientation	Linked to a behaviourist approach this orientation emphasises knowledge and behavioural skills.	Micro-teaching and the achievement of competences.	To prepare student-teachers for the classroom by modelling teaching in the university context or helping students to rehearse, define and resolve problems.
Personal orientation	Emphasises interpersonal relationships and sees learning to teach as a process of becoming.	Is enabled by offering a safe environment in which teachers are able to experiment and find personal strengths.	To encourage schools to support students as they learn to negotiate and maintain relationships.
Critical inquiry orientation	Emphasises the teacher’s role in reducing social inequality and promoting democratic values.	Enables students to become aware of the social consequences of their actions and to become critical, reflective change-agents.	To help students to draw on diverse strategies and personal beliefs to understand their role as a teacher.

This typology, developed by Calderhead and Shorrock (1997) into five types of professional learning which are often new to student-teachers on courses in initial teacher education, shows how the primary purpose of initial teacher education, or the orientation to it, shapes the skills and knowledge required by student-teachers and defines the roles that universities might play in preparing student-teachers for these contexts. These orientations also imply a role for bodies other than universities who are engaged in initial teacher education. Drawn from empirical investigations in the United States, these orientations, perhaps, do not yet reflect more recent trends observed in England which are marked by governmental control, standards and inspection, and require an applied knowledge of governmentally approved strategies and teaching approaches. Perhaps this sixth orientation is one which would appear if this research was conducted again and in England?

Standards, prescribed curricula and inspection in initial teacher education

In Chapter 1, I identified the increasing levels of governmental control exerted during the 1990s and the rise of the domination of a new style of ‘managerial’ discourse in the field of education and schooling (Furlong, 2005, p. 121), a discourse which prioritised ‘accountability, economy, efficiency and effectiveness’ (Sachs, 2001, p. 159). It was a time

characterised by increasing government interference in, and control over all aspects of education... This movement towards increasing control... [was] extended to teacher education, with particular views of what beginning teachers require in the early years of teaching

(Turner-Bissett, 1999, p. 39)

By 1992 a set of competences, which later became ‘standards’ emerged as a key set of statements in the managerial discourse (DfE, 1992; DfEE, 1997; DfES, 2002). This series of government circulars prescribed the standards that student-teachers must reach in order to achieve qualified teacher status (QTS) and at one point set out a National Curriculum for ITT

that student-teachers were required to follow in order to achieve these standards (Mahony & Hextall, 2000). Simultaneously a governmental inspection agency, the Office for Standards in Education (Ofsted), was established which was asked to inspect the training and standards achieved by students and providers on behalf of the TTA according to a published framework (Ofsted, 2005). The outcomes of these inspections were published and the TTA was required to take the findings into account when allocating resource to university ‘providers’ of initial teacher education.

Such a mechanistic application was not without its problems: the methodology and the consequences that flowed from inspection were considered to be weak (Campbell & Husbands, 2000); and the plethora of curriculum initiatives, reflected in the standards for QTS (latterly TDA, 2007), presented what Furlong (2005, p. 125) called an ‘entirely technical-rationalist enterprise’ where professional learning is seen as learning to implement governmental National Strategies without the application of critical judgement. The very fact that competences, later standards, attempted to set out the skills, knowledge and understanding required by teachers was also contested. Calderhead and Shorrock, for example, identified five drawbacks to the identification of competences:

- [They] can be overly prescriptive, placing too tight a definition on what counts as ‘good’ teaching;
- It leaves out those aspects of teaching which can’t be defined or are yet to be defined;
- In describing an end-product it neglects the process by which teachers achieve competence;
- Teaching involves being – it has an existential dimension;
- They neglect the contribution which the school makes to classroom practice.

(Calderhead & Shorrock, 1997, pp 193–4)

On the other hand, some universities saw benefits in a competency-based model before they became a statutory requirement. They saw the development of competences as enabling ‘the demystification of the teacher education; a clearer role for partners ...; greater confidence for employers in what beginning teachers can do; and clearer goals for students’ (Shelton Mayes

& Banks, 1998). Varying approaches taken by universities and schools representing a range of orientations also added to the complexity. Young (1998), for example, identified for universities a critical role in reforms.

The responsibility of those based in universities is not just to critique the bureaucratic character of recent reforms. It is also to articulate real alternatives and how they can raise standards and support new teacher professionalism which puts learning at the centre of the curriculum of teacher education.

(Young, 1998, p. 167)

Standards, and the approach to teacher education and teaching they represent could well be in tension with individual and/or institutional orientations or perspectives on initial teacher education. Whatever tensions did exist, however, in England during the early part of the twenty-first century when the OU PGCE programme was developed, the government's curriculum requirements, the standards that students had to demonstrate and the quality assurance mechanisms needed to support their rigorous application and demonstration were non-negotiable. For a new national programme, sceptically perceived by Ofsted, with new tutors and new school 'partners', they became an important and integral part of the programme structure.

'Partnership' between universities and schools

Learning to teach in England, and in other countries in the United Kingdom and elsewhere, has traditionally involved student-teachers undertaking periods of practical teaching experience in the school setting. This is not an unproblematic endeavour, especially when universities and 'partner' schools may have different orientations to learning to teach. Different ways of understanding teacher professional knowledge and epistemology necessitate different ways of thinking about 'partnership'. This is a position argued by Brisard, Menter and Smith (2005), who comment:

At the heart of theories about partnership in ITE are pedagogical models of professional learning and development, contested notions about the nature of teachers' professional knowledge and the relationship and interaction between theory and practice in teaching. Our understanding of the nature of partnership is highly dependent on our starting points on these questions

(Brisard et al., 2005, p. 5)

The nature of the relationship between universities and schools is one that has changed over the years. Prior to the 1970s university departments designed and developed their teacher education courses without recourse to school involvement, with schools largely seen as places for practical implementation of theoretical ideas. Furlong et al. (2000, p. 12) saw this decade as a changing point and observe that 'throughout the 1970s and 1980s, a number of training institutions had already begun to redesign their courses to place greater emphasis on practical training'. A body of research evidence started to show a growing role for schools during the initial teacher education process (Benton, 1990; Furlong, Hirst, Pocklington & Miles, 1998; McIntyre, Hagger & Wilkin, 1993) and eventually 'partnership' became 'the orthodox way of describing the appropriate relationship between schools and universities in ITE' (McIntyre, 1997, p. 5). In the Oxford internship scheme, this was interpreted as 'a clearly specified, persuasively justified and mutually agreed division of labour between the two partners'.

The rationale [was] that university and school staff should each contribute what their respective positions make them best placed to offer, broadly research and theory-based knowledge and perspectives from the former, and situated knowledge of teaching and schooling and practical perspectives from the latter.

(McIntyre, 1997, p. 5)

McIntyre draws attention to the first issue of complexity, that of appropriation of interpretation. In McIntyre's terms 'appropriate partnership' means a collaboration of equals, but other perspectives, or orientations to partnership, were also seen. Furlong et al. (2000), for example, identified three types of partnership at a structural level which they observed during the 1990s. Significantly, and because their typology looks at 'partnership' from the

perspective of HE, it did not allow for combinations of models either at the level of the institution or at the level of the individual. It did not problematise how some schools simultaneously managed partnerships with several different universities, with very different models and orientations to initial teacher education, or how schools offering initial teacher training (ITT) worked in partnership with bodies other than universities. The three types of partnership identified by Furlong et al. (2000) were:

Complementary partnership

The school and the university or college are seen as having separate and complementary responsibilities but there is no systematic attempt to bring these two dimensions into dialogue. In other words there is partnership but not necessarily integration in the course; integration is something that the student himself or herself has to achieve.

(Furlong et al., 2000, p. 78)

Collaborative partnership

At the heart of this model is the commitment to develop a training programme where the students are exposed to different forms of educational knowledge, some of which comes from school, some of which comes from higher education or elsewhere.

(Furlong et al., 2000, pp. 79–80)

HEI led partnership

An HEI-led model is fundamentally different from the collaborative or the complementary model in that it is indeed led by those in higher education, though sometimes with the help of a small group of teachers acting as consultants. The aim ... is to utilize schools as a resource in setting up learning opportunities for students ... Within this ... model, quality control – making sure students all receive comparable training opportunities – is a high priority.

(Furlong et al., 2000, p. 117)

A *collaborative* partnership is therefore just one type of partnership model and is some way from the *complementary* relationship set out in government circulars at the start of the 1990s which stipulated that schools must take a ‘leading responsibility for training students to teach their specialist subject, to assess pupils and manage classes’ and for ‘supervising and assessing their competences in these respects’ (DfE, 1992), and some way from the HEI model which characterised many courses in initial teacher education during this period. The Open University’s PGCE programme, with a national group of ‘partner’ schools and the need to

ensure parity of student experience and comparable assessment, adopted an ‘HEI-led’ approach which framed a collaborative school/HEI approach to ‘individual training plans’. It is interesting to speculate whether or not a large open and distance university involved in initial teacher education in three, and later four, different nation states could adopt a *collaborative* model of the type exemplified in the Oxford internship scheme (Benton, 1990), in which each school in the ‘partnership’ has an active role in contributing to the jointly devised university and school-based curriculum. Given the ‘static’ nature of the distance education materials, and the need to assure quality at a distance, a collaborative approach to each student’s ‘plan’ probably defined the limits of such an approach for the Open University.

The notion of a collaborative partnership was further developed by Hagger and McIntyre (2006). Focusing on the complexities of classroom teaching, they argue that classroom teachers are best placed to help student-teachers to learn to become teachers:

Our own rationale for teaching ... is that the task of classroom teaching is so complex that one cannot afford to use very much of the limited time available for learning anything other than classroom teaching; that the best place to do most of one’s learning about the complexities of classroom teaching is where that teaching is happening; and that the best people from whom to learn most about these complexities are those who are engaged with them on a daily basis.

(Hagger & McIntyre, 2006, p. 17)

The move to greater school involvement in initial teacher education can also be seen as the first step towards initial teacher education that did not involve university departments. ITT programmes such as school-centred initial teacher training (SCITT) and the Graduate Teacher Programme (GTP) did not initially involve higher education ‘partners’ and could be seen as a direct response to the arguments presented by the Hillgate Group (1989) and by Lawlor (1990) that ‘teacher training’ was best carried out in schools and without university involvement. This introduced another layer of complexity, especially for those schools involved in multiple partnerships and ‘teacher training’ without an HEI partner. Multiple orientations to initial

teacher education or training, different approaches to partnership and moves to exclude universities from ‘teacher training’ altogether resulted in a lack of clarity over the nature and purpose of partnership, compounded by a lack of focused research into its complexities (Moyles & Stuart, 2003, p. 3).

‘Partnership’ between universities and schools in initial teacher education was, therefore, contested and complex territory. While some institutions and schools claimed to have entered into collaborative partnerships, there were other institutions that saw no need for university involvement in initial teacher education. This poses difficult questions for the Open University and its partnership arrangements in England, Wales, Northern Ireland and Scotland. With mainly mature students who have family or other caring responsibilities, ‘partnerships’ are nearly always with schools who have additional partnership arrangements with other universities for initial teacher education or who have GTP ‘trainees’. Given the fact that OU PGCE student-teachers are dispersed and schools are frequently brought into partnership for single student-teachers, one might speculate that OU PGCE student-teachers might find themselves more exposed to different orientations to initial teacher education, different perspectives on learning to teach and how they might be prepared for this task.

Later in this chapter I discuss the nature of student-teacher prior agendas for initial teacher education and make the link to identity. It seems likely that mentor and university tutors’ identities shape the way they approach teacher education, too. If this is the case, then regardless of the models of partnership that are detailed in university and school agreements, individuals are likely to co-construct their own version of initial teacher education according to their own orientation.

The school as a work setting and as a site for learning

Before I continue with an exploration of the mentor and HEI tutor role, I will briefly consider the school as a work setting and a location for learning, and the associated implications for initial teacher education. A consideration of teaching as work which is learned in the school as a workplace can, perhaps, be seen as one orientation to partnership. As Hagger and McIntyre note:

The work-place is where the relevant action is. That is where expert professionals can be seen engaging in their expert practice, and where the novice is most likely to have easy opportunities for purposeful conversations with them. The workplace is also usually where one's potential clients, in all their diversity, can be met ... [Where] people have to confront and deal with all the complex, messy, difficulties which make education a demanding real world task.

(Hagger & McIntyre, 2006, p. 45)

With a focus on pupils as clients and teachers as practitioners opening up their practice to teacher learners, this practical orientation to initial teacher education (see Table 1) circumscribes a particular role for HEIs and schools as they help student-teachers to negotiate their learning in the context of busy schools and classrooms. The classroom and school context shape the learning that is possible. Richert (2005), for example, when talking about an 'inquiry' approach to teaching, comments:

Most [students] do not see examples of teacher inquiry at their schools; in fact their school contexts are anything but helpful when it comes to providing the resources they would need to assume an inquiry stance ... They have little or no school or support time for talking with colleagues and little time for thinking on their own. Many are required to teach with scripted curricula towards high student performance.

(Richert, 2005, p. 300)

Billett (2004b) too, underlines the way in which context shapes learning by pointing out the importance of the affordances and constraints of the workplace, on the one hand, and the individual's construction of these affordances and constraints and his or her willingness to

engage with them, on the other. While workplace opportunities may be highly structured (Billett, 2001), the use of these opportunities cannot be taken for granted.

Learning to teach *as work* in schools *as work settings* also focuses our attention on the informal and incidental nature of much work-based learning. Eraut (2000), for example, draws a distinction between ‘formal’ and ‘non-formal’ learning; between learning that happens incidentally and learning that happens as the result of a systematic, organised intervention led by a designated teacher or trainer. Clearly, there is much informal learning to be done as student-teachers learn to teach in schools, and Lave and Wenger’s (1991) description of newcomers moving towards greater participation in the life and work of a community, gaining a rich understanding of its rules, customs and cultures, models how this might happen in schools.

Learning in the work setting is a complex endeavour, both at the macro, policy level and at the micro, task level (Bauer & Gruber, 2007, pp. 675-676), and learning in practice and from practitioners is not an unproblematic process. As we will see later in this chapter, teachers as practitioners find it difficult to articulate their practice, student-teachers find it difficult to go beyond a surface level understanding when observing and when talking about their practice, and teachers often use discussion to serve purposes other than making their practice clearer. Eraut, for example, makes this point:

In general, discourse in many settings helps (1) to provide a defensible account rather than a description of professionals’ actions and (2) to create an impression of professional control over situations which inspire confidence in them as persons. It may seek to disguise rather than to share uncertainty and risk-taking.

(Eraut, 2000, p. 120)

The school as a workplace site for learning implies particular roles for partners, for mentors and for HEI tutors, and as we will see later in this chapter, these roles, even when learning to teach as work-based learning is not considered, are considerably complex in themselves.

2.2 Student-teacher learning in initial teacher education

Learning as a matter of identity

As I have just identified, different orientations to initial teacher education reflect different pedagogical and epistemological perspectives. This section of the chapter looks in more detail at student-teacher learning, before returning to look at the roles that mentors and university staff might play in this process. The perspective I draw from the literature is that learning to teach in secondary schools is a matter of being and becoming: a matter of identity. Wenger (1998; 2005), for example, focuses on the link between identity and agency, and in doing this draws our attention to ways in which acting in the world – *agency* – can change identity. He also draws attention to the way that who we have been and who we are can affect who we will become. In this way identity is malleable and is formed in relation to other people, with a past and future history, and is a combination of how we see ourselves and how we are seen by others.

Much of the research literature in initial teacher education characterises student-teacher identity as an agenda that is brought to their course by the student-teacher and that sometimes appears as a presentation of an ideal image of a teacher (Calderhead, 1988) or as a reluctance to change pre-conceived ideas which are frequently different from those held by the university (Younger, Brindley, Pedder & Hagger, 2004). Wang and Odell (2002, p. 487), for example, noted tension between the student-teacher's view of teaching as 'transferring information from teachers to students' and the teacher educator's desire to change this perspective.

McIntyre argued that ‘students bring to their initial teacher education strong preconceptions which are resistant to modification’ (1997, p. 7) and it is these preconceptions which form their agendas for their initial teacher education: ‘It is the interns’ own prior experiences and commitments, their own felt needs, their own aspirations and their own understandings which determine the things they attempt to learn and the problems they seek to resolve’ (McIntyre & Hagger, 1992, p. 267). Sfard and Prusak (2005, p. 14) take a more sophisticated perspective and see the process of learning as ‘closing the gap’ between *actual identity* and *designated identity*; between significant, reifiable and endorsable stories about what is *now*, and what is *expected to be the case*. Hodkinson (2007, p. 9), takes a similar stance and describes learning as ‘becoming’, making the link with identity and informal learning: ‘All people, we would argue, learn through becoming and become through learning. Sometimes that becoming is planned and intentional – either on the part of the learner or of a teacher. Often it is neither.’

Prior experience has an important part to play in developing identity, both ‘actual’ and ‘designated’, and in shaping the way that student-teachers and others ‘construct’ the PGCE course of study. For a PGCE programme with a high proportion of mature student-teachers, many of whom have experience in school as both adults and pupils, this was an important consideration for the PGCE team. Lortie (1975) drew attention to the fact that that development of preconceptions, of teacher identity, is the result of an ‘apprenticeship of observation’, based on student-teacher experience as learners in classrooms, a phenomenon which Raymond, Butt & Townsend (1992, p. 150) referred to as ‘the primacy and persistence of early personal experience’. From the vantage point of a pupil in the classroom and later as the student-teacher in the classroom, student-teachers can see teaching as telling and learning as memorising (Calderhead, 1991), and can fail to recognise the complexity of the classroom

context. Darling-Hammond (2001), writing about policy-makers who have had an apprenticeship of experience, provides an illuminating metaphor for this type of learning:

Just as an untrained member of a symphony orchestra's audience may see the conductor's job as merely waving a stick in time to the music, the lay observer of teaching may see the teacher's job as simply giving information and marking assignments.

(Darling-Hammond, 2001, p. 761)

These preconceptions are difficult to change. Hodkinson (2007) noted, for example, when writing about experienced teachers in schools, the inherent difficulty in changing their practice:

Asking teachers to change what or how they teach often entails asking them to change their dispositions, even their identity. Such changes are possible, of course, but can often be difficult and painful, and are almost always slow.

(Hodkinson, 2007, p. 4)

Bourdieu's concept of 'habitus' provides a useful point of reference in this discussion. For Bourdieu, an individual's habitus is derived from social conditioning, the unconscious internalisation of objective social structures which have the appearance of being spontaneous and natural but which also have a built in inertia: 'Habitus, the product of history, produces individual and collective practice, and hence history, in accordance with the schema engendered by history' (Bourdieu, 1990). Bourdieu calls habitus, having a 'feel for the game.'

The habitus as the feel for the game is the social game embodied and turned into second nature ... The constraints and demands of the game, although they are not restricted to a code of rules, impose themselves on those people – and those people alone – who have a feel for the game.

(Bourdieu, 1977, p. 82)

As student-teachers engage in a course of initial teacher education, they observe the spontaneous and natural acts of teaching in their supervising teacher (their mentor's habitus), in the context of the department, or habitat, and, on the basis of their own apprenticeship of

observation, which has led only to a partial understanding, they begin to engage in the socio-cultural setting of the classroom. Pajares (1992) noted that these prior conceptions often produce an unrealistic level of optimism and confidence in the ability to teach. In addition, as Feiman-Nemser pointed out, these prior conceptions form the basis for making sense of the beginning teacher's encounters:

The images and beliefs that prospective teachers bring to their preservice preparation serve as filters for making sense of the knowledge and experiences they encounter. They may also function as barriers to change by limiting the ideas that teacher education students are willing and able to entertain. The paradoxical role of prior beliefs in learning takes on a special significance in teacher preparation ... Taken-for-granted beliefs may mislead prospective teachers into thinking that they know more about teaching than they actually do, making it harder for them to form new ideas and new habits of thought and action.

(Feiman-Nemser, 2001, p. 1016)

This initial engagement with the classroom setting 'as if' (Edwards et al., 2002) students are teachers can lead to superficial imitation, and student-teachers can fall into the behavioural patterns they have observed – the 'folkways of teaching' (Buchmann, 1987, p. 152). And, by recognising only the familiar, they fail to see the possibilities of new and different approaches, and fall into the 'familiarity pitfall' (Feiman-Nemser & Buchmann, 1985). Meyer and Land (2005, p. 377) refer to this in-between stage of mimicry as 'liminality', a place where learners often 'get stuck'.

'Actual identity' (Sfard & Prusak, 2005) is therefore one form of 'filter' which shapes what student-teachers learn and can learn. But this is only one of the forces that shape the learning process. Postlethwaite and Haggarty (2008), for example, draw attention to the problematic nature of university-based ideas which do not resonate with the student-teacher's 'designated identity' (Sfard & Prusak, 2005) as they engage in practice in schools. They refer to this process as 'progressive filtering' (Postlethwaite & Haggarty, 2008, pp. 13–14) as ideas

introduced in the university are subject to prior agenda and school-based tests of ‘truth’ and distilled into a much reduced sub-set of ideas which can be traced back to the university.

Vertical, horizontal and social perspectives on learning to teach

The discussion so far has focused on student-teachers, tutors and mentors making sense of a process of becoming a teacher which is socially and individually constructed. One of the reasons why the process is contested to such a degree is the fact that notions of ‘good teaching’ and what constitutes teaching and learning are also moot points: if it is impossible to agree on the destination, then the route must also be difficult to determine. The next section of this chapter uncovers a further dimension to complexity in learning to teach when it is seen as either a cognitive or a social process, with ‘expertise’ used to illustrate the argument. In doing so I draw on Boshuizen, Bromme and Gruber (2004, p. 5) who define experts ‘as either top performers who excel in a particular field or *professionals who achieve at least a moderate degree of success in their occupation*’ (my emphasis).

Despite the greater significance being given to learning as participation, the literature on teacher development focuses mainly on the individual and presents a vertical model of teacher development, often characterised as a series of stages through which student-teachers and then qualified teachers must pass, on their path to ‘expert’ status from novice-hood. Kelly (2006, p. 505) states that this is a perspective which ‘currently dominates considerations of teacher learning’. The three studies highlighted below by Fuller and Bown (1975), Berliner (1994) and Hubermann (1993) illustrate this trend.

Fuller and Bown (1975) present ‘perhaps the most classic of stage theories in that it was meant to be relatively invariant, sequential and hierarchical’ (Richardson & Placier, 2001, p. 910). They explore teacher development through teacher concerns at different stages of

their career and propose four stages of ‘concern’. Dreyfus and Dreyfus (1986) also hold that professional knowledge and development occur in the same hierarchical and cumulative stages.

Berliner (1994) charted the cognitive development of beginning teachers as they identify classroom situations and gradually assume responsibility for their own actions. He identified five levels of teacher development from novice to expert. The transition from ‘advanced beginner’ to ‘competent’ is marked by the capacity to take responsibility for one’s own actions while ‘expert’ teachers ‘are not consciously choosing what to attend to and what to do. They are acting effortlessly, fluidly, and in a sense, that is arational because it is not easily described as deductive or analytical behaviour’ (Berliner, 1994, p. 167). For Berliner, transition is not an automatic process.

Hubermann’s (1993) complex large-scale study of 160 secondary school teachers identified six phases in the career development of teachers. Hubermann also noted that movement from one stage to another does not necessarily imply progress, especially towards the end of a teaching career. As he noted: ‘For some this process may appear to be linear, but for others there are stages, regressions, dead-ends and unpredictable changes of direction sparked by new realisations; in short discontinuities’ (Hubermann, 1993, p. 4). Table 2 summarises these three studies.

Table 2: A summary of three models of teacher development

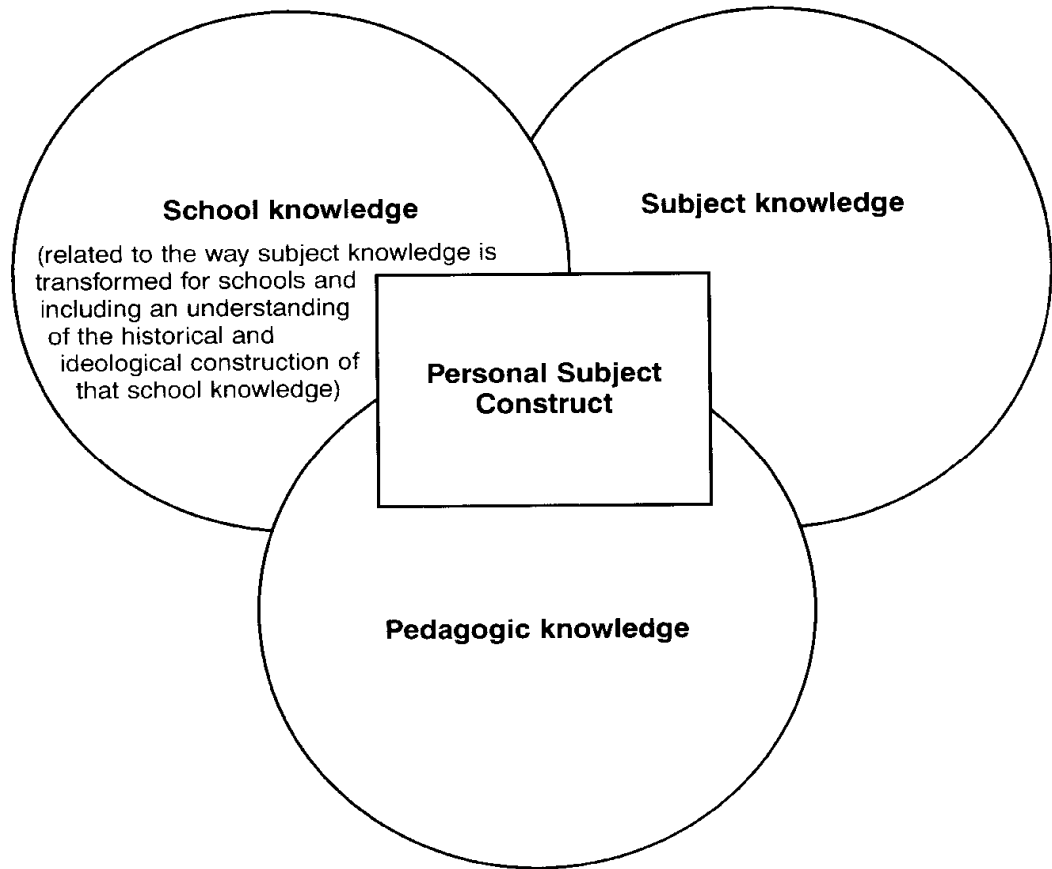
Fuller and Bown (1975)	Berliner (1994)	Hubermann (1993)
<ul style="list-style-type: none"> ▪ Pre-teaching concerns – or no concerns ▪ Survival concerns ▪ Teaching concerns ▪ Pupil learning concerns. 	<ul style="list-style-type: none"> ▪ Novice ▪ Advanced beginner ▪ Competent ▪ Proficient ▪ Expert. 	<ul style="list-style-type: none"> ▪ Survival and discovery ▪ Stabilisation ▪ Experimentation and activism ▪ Taking stock – self doubts, serenity ▪ Consternation ▪ Disengagement.

The notion of expertise as the acquisition of particular characteristics rather than a social process was questioned by Bereiter and Scardamelia (1993) among others and the idea that experience and development are always linked is also refuted by other researchers into teacher development. Burn, Hagger and Mutton’s (2000) research, for example, showed that beginning teachers *are* concerned with pupil learning as did research by Achinstein and Barrett (2004) which showed that beginning teachers can focus on student learning if they are encouraged to take a humanistic or political, rather than a managerial perspective to the work of teaching. These critiques counter-balance strictly linear models of teacher development and suggest that student-teachers are able to bring skills, knowledge and understanding to teaching which have been developed in other contexts. But in doing so, they continue to approach teacher development as an issue of individual accomplishment.

Vertical approaches to learning adopt a cognitive perspective in which individuals build on prior learning; they *acquire* knowledge (Sfard, 1998) such that experts, or more knowledgeable people, can be identified by their capacity to reflect the minds of other experts (McCormick & Fox, 2007). Fenton-O’Creevy (2007), when discussing expertise, identified two types of perspectives on expert performance; ‘expertise as an individual accomplishment...[and] expertise as a social accomplishment.’ As an individual

accomplishment, learning is seen as the development of automaticity in judgement making, supported with a 'critical control of practice' and a desire to 'challenge [oneself] to reach new levels of performance.' Expertise, in this vertical model can be attained through lengthy and deliberate practice and results in a 'vast repertoire of situational discriminations.' Teachers in school, who display a high level of subject knowledge or knowledge about curriculum or who can draw on a wide range of pedagogical stories to support their teaching, demonstrate their competence within the cognitive domain. Banks, Leach and Moon (1999) presented a model in which teacher knowledge is ascribed to one of three types of knowledge: school knowledge, curriculum knowledge and pedagogic knowledge. This is represented in Figure 3.

Figure 3: The Banks, Leach and Moon model of teacher professional knowledge



Expert teachers in this cognitive model would show higher, or more profound, levels of knowledge about the curriculum, teaching and subject; essentially they would know more as individuals; they would become more like other experts. In this cognitive model, expertise would be developed over time and perhaps with deliberate practice leading to more advanced situational repertoire and greater levels of automaticity. Eteläpelto and Collin (2004, p. 234) drew attention to the 'limitations of a knowledge-based approach' and like Sfard (1998) identify the contribution that a *participation metaphor* can make to understanding learning.

Putnam and Borko (2000) show how this perspective can be applied to teacher learning. They see cognition as situated in settings and distributed among tools and people. They also emphasise the need for teacher learners to engage in authentic activities in communities of practice.

Engeström, Engeström and Karkkainen (1995, p. 319) too, call for a ‘broader, multi-dimensional view of expertise’, or for the purposes of this argument the knowledge required for a moderate degree of success, and emphasise the importance of crossing boundaries between contexts in order to develop learning.

While the vertical dimension remains important, a horizontal dimension is rapidly becoming increasingly relevant for the understanding and acquisition of expertise. In their work experts operate in and move between multiple parallel activity contexts. These multiple contexts demand and afford different, complementary but also conflicting cognitive tools, rules and patterns of social interaction. The criteria of expert knowledge and skill are different in the various contexts. Experts face the challenge of negotiating and combining ingredients from different contexts to achieve hybrid solutions. The vertical master-novice relationship, and with it, in some cases, the professional monopoly on expertise, is problematized as demands for dialogical problem solving increase.

(Engeström et al., 1995, p. 319)

Taking the broader definition of an expert presented by Boshuizen (2004, p. 5) – someone who has achieved a moderate degree of success, this concept raises important issues for student-teachers as they move from one community or activity system (the university study setting) to another (the school setting) and back; as they make sense of multiple contexts which demand and afford different approaches to the same object. Earlier in this chapter it was noted that a school’s imperative is to act (Furlong, 1996, p. 160); to teach the curriculum to these children now with the resources available. On the other hand, student-teachers in a university setting might be asked to adopt a more reflective approach when planning, which might ask them to look for alternative strategies or resources or different ways to engage children in the learning process. Engeström and colleagues argue that it is these ‘horizontal’

skills which define a new approach to ‘expertise’. Wenger (2005, p. 31) also identifies a trend towards the ‘horizontalisation of learning: a shift in our view of knowledge communication that emphasises less the vertical relationship between a producer and a recipient and more horizontal interactions required for the negotiation of mutual relevance’.

This horizontalization trend does not suggest that issues of power disappear ... Progressive doctors are attempting to reconceptualize the medical consultation, not as an expert providing a service to a recipient, but as a meeting of two forms of knowledgeability that have to meet and negotiate how they inform each other. Doctors are still doctors, but the process of making their expertise effective requires this horizontal exchange.

(Wenger, 2005, p. 32)

For Wenger, the boundaries between communities, between different forms of knowledgeability, are critically important to learning. Engeström, too, talks of the ‘expansive’ opportunities when contradictions within and between activity systems are jointly explored, and these conceptual perspectives are looked at in more detail in Chapter 3.

My argument in this chapter so far has been that learning and becoming a teacher are inextricably linked as identity and that this is shaped in significant ways by prior experiences, which in turn shape new learning opportunities. Changing identity is a problematic endeavour, and given the multiplicity of orientations that are present in initial teacher education this is likely to lead to differences between student-teachers, their ‘partner’ schools and others involved in their teacher education programme. I have identified considerable dilemmas and tensions which can be encountered in teacher education, in orientation, in beliefs, in values and in approaches to subject and pedagogy, as well as tensions between different understandings about teacher knowledge. These tensions, together with a view of teaching which is presented through standards and which is enforced through inspection and resource allocation, are substantial. Student-teacher identity forged through personal experience as a learner in school shapes what can and what is learned as a beginning teacher; it shapes

student-teacher identity. Student-teachers, too, must experience and handle significant contradictions between their own values, beliefs and understanding and those of others. How these competing demands are handled by student-teachers, mentors and tutors forms a central part of this thesis. The next section looks in detail at each of these roles as set out in OU PGCE programme materials and looks at the difficulties for each of these participants articulated in the research literature.

2.3 The roles of the mentor, HEI tutor and others in initial teacher education

Mentoring, teaching and tutoring on the Open University PGCE

The OU PGCE Programme Handbook (2008) set out the roles of each of the participants who support, educate and assess student-teachers while they are on school experience: the mentor, the school co-ordinator, Open University tutor, Open University subject leader and regional staff tutor. A section of the document which describes these roles in detail is included in this thesis as Appendix B. The key university learning and teaching materials on the programme are the distance education modules, school activities and assessment activities, which are written by the OU subject leaders. The part-time Open University tutor visits student-teachers in school and with the school-based mentor supports and assesses student practice. It is the conversations between student-teachers, mentors and OU tutors which form the basis of this study.

Subject leaders on the OU PGCE programme are qualified teachers and usually full-time academic members of the Open University staff based at its headquarters in Milton Keynes. As part of a course team they develop the course materials and modules and are responsible for the appointment, development, management and quality assurance of a distributed group of part-time tutors and for overseeing student-teacher assessment and

progress within their subject. At the time of the research there were subject leaders for six secondary subjects on the PGCE team.

Part-time OU tutors distributed throughout England, Wales and Northern Ireland report to the appropriate subject leader. They are qualified teachers in the subject area who are responsible for supporting and guiding student-teachers through the distance education materials, and for visiting, supporting and assessing student-teachers while they are on school experience. OU tutors provide academic support to student-teachers; they mark end-of-level assignments which are presented in a portfolio, provide one-to-one tutorial support in school and communicate with student-teachers by telephone and e-conferencing. OU tutors also support mentors and school-co-ordinators and provide them with course briefing, training and development.

School-based 'training' and education is provided primarily by the mentor. This person is asked to 'share practice' by being observed, by discussing and explaining and through collaborative working with the student-teacher. They are asked to 'support and train' the student-teacher to gain the skills, knowledge and understanding to become a newly qualified teacher, to observe and provide feedback on a regular basis and to hold weekly mentor sessions to review progress against previously set targets and the relevant professional standards. They are also asked to help the student-teacher to carry out school-based course requirements and to complete appropriate summative assessment at the end of each level of the programme.

Clarity of role and purpose in an 'HEI-led' model (Furlong et al., 2000) of initial teacher education is, of course, important. It is particularly important where primacy is given to assuring parity of student experience across a large number of partnerships, many of which are formed to educate a single student-teacher. As can be seen from the description of the

mentor role in the PGCE Handbook, their roles are described in terms of activity: ‘observe’, ‘provide feedback’ according to clearly defined requirements, and ‘hold weekly sessions’ to review progress against targets. This focus on activity was considered to be necessary in the early stages of programme development when large numbers of tutors and mentors were introduced to the programme in a short space of time. It was also partly in response to requests from mentors on the subject advisory groups, to have explanations ‘on one side of A4’. But, while the focus on simplifying the role through concentration on activity can assure greater levels of consistency across a distributed partnership, it does not allow for the exploration of complexity or fully recognise the difficulties which these ‘partners’ have in carrying out their role. The next section of this chapter looks at each of these roles separately in order to identify what some of these difficulties might be.

Difficulties in being a mentor

The move to greater school involvement in initial teacher education and the recognition that experienced teachers had a considerable amount to offer student-teachers led, during the 1990s, to greater levels of responsibility for school-based ‘mentors’. Precisely what this role entailed would depend on the model of ‘partnership’ and orientation to initial teacher education, institutionally, departmentally and individually. How these complexities could be managed was a separate issue, picked up by researchers such as McIntyre and Hagger:

One might expect that the complexity of mentors’ roles could be limited in important ways by a negotiated clear division of labour which delimited mentors’ responsibilities, and by clear arrangements for joint planning of curricula and for integration of school and HEI work.

(McIntyre & Hagger, 1994, p. 30)

Haggarty (1995a) looked at the complexities of mentoring in a mathematics teacher education programme in which a clear and negotiated division of labour between the school mentor and

the university programme had been agreed. Her research supported that of Feiman-Nemser and Buchmann (1987): teachers in a mentoring situation find it difficult to find time to talk about what it is they do, and to probe and develop student-teacher understanding in these conversations. Haggarty (1995a) speculated that there might be several issues which might 'discourage' such open discussion: a culture in schools that is not sympathetic to the discussion of teacher problems; difficulties with articulating practice; and preconceptions of the role of the mentor, in particular the concern that the mentor should be a 'role model'. Haggarty (1995a) notes from her study that conversations between mentors and students therefore:

Tended to remain polite; tended to concentrate on a limited range of personal experiences; and did not help students to appreciate the complexity and reality of teaching. What is not clear is whether such conversations are helpful for student learning and what, indeed, mentors are able to achieve in such conversations that the (university) tutor could not achieve.

(Haggarty, 1995a, p. 37)

Placing student-teacher learning on the mentor's busy agenda and engaging with student-teachers in conversation, even when the role is clearly delimited, is a problematic process and is articulated through a range of mentoring strategies, like those defined by Calderhead and Shorrock (1997, pp. 198–201). They suggest these might include:

- influencing by example
- influencing by coaching
- influencing through practice-focused discussion
- influence through structuring the context
- influencing through emotional support
- influencing through devised learning experiences.

These strategies are set in the context of polite yet limited conversations where ‘mentoring [is] often seemed to be regarded as simply another teaching context’ (Calderhead and Shorrock, 1997, p. 201), with student-teachers who talk ‘predominately in terms of learning to teach from experience’ (Hagger, Burn, Mutton & Brindley, 2008, p. 174).

Despite the fact that OU PGCE mentors were provided with extensive personal development materials in the form of print and CD-ROM materials which looked at the wider issues of mentoring, programme evaluation indicated that these rarely formed the basis of conversations between subject tutors and mentors. Research by Lathlean, Hagger and McIntyre (1997) indicated that this was not an isolated OU PGCE experience. Their report on findings from research that was developed to support a mentor preparation programme commented on the ‘striking ... similarity between mentors’ ways of talking about their practice in mentoring and teachers’ ways of talking about their practice in teaching’ (1997, p. 141). Mentors’ talk, they suggested, focuses on the context in which they are working and on the characteristics of the students. In their study, mentors avoided talking about their own actions. Lathlean et al. concluded that:

Mentors’ thinking in practice ... was derived hardly at all from the explicit scheme which had been thoroughly planned, negotiated and piloted ... Instead [it was] clearly derived from a commonsense which had grown out of their experience as teachers and as supervisory teachers in previous years.

(Lathlean et al., 1997, p. 141)

Significantly, and in the context of this research conclusion, when reporting on the mentor reaction to the finally developed mentor preparation materials, Lathlean et al. (1997, p. 144) commented that while mentors approved of the materials, either positively or uncritically, they did not appear to internalise them: the materials ‘were not seen as part of the process of learning to be a mentor’.

There was a pervasive feeling that mentors did not know what they needed to know until they had actually done the job – until they had experience of being a mentor. Thus, in a sense their roles as mentors had to be self-made, but with the recognition that external support, such as the materials, could be of value in their development over time.

(Lathlean et al., 1997, p. 144)

Despite the difficulties and complexities of the mentoring task, mentors are viewed as being best placed to help student-teachers learn about the complexities of classroom teaching as they have this direct experience. Hagger and McIntyre (2006) argued that a new school-based curriculum for initial teacher education should be developed in which student-teachers learn about teaching from teachers. They noted that the current school-based approach is one which has moved ‘back towards something like an apprenticeship position ... [where] mentors have largely taken over the role that teacher educators from HEIs [supervisors] used to fulfil in schools’ (p. 18). In a commentary about the weaknesses of the old pupil-teacher apprenticeship model, they comment on the variation in the quality of the training experience, and suggest that a new model will need to be ‘a great deal more thoughtful and sophisticated for the future’ (2006, p. 9).

Mentoring can, therefore, be seen as a complex, situated and socially constructed activity, and in which there are endemic tensions (Snow-Gerono, 2008) based on previous teaching and supervisory experience, a focus on mentoring as another teaching task and where mentor thinking is not necessarily developed through explicit training and development materials. Furthermore, open discussion between mentors and student-teachers appears to be inhibited by school settings and relationships which focus on politeness. For the OU PGCE programme, with a distributed and sometimes infrequently enacted ‘partnership’ network, and with student-teachers who start the programme at different points and who study at variable rates through the programme, mentor preparation is particularly problematic. A key dimension

of this study will be to look at the kinds of contributions that mentors make and do not make to student-teacher learning on the OU PGCE programme in conversations about teaching and learning.

Difficulties in being an HEI tutor

On the Open University PGCE programme the course materials were developed by a central team, with a lead subject specialist academic in charge of each subject area. Because initial teacher education using open learning methods on this scale is unique, the staffing structure to support the programme is also unique. In the wider literature, the term ‘HEI tutor’ usually refers to tutors who teach on courses in ITE and who usually visit student-teachers in school. But on the OU programme this role is distributed, with part-time tutors taking on the ‘visiting’ role. Just as the role of the mentor requires further detailed investigation, in the context of complex notions of partnership, the role of the university tutor (or *tutors* in the case of the OU) is similarly complex and under-researched. As John (1996, p. 119) noted, ‘teacher educators ... are the missing persons in the literature on teacher education. Ten years later Burn notes that the situation is little improved.

Evidence of what HE tutors actually do remains extremely limited, and where we are offered detailed insights into the nature of their professional knowledge and practice the cases tend to be studied in isolation with few indications of how their contribution relates to the input that student-teachers receive in school.

(Burn, 2006, p. 245)

How people become HEI tutors is an important facet of this discussion. Calderhead and Shorrock (1997, p. 207) commented that university tutors are often appointed ‘having been judged to be good class teachers, with ‘more experience than most teachers in supervising students’. They identified a lack of preparation for the role in HEI; a role which they argued is

extremely difficult. They noted that the role of teacher educator ‘may be viewed as an almost impossible task. Teacher educators have constantly to juggle external expectations together with their own, sometimes contrary, understanding of how one might most appropriately educate and train teachers’ (Calderhead & Shorrock, 1997, p. 195). Their experience, as a ‘good’ class teacher, is unlikely to prepare teacher educators fully for the dilemmas they might face as they develop beginning teachers, dilemmas identified by Calderhead and Shorrock (1997, pp. 195–198) as:

- Theory versus practice: The ‘tension between the need for teachers to understand teaching and the need to be able to perform teaching’ (p.195).
- Content versus process: the tension caused by wanting to prepare student-teachers in advance and providing content at ‘a time when [student-teachers] can appreciate the link between ideas, the practical problems and their own practice’ (p. 196).
- Gatekeeper versus facilitator: the tension between encouraging student-teachers to reflect on their weaknesses to improve their practice and the need to fail students who are too weak.
- Personal development versus professional development: the tensions caused by the time needed to develop ‘maturity of outlook’ and the professional development needs of a structured teacher education curriculum.
- Survival versus ongoing development: the tension caused by attending to immediate student-teacher needs and to developing skills and understanding that ‘might help them to make sense of their practice and make choices in their actions at a later time’ (p. 197).

- Support versus challenge: the tension between providing ‘an appropriate balance of support and challenge, knowing when encouragement or consolation are needed and when challenge is constructive’ (p. 197).
- Reproduction versus innovation: the tension between ‘equipping student-teachers with the required knowledge and skills to function in the school in which they will teach, and at the same time, preparing them as potential innovators who may improve the quality of existing practice, dealing with the many uncertainties that often accompany the innovation process’ (p. 197).

These dilemmas, noted by Calderhead and Shorrock (1997, p. 197) as being ‘readily recognised by teacher educators’ are widespread and stem from the tensions created by different orientations to initial teacher education. And, just as it might be possible to add a sixth orientation to initial teacher education it might also be possible to observe a more recent, and English, dilemma for HEI tutors as they wrestle with governmental prescription and with local or personal beliefs or practices.

In the context of such tensions, identified by researchers such as Berry (2007), proposals have been suggested which would further develop the HEI role. Maynard (1996, p. 115) argued for the formation of a new role for the HEI tutor as the result of a wider discussion about the limitations of mentoring: ‘Personal experience and imitation appear to be key features of student-teachers’ school-based learning. Students are simply likely to accept what seems to “work” not only for them but for their class teachers’ (Maynard, 1996, p. 116). In that context, she argued that tutors should support mentors working with student-teachers ‘acting as mirrors’ so that teachers may clarify and find ways of articulating their practical ‘knowing’ (1996, p. 115). She also argued that HEI tutors should work with student-teachers,

challenging them to ‘examine and evaluate the content of the activities they teach’ (1996, p. 117). John (1996), too, identified a significant role for teacher educators:

They act as role models, supporting and challenging at every opportunity; they question, clarify, comment and criticise; they help student-teachers define the realities encountered in schools as well as helping them account for the discrepancies and inconsistencies that occur. Finally they communicate and filter a wide variety of theoretical and conceptual ideas and encourage reflection, deliberation and experimentation.

(John, 1996, p. 135)

Furlong (1996, p. 162) saw this modelling process as engaging student-teachers in ‘critical conversations’, pursuing ‘truth’ through scholarly and research activity that is critically tested and scrutinised, and pointed out that this was a different contribution to that which might be made in the school context:

The potential contribution of HE to ITT is ... very different from that of a school. ... This is because the essential purposes of schools and HEIs are fundamentally different. The school is not a seminar – far from it. For the practising teacher responsible for teaching this curriculum, to these children, now, the imperative is to act. If teachers stopped to question every action they simply could not teach. As a result, the essential contribution of teachers to professional development is fundamentally different.

(Furlong, 1996, p. 160)

The practical effect of such theorising on the HEI tutor’s contribution to student-teacher learning is not so easy to identify in the research literature. Burn’s research (2006) concluded that mentors and tutors in the collaborative Oxford internship scheme *did* draw from different sources of knowledge and that the ‘tutor’s contribution is also distinguished by the commitment to open and critical scrutiny’ (2006, p. 253). But her study also revealed that despite the fact that this scheme encouraged the articulation of different perspectives, student-teachers only queried or challenged 10% of mentor suggestions. She commented:

Articulation of different perspectives or interpretations is extremely rare; silent substitutions of the interns’ [student-teachers’] own ideas for those of the mentor are much more common.

(Burn, 2006, p. 254)

Burn underlines the reasons for this approach and supports Haggarty's (1995a) findings reported earlier in this chapter:

Expressing doubts or even asking probing questions will never be easy in the school context. This is not only because of the complex personal relationships entailed by the mentor's role in which support and guidance are inextricably linked with assessment, but fundamentally because the overwhelming imperative in school is to decide how to act. Even where mentors succeed in creating a culture in which interns feel genuinely able to critique the ideas or assumptions presented to them, the criteria against which they do so do not generally extend beyond the experience of the mentor and intern, and certainly do not include a research dimension.

(Burn, 2006, p. 255)

The research into the HE tutor role shows significant potential to help student-teachers understand the complexities of practice in a school context which has the over-riding imperative to act. Such a role, which is complex in itself, requires a detailed understanding of the research in initial teacher education and a personal understanding of the nature of open and critical scrutiny through the publication of scholarly work or research. Tutors, however, are ill-prepared for this task and for the dilemmas they face as teacher educators because of their prior experience as teachers and as mentors. The situation is made more complex by the difficulties students and mentors face in expressing reservations or in articulating different perspectives in the school context. Teacher educators and mentors, it seems, revert to their roles as teachers, their understanding of which was largely formed through personal observation. Mentors and student-teachers find it difficult to link theoretical perspectives to practice until they arrive at a 'state of particular concern' (Haggarty, 1997, p. 75), and expressing doubts or questioning decisions is highly problematic. The extent to which HE tutors are able to link theoretical perspectives to practice in the school placement and the extent to which they are able to move beyond politeness remain unclear and are central concerns of this study.

In the context of a ‘distributed’ HEI tutor role, where the OU subject leader and subject tutor carry out related, complementary tasks, and where the subject tutor is a part-time member of staff who works at a distance and who is managed by the subject leader, these complexities are problematic. This is especially the case when groups that are external to the ‘partnership’ have curriculum and quality assurance requirements which must be met in order to receive accreditation. The Open University’s mentor development focus on mentor ‘activity’ was established for understandable reasons, but perhaps on reflection it could now be seen to de-complexify the mentor role and, if school colleagues see mentoring as another teaching task, this focus may have served to model an activity-led approach to teaching.

2.4 Summary

In this chapter I have set out the context in which student-teachers learn to become teachers. I have argued that learning as being and becoming is a matter of identity: a person’s beliefs and values about what it is to be a teacher, developed through their own experience as a learner in school, will shape what they learn about teaching and what sort of teacher they will become and will be shaped in turn by the actual and designated identities of more powerful ‘others’ in the work setting. A personal or institutional orientation to initial teacher education will shape the way that partnership between schools and universities is viewed: whether that orientation is to try out university developed theories, to interrogate both theory and practice or to find out what works in practice. This view of the teacher education process shapes the way that participants see their role and act in their role. In the context of this hyper-complexity, mentors and tutors work with student-teachers, influencing through discussion and coaching, trying to articulate aspects of their practice which sometimes do not lend themselves to verbal reification, in an environment which emphasises politeness and which

does not encourage active exploration of dissonance. Dilemmas and tensions between approaches, beliefs and values appear to be endemic but these, even when they are encouraged in deeply collaborative models of ITE, do not appear to be easily discussed.

While complexity is frequently noted in the literature, it is often seen as an issue that is perceived negatively, usually with a call for greater conceptual clarification with the implied consequence that simplicity will result. The context for initial teacher education in England, set out in the Ofsted-inspected requirements for providers, is one of expected harmony between the higher education institution and school ‘partners’. Similarity, or consonance, between perspectives is rewarded through positive inspection outcomes and consequent funding improvements, while difference is seen as a result of poor quality assurance, poor training of schools by HE or by university tutors being out of touch with the current realities of teaching. Similarly, student-teachers’ prior agendas are identified in the literature as potential barriers to learning, and as being hard and slow to change. This chapter has re-cast this discussion as one of student-teacher identity, of being and becoming. In doing so it helps to draw attention to the ‘involuntary’ nature of student prior agendas and to the inevitability of their individual and social construction and the need to develop from these positions rather than trying to ‘change’ them. This discussion also asks questions of mentors’ and university tutors’ identity and of the difficulties they too face in changing or developing their practice. Such complexity, I argue, is inevitable. Those engaged in initial teacher education need to find ways to embrace complexity and to use it to further improve student-teacher learning. Simplification simply cannot work if a socio-cultural constructivist position is taken to teacher learning.

The next chapter explores activity theory and theories of communities of practice as conceptual lenses for looking again at these enduring issues in initial teacher education. In

particular it looks at the way that these complementary theoretical perspectives open up and use complexity as a tool for developing learning.

DEVELOPING A CONCEPTUAL FRAMEWORK

3.0 Introduction

The last chapter set out the territory for this thesis, that of school-based initial teacher education in England, and focused on the complexity which different perspectives bring to this fundamentally contested area of endeavour. In this chapter I identify two complementary theoretical perspectives through which it is possible to view this complex activity. Theories of ‘community/ies of practice’ (CoP) and ‘activity theory’ (AT) are identified as different perspectives through which it is possible to frame the process of student-teacher, mentor and tutor engagement with universities. With the notion of bricolage, also discussed in this chapter, these provide a conceptual basis for responding to the research area identified in Chapter 1, for the articulation of appropriate research questions, the construction of appropriate methods of data collection, for their analysis and for the conclusions. CoP and AT approaches to student-teacher learning, as complementary theoretical perspectives, have largely been overlooked. As Fuller, Hodkinson, Hodkinson and Unwin (2005, p. 53) commented, a discussion of ‘the ways in which communities of practice and activity theory both converge and diverge as frameworks for analysing learning at work ... is surprisingly underdeveloped and deserves attention’.

3.1 Connected communities of practice

Lave and Wenger (Lave & Wenger, 1991; Wenger, 1998) developed the term ‘community of practice’ and described the way that new members of a community, *the*

newcomers' (Lave & Wenger, 1991, p. 29), were inducted into the practices of more established members, termed the '*old timers*' (p.29), through a process called 'legitimate peripheral participation' (p.29). They proposed a social theory of learning which developed from the premise that human beings are fundamentally social beings who are engaged in the negotiation of meaning, transforming the way they think about the world and transforming the way they are in the world. Lave and Wenger's exploration of 'situated cognition' (1991, pp. 32–34) and of the social processes involved in full participation in communities contrasts with the once dominant cognitive perspective and sees learning as *belonging* to a community of practice. These are processes of *becoming* a member of the community, of *doing*, or engaging, in the practice of the community, and of *experiencing*, or making, learning meaningful (Wenger, 1998, p. 5). What is more, Wenger sees these processes as facets of an identity which is dynamically related to learning. In that sense we are what we have learned. Despite the fact that the original empirical work underpinning this theoretical position is far removed from modern post-industrial practice, the insights that were developed through this work feature strongly in much work-based literature.

Music student-teachers on a programme in initial teacher education who are learning to teach music in schools might be seen to be engaged in multiple communities of practice: of the department, of their school, of their instrument/musical genre, and of the university at which they study as well as in multiple other communities. Wenger (1998, p. 127) views these multiple communities as 'constellations of interconnected practices'. Learning in these contexts creates highly individual trajectories of identity defining 'who we are by where we have been and where we are going' (Wenger, 1998, p. 149). Wenger describes communities of practice as having 'mutual engagement, joint enterprise and a shared repertoire' (1998, p. 73) and sets out fourteen indicators that a community of practice has formed:

- Sustained mutual relationships – harmonious or conflictual
- Shared ways of engaging in doing things together
- The rapid flow of information and propagation of innovation
- Absence of introductory preambles, as if conversation and interactions were merely the continuation of an ongoing process
- Very quick set up of a problem to be discussed
- Substantial overlap in participants’ descriptions of who belongs
- Knowing what others know, what they can do, and how they can contribute to an enterprise
- Mutually defining identities
- The ability to assess the appropriateness of actions and products
- Specific tools, representations and other artefacts
- Local lore, shared stories, inside jokes, knowing laughter
- Jargon and shortcuts to communication as well as the ease of producing new ones
- Certain styles recognized as displaying membership
- A shared discourse reflecting a certain perspective on the world.

(Wenger, 1998, pp. 125–6)

Student-teachers engaging with the OU distance learning course in initial teacher education demonstrate some of these characteristics, they share tools and artefacts developed by academic members of staff and by tutors; and engage with the course and each other through e-conferencing, and in face-to-face day schools, as well as engaging as learner teachers in schools. It would seem therefore that the potential for a community of practice, both of the university and of the school, is present. To what extent student-teachers perceive *the university* as a discrete community of practice while they undertake a distance education programme in initial teacher education is an interesting question. Identifying the way that these participants and their linked mentors refer to the university in conversations through this research may give some insights into this question.

3.2 Critiques of the theory of communities of practice

Lave and Wenger’s theoretical position has been developed, expanded and criticised in the literature. Fuller et al. (2005) argue that their position needs expanding to accommodate the learning that takes place when experienced and full members of the community continue to learn, for example when engaging in professional development. They claim that ‘Lave and

Wenger's attempt to stretch legitimate peripheral participation to cover all workplace learning is unconvincing' (2005, p. 65). Secondly, and underlining similar comments made by Rainbird, Munro and Holly (2004, p. 41), Fuller et al. claim that Lave and Wenger are 'overly dismissive of the role that 'teaching' plays in the workplace learning process and of learning in off-the-job settings', and that this fails to recognise the learning which apprentices and experienced employees gain by sharing 'knowledgeable skill' with others. Fuller et al. see this as a dismissal by Lave and Wenger of formal education (2004, p. 138) and, supported by Young (2004) are critical of a perspective which they claim conceives of all knowledge as situated or context specific. Similarly, Eraut (2004b, p. 203), while claiming to be a 'strong supporter of the concept of situated learning ... dissent[s] from those theorists, such as Lave and Wenger, who [he claims] attempt to eradicate the individual perspective on knowledge and learning'. He suggests that there is a need to recognise the individually situated, as well as the socially situated nature of cognition:

There will ... be aspects of a person's knowledge that have been constructed through lifelong learning and have become unique to them i.e. outside the shared circle of shared cultural knowledge, because of the unique set of situations in which they have participated ... A single idea will acquire a distinct web of meaning for each individual user according to the sequence of situations in which they used it.

(Eraut, 2004a, p. 203)

Evans, Hodkinson, Rainbird and Unwin (2006) talk in a similar vein when they refer to an individual's 'learning territory.'

By this we mean that every individual has, and has had access to a (unique) range of learning opportunities that make up their learning territory ... we would argue that the character and scope of the individual's learning territory (as well as how they respond to it) influences how he or she perceives and engages with opportunities and barriers to learning ...

(Evans et al., 2006, p. 42)

Thirdly, Fuller et al. (2005) criticise Lave and Wenger for failing to address the issue of identity adequately, focusing almost exclusively on how communities form identities and failing to address the contribution that newcomers can make to communities:

Lave and Wenger (1991) implicitly treat their newcomers as tabula rasa. Yet paradoxically, their overall position is consistent with the view that people come to a workplace already formed, with beliefs, understandings, skills and attitudes.

(Fuller et al., 2005, p. 66)

Finally, Fuller et al. (2005, p. 66) claim that Lave and Wenger do not fully explore the 'significance of conflict and unequal power relations as part of their theorising on the internal operation of communities of practice and its relationship to the wider context'. These themes are developed by Evans et al. (2006, p. 31) who identify perceived shortcomings of Lave and Wenger's perspective: the 'downplaying' of formal education; the lack of consideration about institutional arrangements and the way that these can create opportunities or present barriers to learning at work; and 'the linear journey along which the 'novices' learn from their more experienced colleagues'.

The use of the terms 'expert' and 'novice' by Evans et al. (2006, p. 13) causes some confusion here. They use the term 'expert' and 'novice' to describe Lave and Wenger's 'old-timers' and 'newcomers' and point out that 'newcomers bring capabilities with them'. In doing this they superimpose a model of what Engeström (2004, p. 146) terms the 'mainstream cognitivist model of expertise' and which Engeström criticises because of its inability to cope with complex, situated problem solving, a view which is at odds with Lave and Wenger's intended, participatory, stand-point. Claims that social theories of learning developed by Wenger are 'overly dismissive' of formal learning also require further investigation. Wenger draws attention to the 'epistemologically flat' relationship between practices, commenting that 'there are no hierarchies of practice' (Wenger, 2007). In his view, although there may be a

significant power dynamic, universities involved in work-based learning do not subsume the practice setting. Billett (2004a, p. 110), similarly, challenges the idea that social participation in educational institutions is superior to social participation in the work setting: ‘No category of social practice (e.g. educational institution) has a monopoly in promoting robust learning.’ Lave and Wenger’s theoretical position, then, draws attention to the communities of practice in which learning takes place and the situated nature of cognition. For students on a university-based course in initial teacher education, the university setting and the school department setting may form just two communities which in turn form part of the student-teacher’s constellation of communities of practice (Wenger, 1998). The university and the school can be seen as linked but not hierarchically related practices and, in Wenger’s terms, both making claims to different sets of competences.

Engeström (2007, p. 43) is critical of Lave and Wenger (1991), and Wenger (1998), for failing to situate their communities of practice in ‘real societies and patterns of organizing work’ and for failing to address the issue of history. He takes an alternative view, and one which focuses attention on the ‘object’ of a system’s productive output. Both Wenger and Engeström see learning as socially and culturally constituted, but where Wenger focuses on the identity of individuals within communities, Engeström (1999) places emphasis on learning as engagement in *activity* which takes place in historically constituted social situations. ‘Paying relatively little attention to individuals’ (Evans et al., 2006, p. 165), he has developed a theoretical position which he calls cultural historical activity theory (CHAT).

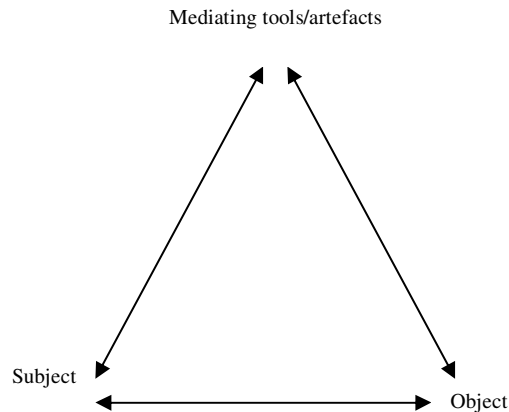
3.3 Cultural historical activity theory

Engeström's version of activity theory is developed from the work of Vygotsky (1986) who developed the concept of learning as a social and cultural process through 'complex mediated acts'. For Vygotsky, learning was fundamentally about the relationship between an individual(s) (the *subject*), the activity (the *object*) and the *tools*, such as language, technologies and other more knowledgeable people, which are used to create meaning. He also fore-grounded the importance of dialogue in learning, taken forward by Boreham and Morgan (2004, p. 314) who describe dialogue as 'the foundational process by which organisations learn'. Vygotsky differentiated between spontaneous concepts, occurring naturally and through the process of direct engagement, and scientific concepts developed through deliberate pedagogical acts. He posited that spontaneous learning is unmediated whereas scientific learning uses a range of culturally developed tools and artefacts to develop learning. The learning of scientific concepts is, therefore, the result of an 'interventionist pedagogy which is operating with an established body of knowledge' (Edwards, 2005, p. 3).

Vygotsky's theoretical perspective focused on the role that mediating tools play in revealing and shaping the learning of individuals and pointed out that the way we act in the world is mediated by the practices and cultures which have cultural currency. Figure 4 is frequently called the basic or classic mediational triangle and presents the first generation of activity theory. The mediational triangle, as a unit of analysis, shows how the person or people who are being considered, the *subject*, reveal their thinking by the way in which they use *tools* to act on or change the *object*. The *tools* used by the *subject* can be an idea, a concept, an artefact, language, music, instrument, etc. and the *object* is seen as the material that is being

worked on or changed by the *tool*. Importantly, the *object* is seen as something that is different from the objective or *outcome*.

Figure 4: Mediating tools/artefacts



If a music classroom is considered as an activity system, the *object* (the area that is being ‘worked on’) could be seen as the pupil by the classroom teacher, who might be seen as the *subject*. The classroom teacher might want the pupils to engage in music by learning a *bass riff* on a keyboard from a popular song. They could do this in a variety of ways: by playing the *riff* on a piano, or by playing a record, or by using written staff notation. These are the mediating tools and artefacts which themselves embed a particular pedagogical approach to teaching music. The teacher’s scientific, deliberately pedagogic approach to this learning task engages the pupil in ways that they could not have been engaged if this had been left to natural, spontaneous, processes. The process of learning in this way is explained by Vygotsky (1978, p. 163) as the ‘zone of proximal development’ (ZPD), the gap that exists between what a person can do on their own and what they can achieve with help from a more knowledgeable person, the gap between spontaneous and scientific learning. A more expert person, such as a teacher, engages with the learner at a social level as the learner internalises social experiences

and develops new skills. The teacher ‘scaffolds’ social learning experiences in a way that helps the learner to structure their experiences and transfer their skills and understanding to new situations. Through the process of internalisation these new skills and understandings are elevated to the ‘psychological plane’ where they can be applied to future social learning experiences.

Leont’ev and colleagues developed Vygotsky’s theoretical perspective by moving the focus away from tool mediated activity towards the object and in particular the object motive: the way that the object draws out culturally appropriate behaviour. Leont’ev (1978) illustrates this concept by referring to gemstones which elicit different behaviours from gemstone traders and geologists.

The main thing which distinguishes one activity from another ... is the difference in their objects. It is exactly the object of an activity that gives it its determined direction. According to the terminology I have proposed the object of an activity is its true motive.

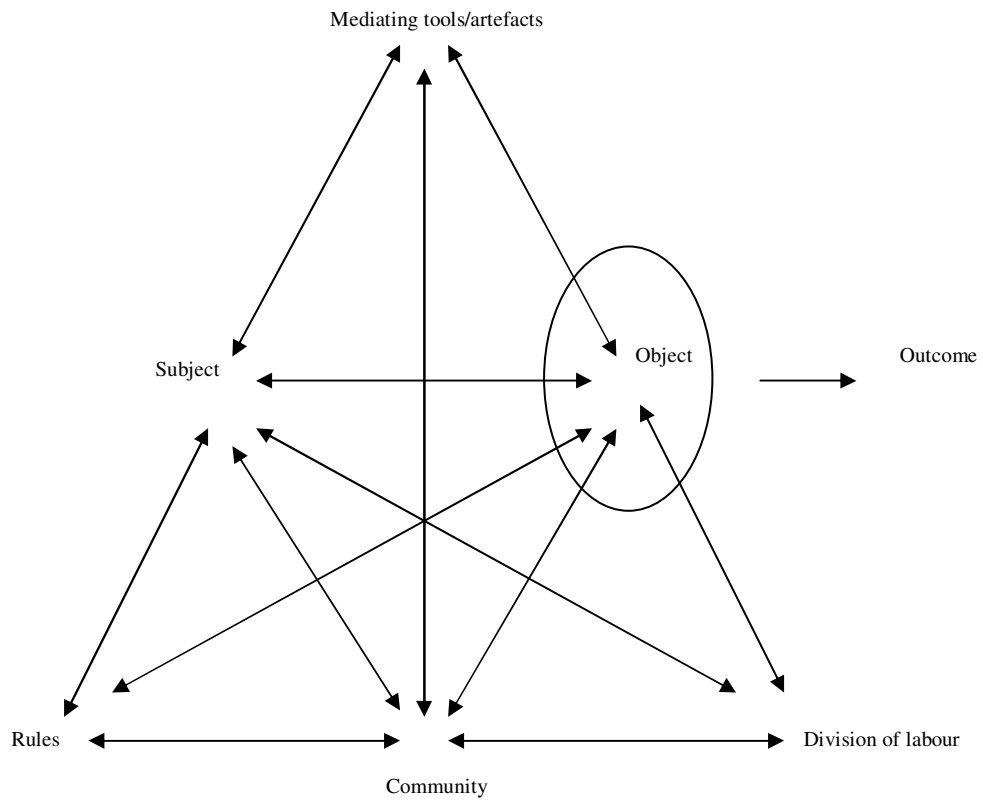
(Leont’ev, 1978, p. 62)

The *bass riff* example used in a previous illustration provides a musical example. The playing of the riff in the classroom setting exerts a different set of meanings and social practices when compared to the playing of the same *riff* in a studio rock band rehearsal.

The nature of the role of the more knowledgeable person, the culturally defined and developed nature of mediating tools and artefacts and the fact that individuals are embedded in culturally defined communities led to criticism by Cole and Engeström and others (Cole & Engeström, 1993, p. 30; Engeström, Miettinen et al., 1999) that this model was too simplistic and lacked cultural sensitivity. In the words of Engeström (1999, p. 30) it ‘does not fully explicate the societal and collaborative nature’ of the participants’ actions. From the ideas of Leont’ev’ they developed an analytical framework which focuses our attention on the cultural, historical nature of the system and on the tensions or contradictions that can exist in multi-

voiced systems. Two significant dimensions were added; first the contribution that is made to activity by wider society or communities, and secondly the temporal relationship as activity rooted in its history develops over time, which is referred to by Engeström as second generation activity theory.

Figure 5: An adaptation of the mediational triangle expanded by Engeström (1987)



In this system, the actions of the community are mediated by 'rules', the norms and sanctions that regulate the activity process and which apply to all areas of the activity system. The community, in turn, regulates its activity through a division of labour – the distribution of tasks, powers and responsibilities. Each area of the activity system relates to all the other

areas, sometimes in tension, and all work together to produce both desired and undesired outcomes. The classroom performance of the *bass riff* provides further illustration. The classroom community, the rock/pop community as well as the teacher are regulated by the rules and conventions of the school and classroom, and tasks are divided in a context-specific way depending on the tools that are being used and depending on the object motive. For example, by teaching the *riff* with staff notation the teacher might produce the worksheet and write letter names of notes on the sheets, as a facilitator, while the learners, perhaps two or three to a keyboard or taking it in turns, rehearse the *riff*.

For Engeström, this teaching and learning encounter reveals learning affordances through the contradictions that are apparent internally (for example through the use of conventional staff notation to teach something that might usually be learned aurally through repetition) or externally between activity systems (for example between the rules and conventions of the classroom and the rules and conventions of a rock band rehearsal). From Engeström's activity theoretical perspective it is precisely these contradictions which, when worked on, have the potential to expand a joint understanding of the nature of the object (learning and performing the *riff*), which in turn works back on to the subject and changes the way future similar tasks are approached.

The 'third generation' of activity theory takes this a step further and considers what happens when similar objects are looked at from the perspective of two different activity systems. In this model the unreflected object of the initial system (Object 1), moves to a collectively meaningful object (Object 2), and then to a collaboratively constructed object (Object 3.) To return to the *bass riff* example:

Activity system A

- Object 1: the school pupil enters the music classroom
- Object 2: the school pupil, perhaps, brings real or remembered examples of the *bass riff* used in composition
- Object 3 (shared now with activity system B): the teacher and school pupil now construct a shared understanding of this compositional device.

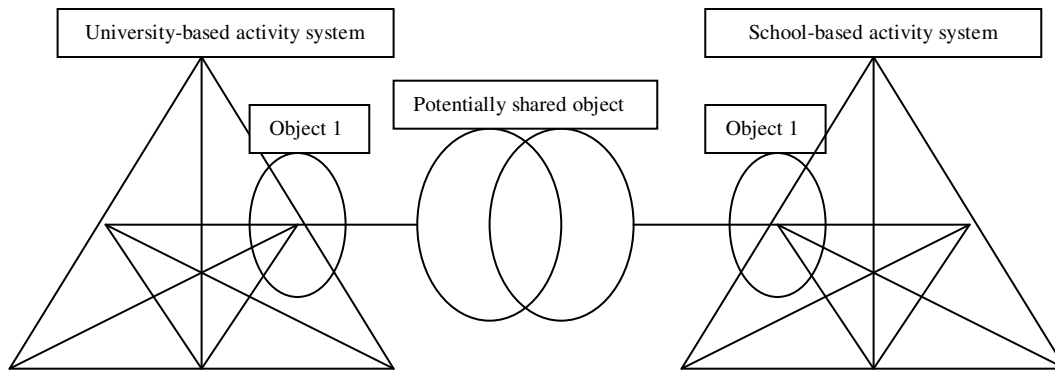
Activity system B

- Object 1: the teacher is waiting in the music classroom
- Object 2: the teacher uses the examples which are presented to identify whether or not the pupil understands the concept
- Object 3 (shared now with activity system A): the teacher and pupil construct a joint understanding of this device and its role in composition.

Figure 6 shows how this conceptual framework might relate to a school and university engaged in initial teacher education. The first activity system is focused on the school and its primary purpose of working with children in classrooms with a series of intended and unintended outcomes, which might include learning and/or improved examination performance. The second activity system relates to the university course in initial teacher education and its role in preparing the student-teacher to work with children in classrooms with outcomes which might include teacher learning and/or success in gaining a teaching qualification. The student-teacher in this model is a subject in both activity systems, working on the same problem (learners in classrooms) but with different sets of tools and rules, and working with different communities and different ways of dividing labour. Some of the

resources drawn on in both systems could be complementary and some could be contradictory, and by using third generation activity theory it is possible to speculate on the potential for expansive learning.

Figure 6: A ‘third generation’ activity theory model as it might apply to university and school-based initial teacher education



3.4 Expansive transformation

Bringing together two activity systems in this way draws attention to the possibilities of systemic learning and systemic intervention. Engeström calls the process in which there is a collective re-positioning in terms of the object ‘expansive transformation’:

An expansive transformation is accomplished when the object and the motive of the activity are reconceptualised to embrace a radically wider horizon of possibilities ... A full cycle of expansive transformation may be understood as a collective journey through the zone of proximal development.

(Engeström, 2001, p. 137)

Engeström outlines ‘an ideal-typical sequence of epistemic actions’ which constitutes a collective journey through a *zone of proximal development*:

- Questioning, criticizing or rejecting;
- Analyzing the situation; asking why? Seeking explanation through an ‘historical-genetic’ or ‘actual-empiric’ analysis;

- Modelling the new explanation in a publicly observable and transmittable way that offers a solution to the problem;
- Examining the model – operating it and experimenting on it to grasp its potential and limitations;
- Implementing the model: making the ideas concrete by practical application, enrichments and conceptual extension;
- Reflecting and evaluating the process;
- Consolidating the outcomes into a new, stable form of practice.

(Engeström et al., 1999, p.383)

Table 3 shows how the use of staff notation, to teach music which would not normally require it, might be seen in expansive learning terms.

Table 3: An example of a possible cycle of expansive transformation in a music classroom

<i>Questioning</i> , criticising or rejecting.	The questioning in this example could come from both the learners and the teacher and could relate to learner criticism of the inauthentic approach being taken by the teacher or teacher criticism of an informal approach that lacks ‘transferability’.
<i>Analysing</i> the situation: asking why. Seeking explanation through a ‘historical-genetic’ or ‘actual-empiric’ analysis.	Why is this approach being adopted by the teacher? Why is it adopted by rock/pop musicians? Is it the result of traditional approaches to teaching and learning in both spheres or is it more effective for both?
<i>Modelling</i> the new explanation in a publicly observable and transmittable way that offers a solution to the problem.	What are the possible solutions to this contradiction? A possible solution might be for the teacher and learners to develop a strategy for learning which develops transferable aural skills combined with musical ‘note taking’, perhaps developed in small groups in practice studios with tape recorders.

<p><i>Examining the model</i> – operating it and experimenting on it to grasp its potential and limitations.</p>	<p>How does the new strategy work in practice? Does it address the issue of authenticity and transferability? What is the potential for developing this further (perhaps with other groups) and what are its limitations? The new model might reveal logistical or musical potential or draw-backs.</p>
<p><i>Implementing the model:</i> making the ideas concrete by practical application, enrichments and conceptual extension.</p>	<p>In this stage of the collective process, the teacher and learners engage with the new process and, through application, discussion and modification, the concept of the object (to learn and perform a bass riff) is expanded as the learners and the teacher conceptualise a new way of approaching future teaching and learning.</p>
<p><i>Reflecting</i> and evaluating the process.</p>	<p>The new way of approaching this task is subject to further discussion ...</p>
<p><i>Consolidating</i> the outcomes into a new, stable form of practice.</p>	<p>... as it becomes an accepted approach to teaching and learning and until it becomes subject to further questioning.</p>

Activity theory thus provides a systemic perspective to student-teacher learning, and a consideration of expansive transformation draws attention to the possibility for systemic learning.

3.5 Expansive and restrictive learning environments

Whereas Engeström uses the term ‘expansive’ to refer to a process of systemic learning, Fuller and Unwin (2003) use the term differently, placing the concept at one end of a restrictive/expansive continuum and using it to refer to the organisational context. This model,

applied by Hodkinson to teacher learning in secondary schools (Evans et al., 2006, p. 53), focuses on the setting as a means of affording learning, with greater affordance being offered through an expansive approach. This approach provides a valuable perspective on the context for learning, and a framework for the analysis of learning in the workplace. Figure 7 is taken from Fuller and Unwins' chapter in *Improving Workplace Learning* (Evans et al., 2006, p. 53).

Figure 7: Expansive and restrictive learning environments for teachers (Evans et al., 2006, p. 53)

EXPANSIVE	RESTRICTIVE
Close collaborative working with colleagues	Isolated, individualist working
Out-of-school educational opportunities, including opportunities to reflect and think differently	No out-of-school educational time to stand back, only narrow, short training programmes
An explicit focus on teacher learning as a dimension of normal working practices	No explicit focus on teacher learning, except to meet crises or imposed initiatives
Supported opportunities for personal development that goes beyond school or government priorities	Teacher learning dominated by government and school agendas
Colleagues are mutually supportive in enhancing teacher learning	Colleagues obstruct or do not support each others' learning
Opportunities to engage with other working groups, inside and outside the school	Work restricted to 'home' departmental teams, within one school
Opportunities to extend professional identity through boundary crossing into other departments, school activities and schools	The only opportunities for boundary crossing come with a major change of job
Support for variations in ways of working and learning, for different teachers and departments	Standardised approaches to teaching and teacher learning are prescribed and imposed
Teachers use a wide range of learning approaches	Teachers use a narrow range of learning approaches

This continuum highlights institutional and organisational affect on the trajectory of identity and sets out a perspective which imposes itself on systemic learning, and in particular Engeström's version of expansive learning.

3.6 Boundary objects

As Wenger observes (1998, p. 140), crossing boundaries between communities of activity systems exposes learners to ‘different forms of engagement, different enterprises with different definitions of what matters, and different repertoires – where even elements that have the same form (e.g. the same words or artefacts) belong to different histories’. Star and Griesemer (1989, p. 393) call these items ‘boundary objects’. These might be artefacts or shared mental modes (internalised artefacts) which ‘sit in the middle of a group of actors with divergent viewpoints’ and which can meet local needs and be robust enough to maintain a common identity in both communities. Wenger (1998, p. 105) defines boundary objects as ‘artefacts, documents, terms, concepts and other forms of reification around which communities of practices can organize their interconnections’. Boundary objects exist as artefacts with multiple perspectives and also have the qualities of agency within activity systems. Engeström et al. (1995) see boundary objects as a way of overcoming what they term ‘groupthink’ and its opposite form, ‘fragmentation’. Groupthink leads to ‘closed-mindedness and stereotypes of out-groups’ while its opposite, fragmentation, is a ‘fragmentation of view points and a lack of shared mental models’. In the case of a music teacher learning to teach music, ‘groupthink’ might be encountered in a school department which has developed ‘competence’ in unique ways. A department that builds its curriculum around the music in the western European tradition might introduce the musical device ‘ground bass’ to its learners as being typical of the Baroque period. A student who is located simultaneously in another community might take this object and use it to exemplify ‘*bass riff*’ and locate the notion of a repetitive bass pattern in the rock/pop genre. As has been discussed earlier in this chapter, a

joint exploration of this musical device, as an object, expands its potential which then works back on the subjects to reframe their understanding of its use as a musical device.

Fragmentation might occur if a department has a weakly framed curriculum that might be based on an eclectic set of worksheets collected on the basis that they are popular with pupils, without an underpinning rationale for their inclusion. Use of a resource as a boundary object in this case, through the process of expansive transformation, can help to draw out an underpinning rationale and lead to greater cohesion. For example, a department might use a class performance of a ground bass because it is popular with the pupils; used as a boundary object by a student-teacher, it might be possible to show other dimensions within the same object which might then link to other fragmented items (the class performance of a bass riff) or to the creation of new musical activities.

3.7 Bringing domains together

The point of intersection and interaction in multi-voiced settings is developed by Gutierrez, Baquedano-Lopez and Turner (1997) who define the point at which ‘two normative patterns of interaction interest’ as the ‘third space’ – a zone which creates the potential for ‘authentic interaction and learning’. This has similarities with the concept of the ‘boundary zone’ developed by Konkola (2001) and cited by Tuomi-Gröhn, Engeström and Young (2003, p. 5). Konkola’s concept of boundary zone, they say,

Resembles a ‘no-man’s land’, free from pre-arranged routines or rigid patterns. It is also a place where each activity system reflects its own structures, attitudes, beliefs, norms and roles. This means that elements from both sides are always present in the boundary zone.

(Tuomi-Gröhn et al., 2003, p. 5)

Bringing together the notions of activity systems, expansive learning and consequential transitions, Engeström (2001) talks of a ‘boundary-crossing laboratory’ in a study of

expansive learning in a hospital in Finland as a process for systemic change. Tuomi-Gröhn (2003, p. 202) similarly describes an internship in practical nursing where ‘collaborative teams of students, practitioners and teachers ... develop knowledge and skills [cognitive tools] that meet the challenge of the projects’. Engeström et al. (Engeström, Engeström, & Vähäaho, 1999) develop the term ‘knotworking’ to describe the combination of networks and ‘knots’ of expertise that can be found between boundary practices. Tuomi-Gröhn’s (2003) description of a nursing internship, for example, exploits this ‘knot’ of expertise and creates a ‘zone where two activity systems, the school and the workplace’ can meet as nursing interns worked collaboratively with a teacher and a local workplace mentor to develop and implement their project. Each of the projects is eventually presented at the workplace in a joint meeting called the ‘arena of learning’.

The very basic difference between the thinking based on traditional and expansive learning is that in the former the student either takes theoretical concepts learned at school and applies them in the workplace, or the student adapts to the existing working practices. According to the notion of expansive learning this is not enough: one should be able to create new knowledge and more advanced work practices. ... The ethos of learning is to investigate and reconstruct, instead of adapting to existing practices.

(Tuomi-Gröhn, 2003, p. 206)

Lambert (2003, p. 241) describes a ‘learning studio’ as part of the education of vocational teachers, as a ‘network of three activity systems; the school of vocational teacher education, the training institutes and the health care and social work organisations’, all of which have a partial role in the supervision of health care and social welfare teachers in Finland. She refers to a ‘boundary crossing place’, a place for multi-voiced discussion which offers the opportunity to reconstruct knowledge and skills. Critically, Lambert sees the learning studio as an opportunity for students to become what Tuomi-Gröhn, Engeström and Young (2003, p. 4) term ‘mediators’ and ‘brokers’ in a process of ‘developmental transfer’: ‘The student-teachers have now an opportunity to bring with them new instruments, offered or

developed in teacher education, for instance pedagogical theories, models, principles, concepts etc., to enrich the discussion of the learning studio' (Lambert, 2003, p. 240).

3.8 Helping student-teachers to move between domains

Learning to teach in a model of ITE that has distinct HEI and school elements requires extensive horizontal social accomplishment. In the context of the OU PGCE it is facilitated by a tutor, the part-time university employed member of staff who works with students and mentors in schools and who assesses student written submissions and jointly assesses school-based practice. Wenger talks of the idea of 'brokering': the 'connections provided by people who can introduce elements of one practice into another'. According to Wenger, brokers are able to participate in both communities to some extent and act as a bridge between the two.

Brokers must avoid two opposite tendencies: being pulled in to become full members and being rejected as intruders. Indeed their contributions lie precisely in being neither in nor out. Brokering therefore requires an ability to manage carefully the co-existence of membership and non membership, yielding enough distance to bring a different perspective, but also enough legitimacy to be listened to.

(Wenger, 1998, p. 110)

Burt (1992, 2000) offered an alternative view of the role of broker, one of 'bridge building', as opposed (in Wenger's terms) to 'being the bridge' (Carmichael, Fox, McCormick, Proctor & Honour, 2006). Fielding et al. develop this and consider the brokering relationship between schools involved in sharing good practice:

- Knowing about and making information available (brokering practices)
- Putting people in touch (brokering relationships)
- Creating a sense of audience and a sense of community to provide a context for practice sharing (enabling fruitful dialogue)
- Providing resources that could make practice sharing happen (resourcing joint work)
- Being a catalyst.

(Fielding et al., 2005, p. 57)

The research of Fielding and colleagues looks at school leadership and is set in the context of individuals who have power to act in this way, but the notion of brokers both ‘being the bridge’ and ‘building the bridge’ helps to frame Open University tutors’ capacity for action, albeit not explicitly defined, as they work with student-teachers on the PGCE programme. A horizontal, brokered dimension to student-teacher learning also implies a new way of looking at the learning process. Beach (2003), when thinking about the transfer between school and the workplace for pupils, developed the concept of ‘consequential transitions’ as a way of capturing the relationship between an individual and one or more learning settings, or social activities:

We define transition as developmental change in the relation between an individual and one or more social activities. Changes in their relation can occur through a change in the individual, the activity, or both. Transition, then, is the concept we use to understand how knowledge is generalized, or propagated, across social space and time. A transition is consequential when it is consciously reflected on, struggled with, and shifts the individual’s sense of self or social position. Thus, consequential transitions link identity with knowledge propagation.

(Beach, 2003, p. 42)

The role of the university tutor in helping student-teachers to make consequential transitions is therefore critically important, when student-teacher learning is considered as both a horizontal and vertical enterprise.

3.9 Bricolage as an organisational principle

The discussion so far in this chapter has focused on the way that the theories of communities of practice and activity theory provide complementary approaches to boundary objects, boundary crossing and expansive learning opportunities. By means of ‘brokering’ one set of approaches in another, it is possible to identify dissonant perspectives and use these as a source of learning. Wenger’s notion of a trajectory of identity which draws on multiple communities in a highly individualistic ‘constellation of practices’ (Wenger, 2007) highlights

the need, however, to consider this in problematic terms. For example, just because university tutors are employed by a university, it does not follow that they will necessarily re-present university concepts in practice. Just because a university asks that student-teachers plan lessons in a certain way and draw on certain university resources and principles as they do so does not mean that this will happen. University practice provides just one ‘source of knowledgeability’ (Wenger, 2007); just one aspect of a student or a tutor’s identity, which is not always ‘expressible’ (Wenger, 2007). Given the complexity of a highly individualistic trajectory of identity through different constellations of practice, and where the *object* of activity is contended, it is likely that individuals involved in activity systems are likely to draw on different *resources* or *tools* (in AT terms). What is more; these resources and tools will have been developed by communities and approaches with different claims to competence (Wenger, 2007).

One way of looking at an approach that uses multiple sources developed by different communities with different *objects* is to use the concept of bricolage (Lévi-Strauss, 1966). A footnote to the English translation of *The Savage Mind* notes that:

The ‘bricoleur’ has no precise equivalent in English, He is a man who undertakes odd jobs and is a Jack of all trades or a kind of professional do-it-yourself man ... but he is of a different standing to the English ‘odd job man’.

(Lévi-Strauss, 1966, p. 17)

The bricoleur’s task is to make do with ‘whatever is at hand’ (Lévi-Strauss, 1966, p. 17) and for Lévi-Strauss this is at the opposite end of the spectrum to an engineering or a scientific approach: ‘the engineer is always trying to make his way out of and go beyond the constraints imposed by a particular civilisation while the “bricoleur” by inclination or necessity remains within them’ (Lévi-Strauss, 1966, p. 19). The act of bricolage can be seen as a conservative process; rather than asking what resources are needed to complete a task, bricoleurs look first

at the materials they have to hand and then consider how these might be used to complete the task. Hatton (1988, p. 338) takes this further: ‘it is plausible’, she believes, ‘to suggest that the bricoleur’s capacity to understand the nature of the project is constrained by the fixed pool of tools, materials, etc’. Bricoleurs gather resources in the hope that they might be useful, putting them to multiple uses, extending their repertoire by luck or chance, and re-organising, re-arranging and improvising solutions in an *ad hoc* fashion. Hatton (1988, pp. 340–343), identified six ways in which the work of teachers can be seen as bricolage. In 1988, her review of the literature identified as principal features of teachers’ work: conservatism; limited creativity; non-principled repertoire enlargement; limited use of theory which draws on affective, sensory perceptions; devious use of teaching strategies in which the means and the aim are not obvious; and *ad hocism*. This *modernist* perspective sees bricolage in deficit terms; as an impoverished, unscientific approach to the work of teaching which caused problems in teacher education identified in the literature of that time.

When looked at with the perspective of later theoretical trends, the process of bricolage can also be viewed as essentially *postmodern*, which embraces complexity rather than attempting to order chaos in the modernist tradition. Seeley Brown (2000, p. 14), for example, uses the concept of bricolage to describe the way that ‘kids [work] with digital media’; finding something and making judgements about it to build something they see as useful. Boisvert (2003, p. 3), similarly draws on bricolage to analyse the ‘remix’ culture of the DJ and hip hop MC: ‘a culture of quoting and of the remake ... of intervention and reinvention’; a postmodernist perspective where the remix depends ‘on the way the artist interacts’ with ‘the machinery, the ‘samples’, ‘the work [which is always a work in progress] and the audience’ (Boisvert, 2003, p. 1). This postmodern perspective, of quoting, of remake, of intervention and re-invention, of making new from old, provides a theoretical window on the process of co-

creation and provides a way of thinking about university and school-based ideas as boundary objects, as they are worked on by university and school-based participants in conversation in a multi-voiced 'boundary zone'. Boisvert's (2003) discussion of the mix and remix hip-hop culture also draws attention to the role of provenance as already known 'samples' are juxtaposed with other known or unknown pieces of work in interesting and new ways, and where the juxtaposition itself adds meaning.

3.10 Summary

In this chapter I have looked at the underlying concepts behind two theories which reflect the main thrust of a socio-constructivist view of learning at the start of the twenty-first century. I raise the issue of an individual's socially formed identity and see identity as a learned experience of agency (Wenger, 1998, 2005). An individual's complex and socially formed identity as a sum of their learning raises important questions in activity theory terms, about the nature of an individual as 'subject'. A reflexive view of the nature of the subject, with multiple trajectories in multiple communities of practice with multiple motives seems to imply a need for a complex understanding of the nature of the 'object': trying to identify the 'object' of an activity system which is dynamically related to an ever-changing 'subject', engaging in multiple trajectories is a problematic endeavour. I have also discussed the learning potential created by the 'third space' (Gutierrez, Rymes, & Larson, 1995) – a boundary zone of proximal development between activity systems or communities where brokers have a critical role to play in scaffolding learning and have identified the potential for these boundary zones to act as physical and theoretical spaces for expansive learning. Finally, I suggest that the concept of bricolage, as a modernist and postmodernist perspective on co-creation, is a

valuable way of theorising about university and school-based ideas as they are worked on in boundary zones, or the 'third space'.

3.11 Refining the developing research questions

This study develops further the notion of the 'third space', or zone, in initial teacher education. Set against endemic complexity in initial teacher education, it examines what happens when student-teachers, their mentors and their tutors plan, teach and discuss a lesson together. How these participants accommodate the potential for expansive learning, how course materials and ideas are handled as boundary objects, how they cope with complexity are issues which are central to the thesis. The following question emerges:

How can secondary PGCE student-teacher learning be understood in the light of the following?

- a) the learning opportunities offered to student-teachers in school when they discuss practice with their mentor and tutor
- b) the complexity of contradictory approaches implied by different orientations to initial teacher education.

The next chapter focuses on case study methodology and its component data-gathering approaches, identified as the most appropriate strategy for developing comprehensive responses to this question.

CASE STUDY METHODOLOGY

4.0 Introduction

Chapter 3 concludes with this study's research question which asks how student-teacher learning can be understood in the light of the learning opportunities presented in conversations with their mentor and tutor and the complexity presented by competing orientations to initial teacher education. This is a question which generates further sub-questions at each phase of the study and these are detailed in Chapter 5. In this chapter, which is in five parts, I consider the nature of these over-arching research questions and identify case study as an appropriate methodology in order to develop robust responses to them. I then set out the issues that need to be considered when planning, conducting and reporting research which adopts this paradigm and conclude with a consideration of the most appropriate data-gathering tools that might inform case study construction.

4.1 Choice of methodology

Principally, this study asks how music student-teachers learn to become teachers in the school and departmental setting, as they engage with their mentor, with their tutor and with a distance learning course in initial teacher education. It is an attempt to shed light on practice within a programme in initial teacher education and provide a different way of looking at the process of tutor, student-teacher, and mentor discussion. This requires, broadly speaking, an interpretive methodological approach and can be seen as a rejection of positivist, scientific approaches to sociological research. A positivist approach to this study might have involved

an attempt to measure student-teacher learning in some way, categorising mentoring and tutor approaches in an attempt to identify which approach was 'better'. Such an approach, though, runs contrary to the complex, situated and highly individual problem of student-teacher learning which is being investigated. It would be unable to address learning as part of a rich context and address the research question in any deep or meaningful manner, so was therefore rejected as an approach. An interpretive approach, on the other hand, is concerned with making meaning and theoretical approaches explicit, and by sharing these with those who are involved in the PGCE programme it may influence practice by influencing the ways in which individual practitioners comprehend themselves and their situations (Carr & Kemmis, 1986). A focus on 'thick' as well as 'thin' description allows an interpretive dimension to the study. Geertz (1997, p. 6) illustrated the point by talking about a human 'wink', which can be observed as the involuntary rapid twitching of an eye ('thin' description), or *interpreted* as a conspiratorial communication between two children ('thick' description). One interpretive approach that could have been taken in order to illuminate an understanding of student-teacher learning is a wholly ethnographic study; taking a holistic view of student-teacher learning with a comprehensive look at the cultural processes of learning over a long period of time drawing on primary observation, interviews and an analysis of a range of documentation. The nature of the research questions, however, indicate that a detailed analysis of a set of interactions between student-teachers, their mentor and tutor across a number of settings would be more likely to provide insights into this issue than a study that took a more complete, extended and holistic approach (Cresswell, 1998).

Finding out more about student-teacher learning by examining the conversations that take place between student-teachers, mentors and tutors as they focus on teaching pupils implies a 'bounded system' (Cresswell, 1998, p. 61) which centres on what Hammersley

(1992, p. 86) defined as ‘a relatively small number of naturally occurring cases’. Case study methodology is an interpretive approach which allows for detailed examination of complex behaviours with small samples. It enables a close examination of a variety of complex and inter-related patterns of behaviour and enables these behaviours to be observed in their settings. It can also be used to examine how context impacts on behaviour. Understanding the process of student-teacher learning as tutors, mentors and students discuss teaching specific groups of pupils in particular departments and schools requires a detailed consideration of the process from a variety of perspectives, drawing on a variety of data sources.

In order to develop a detailed response to the research question it was, therefore, necessary to adopt a research method that could draw on multiple methods, as a way of providing ‘methodological triangulation’ or corroboration (Mason, 1996, p. 25), and as a way providing different perspectives on the over-arching theme. Interviews with, and observations of, student-teachers, their mentors and their tutors, documentary evidence provided by the participants as well as publicly available documentation such as Ofsted inspection evidence, could be used to provide a picture of the learning process of beginning music teachers in its fullest sense. Through this descriptive and analytical process, patterns and stable relationships may be found (Miles & Huberman, 1994) and through their description new light may be thrown on to existing practice (Chaiklin, 1993). Yin (2003, p. 8) commented that ‘the case study’s unique strength is its ability to deal with a full variety of evidence; documents, artefacts, interviews and observations’. He concluded that case study method has distinct advantages when ‘a “how” or “why” question is being asked about a contemporary set of events, over which the investigator has little or no control’ (Yin, 2003, p. 9). This study’s research questions focus on ‘how’ we can come to learn more about student-teacher learning and although it could be argued that I have some control over the situation through my work

role as Director of the PGCE, I have no direct control over the learning process in these cases. This study focuses on ‘what’ learning opportunities are presented to student-teachers as they engage in conversations about teaching and learning with their mentor and tutor. It also focuses on who talks, what they talk about, what sources they draw on in their conversation, as well as identifying agreement or disagreement between them. This sort of categorisation implies a quantitative dimension to the study, discussed later in this chapter. Case study method, therefore, with its focus on developing detailed understandings of complex issues and its ability to incorporate other methods, is able to support an investigation that will lead to a greater level of understanding of student-teacher learning.

4.2 The limitations of case study research

Yin (2003) points out the stereotypical weaknesses of case study research method:

The case study has long been (and continues to be) stereotyped as a weak sibling among social science methods. Investigators who do case studies are regarded as having downgraded their academic disciplines. Case studies have been denigrated as having insufficient precision (i.e. quantification), objectivity, or rigor.

(Yin, 2003, p. xiii)

The most strident criticism of case study research comes from researchers who work in a positivist tradition, defined by Silverman (2005, p. 379) as ‘a model of the research process which treats ‘social facts’ as existing independently of the activities of both participants and researchers’. This contrasts with an interpretive stance taken by qualitative researchers and described by Denzin and Lincoln in their introduction to the second edition of the *Handbook of Qualitative Research*.

Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape the inquiry. They seek answers to questions that stress how social experience is created and given meaning. In contrast quantitative studies emphasize the measurement and analysis of causal relationships between variables, not processes. Proponents of such studies claim that their work is done from within a value-free framework.

Yin (2003, pp. 10–11) identifies three common complaints against case study method:

- A perceived lack of rigour and subjective bias.
- A perception that it is impossible to generalize from such research;
- They are time-consuming and result in unreadable documents.

The following three sub-sections address these concerns as they relate to this study.

Rigour, research validity, reliability and plausibility

The concepts of validity and reliability are sometimes seen as being mutually incompatible with research which follows the interpretive tradition. Bassey (1999, p. 74), for example, states that ‘the concepts of reliability and validity are vital concepts in surveys and experiments – but not case study research.’ The argument is, essentially, that such research can not be replicated by the same person or by others and that because of this it can not be seen as representing ‘the truth’: it is both ‘unreliable’ and ‘invalid’. Other researchers, on the other hand, take a broader view of both these terms and focus on the need for researchers to demonstrate to an audience that their methods are reliable and conclusions valid. Silverman (2005, pp.209-210) takes this perspective and comments; ‘short of reliable methods and valid conclusions, research descends into a bedlam where the only battles that are won are by those who shout the loudest.’

At the core of this debate is the accusation that case-study research lacks a systematically rigorous approach to data collection and analysis. Yin (2003) comments:

Too many times, the case study investigator has been sloppy, has not followed systematic procedures, or has allowed equivocal evidence or biased views to influence the direction of the findings and conclusions. Such lack of rigor is less likely to be present when using other strategies.

(Yin, 2003, p. 10)

Research which lacks this kind of rigour, whether in a positivist or interpretive paradigm, is unlikely to be either reliable or valid. Yin (2003) argues that a lack of a systematic approach to case study research, which allows biased collection of data and reporting, is not an endemic feature of the methodology and sets out four tests for case study research suggesting a number of tactics which help to meet them. Significantly, he does not shy away from using the terms ‘validity’ and ‘reliability’.

Table 4: Case study tactics for four design tests from Yin (2003, p. 34)

Tests	Case study tactic	Phase of research in which tactic occurs
Construct validity	Use multiple sources of evidence	Data collection
	Establish a chain of evidence Have key informants review draft case study report	Data collection
Internal validity		Composition
	Do pattern matching	Data analysis
	Do explanation building	Data analysis
	Address rival explanations Use logic methods	Data analysis Data analysis
External validity	Use theory in single-case studies	Research design
	Use replication logic in multiple-case studies	Research design
Reliability	Use case study protocol	Data collection
	Develop case study database	Data collection

Yin’s analysis offers a comprehensive approach to the issue of validity defined by Hammersley (1990, p. 57) as ‘truth: interpreted as the extent to which an account accurately represents the social phenomena to which it refers’. This means that the account and the way that an account is developed must be capable of accurately representing the issue under investigation. In the case of this study, the researcher must ask, is a case study methodology with the research design set out in Chapter 5 likely to answer the study’s focus on student-teacher learning, or would other approaches more effectively represent this phenomenon?

Yin (2003) highlights the need to apply all four tests to all aspects of the research process: the design, data collection and composition. Silverman (2005, p. 212) notes that Yin's tactic to enhance construct validity through 'method and data triangulation and/or respondent validation' is a common response to the problem of validity. He notes that this is often seen as a form of triangulation or 'getting a "true" fix on a situation by combining different ways of looking at it or different findings' (Silverman, 2005, p. 212). Silverman sees these as flawed mechanisms to achieve validity: method and data triangulation to achieve a one 'true' fix on what is 'real' is at odds with the qualitative researcher's perspective on the situated view of knowledge and the intimate relationship with what is studied, and respondent validation is flawed if it affords a privileged status to respondent accounts. He proposes five ways of thinking about qualitative data in order to achieve validity:

- The refutability principle – subjecting findings to every possible test in order to refute them;
- The constant comparative method – comparing findings with other cases and within cases;
- Comprehensive data treatment – not being satisfied until all relevant data is accounted for;
- Deviant case analysis – identifying data which does not fit the approach and accounting for it;
- Using appropriate tabulations – using 'simple counting techniques, theoretically derived and ... based on members' own categories, can offer a means to survey the whole corpus of data ordinarily lost in intensive, qualitative research.

(Silverman, 2005, p. 220)

Developing *construct validity* by using multiple sources of evidence, including responses from key informants, is problematic if these perspectives are considered to be more 'valid' or 'truthful'. Using these methods to provide alternative perspectives and insight is a useful tactic, however, and is adopted in this study. Both quantitative and qualitative data that are gathered to support the case studies are matched against each other and explanations are generated to support *internal validity*. These are tested out with alternative explanations and perspectives until they are internally and externally consistent. Comparing new data with existing data from within cases and between cases, and using the theoretical perspectives

developed in Chapter 3, the cases illustrate *external validity*. Establishing *reliability* is attempted through a case study protocol.

Reliability is defined by Hammersley (1992, p. 67) as ‘the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions’. In terms of research carried out in an interpretive paradigm, this is a more problematic concept. If the researcher is seen as an actor within the research process, unproblematic replicability between different or subsequent researchers is a difficult, if not impossible, task. Yin (2003, p.35) points out that this extends the concepts of ‘validity’ and ‘reliability’ ‘to which most students have been exposed’ and Knight and Saunders (1999) draw attention to the researcher’s role in co-constructing interviews and the consequences for reliability. They considered a more appropriate term to be ‘plausibility’ when looking at an archive of interview material, for example:

The test of the adequacy of an interpretation is the extent to which it is plausible, accepted by other professionals, and is recognizable as a fair reading of the archive. It was this concept of analytical reliability as plausibility that was applied to the interpretation of this large archive of interview material.

(Knight & Saunders, 1999, p. 153)

This study, by adopting an interpretive framework which contains a quantitative thread exposed by Content Analysis, draws attention to different perspectives on the concept of reliability. In Content Analysis the reliability of the coder or between coders can be tested over time and calculations can be made to indicate the extent to which the coders agree, but in an interpretive design this type of approach to reliability is not possible. This study takes a broadly ‘plausible’ approach to reliability, opening up the research process through adequate description, setting the quantitative data within the context of qualitative case studies and providing an auditable trail back to the data on a research database for further analysis and

interpretation by other researchers. The intention of these processes is to show the procedures and evidence that lead to the study's conclusions.

The issues of rigour, validity and reliability are therefore particularly problematic in case study research especially when faced with criticism from a positivist research tradition. Internal and external validity as a consequence of comprehensive research design may help in alleviating some of the issues, but triangulation and respondent validation that has a privileged position should not be seen as the only way to enhance validity. Reliability, when the researcher is seen as part of the co-constructed research process, is also problematic and other terms such as plausibility and trustworthiness which draw on the professionalism of the researcher and on the evidence and argument that he or she is able to develop become more significant.

The issue of generalisability

The extent to which case study findings in one setting can be applied to another setting is highly problematic. Simons (1995) highlighted the paradox of the intensive study of a case, which allows for complexity to be understood, and the difficulties to which this leads if the intention is to generalise more widely and to make universal claims. Simons, however, points out that this misrepresents the role that case study plays in relation to other cases; their intention is not to produce universal truths, but rather to shed light on a particular case, opening up the possibility of thinking differently about other cases more generally. Hodkinson and Hodkinson (2001) concur with a view that case study findings that are focused on developing theoretical perspectives 'can provide more than simply idiosyncratic understanding'. Yin takes a similar stance. His message for researchers is that: 'Case studies, like experiments, are generalizable to theoretical propositions and not to populations or

universes' (Yin, 2003, p. 10). This study, with its focus on music student-teachers, their mentors and their tutors, needs to develop a detailed picture of the learning process reflected in conversations in order to answer the research questions. The research process will need to develop a detailed understanding of the particular nature of each case. Stake (1995) calls this 'particularisation':

The real business of case study is particularization, not generalization. We take a particular case and come to know it well, not primarily as to how it is different from others but what it is, what it does. There is emphasis on uniqueness, and that implies knowledge of others that the case is different from, but the first emphasis is on understanding the case itself.

(Stake, 1995, p. 8)

The provisional and contextual nature of case study research is captured by Bassey (2001), who developed the term 'fuzzy prediction': 'A fuzzy prediction replaces the certainty of scientific generalisation ('x in y circumstances results in z') by the uncertainty, or fuzziness, of statements that contain qualifiers ('x in y circumstances may result in z')' (Bassey, 2001, p. 5). But this is a consideration which should be applied to all research paradigms. Hammersley (2001) argues that Bassey

neglects a crucial feature of causal attribution; that it is intrinsically general in character. To say that a causal relationship operates in one case is necessarily to imply that the same relation will (not that it may) hold in other similar cases (even if we cannot be sure what 'similar' means in exact and reliable terms).

(Hammersley, 2001, p. 221)

Pratt (2003) agreed with Hammersley but again draws our attention to the nature of co-construction:

The practitioner is not a passive recipient of the research in the way in which formulations of generalisations (of any sort) seem to suggest. Thus, they are suggested in the form 'do x instead of y and something positive will happen to your practice as a result', whilst their 'fuzzy' equivalents suggest 'do x instead of y and something positive may happen to your practice as a result'. However, both these formulations imply that the changes in practice happen to practitioners rather than [that] practitioners make changes happen within their practice.

(Pratt, 2003, p. 29)

The particularities of the case studies which are used to build and develop theoretical principles might have ‘fuzzy’ predictability, but case studies cannot be used to infer generalisability to other cases. This is because of the very nature of research and the provisional nature of all ‘truth’, and also because of the situated and constructed nature of cognition. Instead, researchers in this paradigm rely on high levels of researcher integrity, well-supported evidence and the ability to report findings in ways which ‘ring true’ with an informed reader.

The time-consuming and potentially unreadable nature of case study research

Developing detailed case studies in which the complexities can be explored and reassessed as new conceptual insights are developed iteratively is a time-consuming process. Significant amounts of observational and interview data need to be recorded and made accessible for subsequent analysis through a case study database. The problem of excessive amounts of data and the difficulties in rendering down the complexity for simplistic representation are noted by Hodkinson and Hodkinson (2001, pp. 8–9), and the choice of material for analysis and reporting can lead to accusations of subjectivity. The research reported in this thesis adopts the following tactics to minimise subjectivity:

- a research strategy stored on a secure database which allows other researchers to access ethically permissible data
- a clear chain of evidence (Yin, 2003, p. 106)
- a research design which takes into account construct, internal and external validity
- a research question which is fully integrated into each phase of the research process.

4.3 Different types of case study

Having established that case study methodology is an appropriate research strategy for complex and situated problems, it is now necessary to identify what sort of case study is most appropriate. Stake (2000) identified different genres of case study, with different primary purposes. Stake (1995, pp. 3–4; 2000, pp. 437–8) focused on two types of approach: the *intrinsic case study* and the *instrumental case study*. He contends that these are not mutually exclusive areas of interest, but argues that it is helpful to consider the purpose of the study in order to inform the range of methods required. In the intrinsic case study, the researcher concentrates on an area of specific interest: ‘We are interested in [this case] not because by studying it we learn about other cases or about some general problem, but because we need to learn about that particular case’ (Stake, 1995, p. 3). Intrinsic case studies, therefore, do not generalise beyond the case or develop or refine theoretical models. Because the development of theory about student-teacher learning is an important dimension to this study, this approach was rejected. The instrumental case study, on the other hand, is one in which the case study is used to develop an understanding of something outside the particular case; to develop a particular insight, or to refine or generate theoretical understanding. The principal research question in this study asks how student-teacher learning can be understood in the light of learning opportunities presented in discussion and in the light of contradictory orientations to initial teacher education. In Stake’s (1995) terms, the type of case study needed to answer this kind of over-arching question is *instrumental*: it intends to illuminate theory and understanding and develop a set of principles in order to move beyond the particular case.

Further questions arise about the boundaries between the cases: is this a single case study across multiple sites or a multiple case study with cross-case analysis or a single case

study? A research question which asks how student-teacher learning can be understood in relation to learning opportunities in conversations and complexity in initial teacher education, and which takes a socio-cultural perspective on teaching and learning, implies multiple examinations of the same phenomenon in different contexts. Whether this is one *collective case study* (Stake, 1995, p. 4) or one which presents ‘a multiple case narrative ... with a cross-case’ section (Yin, 2003, p. 146) *is not* a significant distinction when addressing this study’s research question. Analysing the phenomenon in various different settings and making comparisons between them *is* important. As this research uses a combination of activity theory and communities of practice approaches which draw attention to context, a single case study approach was rejected. The term *case* is now used to refer to a mentor, tutor and student-teacher trio in one school setting, planning a lesson, participating in it and discussing it afterwards. There are four cases in the study, and sections within the thesis are devoted to cross-case discussion and analysis.

4.4 Case study construction

The purpose of case study research is to be able to explore specific cases and to create a plausible and trustworthy interpretation that is convincing to others who are able to access the data so that they can support, challenge or provide alternative explanations for the data.

Bassey (1999) usefully offers the following set of instructions for case study design:

- (a) to explore significant features of the case;
- (b) to create plausible interpretations of what is found;
- (c) to test for trustworthiness of these interpretations;
- (d) to construct a worthwhile argument or story;
- (e) to relate the argument or story to any relevant research in the literature;
- (f) to convey convincingly to an audience this argument or story;
- (g) to provide an audit trail by which other researchers may validate or challenge the findings, or construct alternative arguments.

(Bassey, 1999, p. 65)

By providing a plausible and trustworthy interpretation which is convincing to an external audience, Bassey is referring to the ability of case studies to generate theory. The generation and testing of theory or, as Bassey refers to it, ‘analytical statements’ is carried out by sifting through the data in the context of the study’s research questions, building patterns and searching for rival explanations, and by considering and reconsidering the developing statements in the light of the raw data. Yin (2003, p. 112) draws attention to the importance of considering the theoretical propositions which shaped the research question when developing and reporting the cases: This stance is complemented by Anderson (1998) who identifies two approaches to data analysis that can be applied singly or in combination: organising the analysis around literature and theoretical concepts, as Yin proposes; and organising data around descriptive themes that emerge as the study progresses.

Developing case studies that explore the learning opportunities presented to student-teachers in conversation would require an approach to case study construction in which data would be sifted and sorted according to the literature and theoretical perspectives in Chapters 2 and 3 developing descriptive themes and analytical statements as the study progressed so as to provide rival explanations and alternative perspectives.

4.5 Using multiple data-gathering methods

A rationale for using multiple methods

The following section of the thesis explores data-gathering and analysis tools which have the facility to interrogate multiple sources of evidence to provide access to what Yin (2003, p. 98) terms ‘converging lines of inquiry’. Triangulation through data and method, according to Yin, can enhance construct validity, but as has been noted previously in this thesis, Silverman (2005) questions whether this alone is sufficient to ensure validity. As

Hammersley and Atkinson note (1983, p. 199), ‘one should not adopt a naively “optimistic” view that the aggregation of data from different sources will unproblematically add up to produce a more complete picture’. Nonetheless, an approach which combines interviews, with observations, of the participants offers opportunities to provide additional insights and address the study’s research questions in more detail.

Using a variety of data-gathering approaches is a particular strength of a case study approach to research. In order to answer the research question, it is important to *observe* the participants throughout the research process, to invite them through *interview* to talk about the contributions they and others make, and to *analyse* these conversations using a method which sheds light on the learning opportunities that are presented to student-teachers in conversation. The following section in the thesis identifies a number of data-gathering methods used in the research and offers a rationale for their use. In Chapter 5 I discuss how these data-gathering tools are used in combination in practice.

Observation of the research participants during conversation

Direct observation of the research participants engaging in discussion before and after the teaching is central to an understanding of the cases. Much teacher knowledge is tacit and not easily brought to mind, especially that knowledge which is not acquired through formal education and which is based in practice settings. Eraut (2003, p. 2), for example, argues that exploration of this sort of knowledge is best done through the ‘actuality of daily working life’. The aim of this study is to identify the learning opportunities offered during discussion, aspects of which may well be held tacitly, and direct observation is ideally suited for this purpose.

Direct observation of the participants as they engage with each other also provides direct access to the primary data, and has significant advantages over reliance on *post-hoc* participant re-construction of events through interviews or through questionnaires alone. Observing the conversations as they happen, recording and transcribing them for later analysis, provides a chain of evidence and the possibility for the research to be subjected to tests of reliability and validity by others. The questions of validity and reliability discussed previously about case study methodology also apply to the use of observation as a data-gathering tool. Adler and Adler (1998) suggest that multiple observers and cross-checking with participants can increase validity, although only the latter strategy is possible within the confines of this study. They also suggest that observations conducted systematically and over time in a variety of conditions can increase reliability.

In order to find out who is talking, about what and to whom, these observations will require a strong quantitative thread. Allocation of things which are said to identified categories will enable detailed analysis of the content of the discussion during these sessions and, set in the context of a narrative approach to the cases, through counting will help to address Silverman's (2005) concerns for validity. Content analysis, discussed in detail later in this chapter, provides one way of quantifying and analysing these sorts of data.

Observing the teaching

The research process in this study centres on conversations which surround teaching a single lesson to a class of pupils. Just as direct observation of the conversations between the student-teachers, mentors and tutors is important, direct observation of the topic of their conversations is also critically important. Sharing the same experience enables the researcher to gain an enhanced understanding of the conversations and opens up a rich source of data for

case study construction. The focus of the lesson observations is to provide background data for the conversations and for the subsequent individual interview, and so appropriate amounts of data need to be gathered systematically. The purpose of the observations of the lessons is to get a sense of the whole lesson and of the participants' thinking behind the lesson, not to concentrate on counting specific behaviours. For this reason, event sampling was rejected as a method for data gathering. Another alternative was to gather data on a 'timed' basis. Sylva et al. (1980) developed a technique called 'target child observation' in a study of pre-school children. This research process identifies a target child and detailed notes are made of everything the child does and says during a pre-identified interval at periodic intervals. Detailed notes are taken in written form, with less rigorous observations recorded in the intervening period. In the case of this study, the student-teacher is identified as the 'target' (Sylva, Roy & Painter, 1994, p. 9) and the video camera was used to record their activity in detail. Field notes were used to record observations for the remaining time.

Using observation in this way, combined with stimulated recall interviews and interviews before the planning session, partially addresses Adler and Adler's (1998) concerns for reliability and validity. This is a systematic approach to observations which invites participant involvement through stimulated recall and provides a coherent picture of participant perspective over several weeks.

Using stimulated recall

'Stimulated recall' refers to a technique where video or audio material of behaviour is later used to enable participants to relive and verbalise the thought processes behind their observed behaviours. Calderhead (1981, p. 211) noted that 'gaining access to the thoughts and decision-making of others is intrinsic to the endeavour of many social scientists'. He draws

attention to the problematic nature of systematic observation and participant observation: with the former typically involves an observer counting behaviours using pre-determined categories, and the in latter an observer attempts to ‘empathise with the participants and describe their unique perspectives’. He argues that these approaches have left a gap in our understanding of the teaching process and that ‘any adequate description of teaching process must view teaching behaviour in the context of teachers’ aims, goals or intentions’ (p. 211).

Calderhead believes that stimulated recall is helpful in accessing these dimensions. He identifies factors that make stimulated recall problematic: the participant’s anxiety; the limitations of visual cues not taken from the participant’s perspective; the issue of whether or not tacit knowledge can be verbalised; and the conscious censoring by the participants in order to put themselves into the best light. Retrospective self-reporting thus presents problems of validity, but Calderhead points out that ‘some crude indication of the validity of reported thoughts may be obtained from their internal consistency and the degree to which teachers’ accounts appear to match observed classroom practice’ (Calderhead, 1981, p. 211).

Gass and Mackey (2000) identify a series of steps which increase the validity and reliability of stimulated recall:

- the delay between event and recall should be minimised
- the threat of a priori theories should be minimised by creating the strongest possible links between the focus of the study and the procedures for creating recall
- there is a need to make sure that the questions/prompts do not alter the cognitive process being employed at the time of the event.

Lyle (2003) presented a detailed analysis of the literature around stimulated recall and its use in a study of decision making by expert volleyball coaches. He concludes that despite the

weaknesses detailed above, stimulated recall is a valuable tool for educational researchers. He, too, stresses the need to enhance validity by minimising the delay between event and recall, and the importance of creating the most comfortable environment possible and avoiding an overtly structured approach. A process of periodic, detailed, observation using video/audio capture of participant behaviour is capable of framing and directing the subsequent semi-structured interview so that participants can focus on these very recent events and use them to explore their thinking in relation to the context.

Interviewing the research participants

In this study there are two interviews with participants: the stimulated recall session where the participants observed the selected video materials and commented on their thoughts and actions, and an interview at the start and end of the process which followed a semi-structured format, or as Wengraf (2001) terms it, the lightly structured depth interview. The participant interview guide, prepared in advance of the interview, is included as Appendix D to this thesis. Both of the interviews were transcribed and uploaded on to the research database.

Content analysis as a tool for data analysis

As part of a more comprehensive series of data-gathering activity, discussions between the student-teacher, mentor and tutor about planning and teaching a lesson were recorded. These conversations, subsequently transcribed, focused on planning a single lesson and on a discussion following the taught lesson in which all of the participants had taken part. A careful, detailed and structured analysis of these conversations provides a strong quantitative thread to this largely qualitative study and enables the report to re-present in more precise

terms the learning opportunities presented to students. For the purposes of coding the conversations, the main focus of the analysis is on who talks about what.

Content analysis is one of a range of possible data-gathering and analysis approaches to conversational data. Other methods which adopt a similar approach are *discourse analysis* and *conversation analysis*. Discourse analysis is concerned with text ‘above the level of sentences’ (Krippendorff, 2004, p. 16) and how phenomena are represented in text; for example, how race is presented in the media. Conversation analysis, on the other hand, starts from an audio recording of ‘verbal interaction in a natural setting’ (Krippendorff, 2004), with an analysis which focuses on conversational moves through turn taking. Conversation analysis is a branch of ethno-methodology and takes into account the subjective involvement of the researcher in data collection. This type of analysis focuses on the conversational skills and strategies used by participants, and it is inductive in terms of theory construction. While both of these approaches have particular merits in terms of the research question, discourse analysis was rejected because the focus is not on typifying representations of concepts through language. Conversation analysis was rejected because this study is primarily interested in counting ‘who says what’ as a way of identifying the learning opportunities presented to student-teachers in conversations. The unit of analysis is not the conversational move, but rather topics and concerns drawn from the literature, indicating the need for an analysis schedule which is constructed in advance of the analysis and which is, therefore, not inductive.

Content analysis on the other hand offers an approach in which the *topic* of conversation can be enumerated. It offers an analytical approach which has a high degree of reliability. For a study in which the main question centres on ‘who’ says ‘what’ and on the learning opportunities that arise as a result, content analysis is the most appropriate way to

present these data quantitatively in order to answer the research question. There are three main components in content analysis:

- identification of categories
- identification of dimensions
- identification of units.

Identification of categories is linked to the questions that are being asked of the content analysis. In terms of this study, who is talking would be one category; what they are talking about would be another. The dimensions within content analysis refer to the possible options, or answers, to the questions being asked in each category; so, for example, in terms of this study the dimensions within the category ‘who is talking?’ would be the mentor or the student-teacher or the tutor.

Identifying the unit of analysis, or as Krippendorf (2004) terms it, ‘unitising’, is an important facet of content analysis, and is a more complex process than determining either categories or dimensions. Weber (1990, pp. 21–23) identifies six commonly used options for the identification of units for analysis: the word, word sense, sentence, theme, paragraph and whole text. Holsti (1968) defines the theme as a ‘single assertion about a subject’ and comments that this is sometimes the most useful form of analysis. He also draws attention to the drawbacks of analysis at this level in terms of their identification of themes and their boundaries. Weber (1990) also points out the negative consequences for research reliability when units larger than the word form the basis for analysis as this increases researcher subjectivity and makes it more difficult for other researchers to present a similar analysis.

Neuendorf (2002) underlines this point:

Because thematic units may have to rely on textual features that are distributed throughout the text, even carefully trained coders can easily be led in different directions, making reliability difficult to achieve. Themes, even when they are relatively formalized or limited in scope, are not as easily analysed as simpler units.

(Neuendorf, 2002, p. 109)

However, small but reliable units will not shed light on the research question, and so the most appropriate way forward is unitisation at the level of the theme, but with as much formalisation and definition as possible. In order to help formalise the definition of a theme it is identified as a presentation or discussion of a single idea or event. It might include:

- An idea or property which is being explained, questioned or discussed;
- A question which is being examined, clarified or debated;
- An event which is recalled, described, interpreted or judged.

(Haggarty, 1995c, p. 189)

Conventional interpretations of the concepts of reliability and validity are strengths of content analysis; in particular the ability to test analyses by the same coder or coders over time (stability) and the ability for others to reproduce an analysis using the same coding schedule (reproducibility). Cohen's *kappa*, which accounts for agreement between an initial coding and further codings beyond that which might be achieved by chance, is a way of assessing the stability or reproducibility of content analysis. Krippendorff (2004, p. 218) points out the dangers to reliability of discussion and consensus building prior to the identification of reliability. He identifies two steps (p. 219): employing three or more observers working independently, and reconciling coding differences in 'post-coding deliberations'. While it is beyond the scope of the resources available to this particular project to engage more than two coders, the second step is integrated into the content analysis reliability study.

Validity, in relation to content analysis is defined by Weber (1990, p. 18) as being between ‘the validity of the classification scheme, or variables derived from it, and the validity of the interpretation relating content variables to their causes or consequences’. Krippendorff (2004, p. 313) defines content analysis as valid ‘if the inferences drawn from the available texts withstand the test in independently available evidence, of new observations, of competing theories or interpretations, or of being able to inform successful actions’. He identifies three types of validity:

- face validity – whether or not something is obviously true, sensible or plausible
- social validity – whether or not the research makes an important social contribution beyond an academic audience
- empirical validity – the degree to which available evidence and established theory support various stages of a research process and the extent to which it can withstand new evidence.

In the case of face validity, or plausibility, the argument has been made that this is a significant aspect of case study validity. The social validity of this research will be tested as recommendations for further training and development of tutors and programme revisions occur. Empirical validity was explored as data gathered from different sources are compared.

4.6 Summary

In this chapter I have argued that the most appropriate form for a study, which answers the principal research question, is one which has an interpretive design, uses case study methodology and includes a variety of data-gathering tools and methods, not as a way of getting a ‘true fix’ on ‘reality’ but as a way of offering different insights into the problem. I have examined the limitations and benefits of case study method, the issues of generalisability,

reliability and validity and the various types of case study, and have investigated approaches to rigorous case study design. Appropriately robust case study research should attend to these issues through its design, application and reporting. In this chapter I have also discussed a variety of data-gathering strategies that might be used to support a comprehensive response to the research question, and considered case study construction as a theory-generating process. The consequences and implications of this approach are considered in more detail in the next chapter which considers the research design and data-gathering issues in more detail.

RESEARCH DESIGN AND DATA-GATHERING ISSUES

5.0 Introduction

In the last chapter I argued that the most appropriate form of a study, which will answer the principal research question, is one that has an interpretive design, uses case study methodology, and includes a variety of data-gathering tools and methods. Before a detailed investigation of the ‘third space’ (Gutierrez et al., 1997) conversations took place, it was important to gain a sense of the issue of contradiction and tension more broadly. What tensions, if any, were perceived by student-teachers and in what dimensions? A quantitative survey was considered an appropriate way to set the context for the following qualitative study, and to enable the research processes and questions to be more tightly defined. This chapter is in four sections. In the first section I develop the argument for a two-phase research design. The second section outlines the necessary ethical considerations of a study of this kind. The third section discusses data-gathering issues for Phase 1 of the study, while the final section explores data-gathering issues for the second phase of the study.

5.1 Data-gathering design to support a research question response

This thesis began setting out a broad area of research interest: what do student-teachers on a PGCE which includes both school-based experience and university course study learn from both of these sources, and how is their learning influenced by university materials and by their mentor and subject tutor? Following a discussion focused on the complexities and extant issues in teacher education and of a theoretical framework, this was refined into a question

about student-teacher learning: how can we understand this in the light of the learning opportunities presented in discussion and the complexity endemic in initial teacher education? In the last chapter, I argued that case study methodology is the most appropriate method of answering a question which requires a detailed understanding of the socio-cultural perspective.

Before undertaking these detailed studies it was important to understand what student-teachers on the PGCE, in general, thought about possible tensions between different orientations to initial teacher education, and how these tensions were made apparent during their PGCE course of study. Use of activity theory headings to structure a survey questionnaire, and asking student-teachers to prioritise their own areas of concern and to contrast these with their mentor and tutor, had the potential to lead to a better understanding of the subsequent in-depth case studies. A focus on dissonance between perspectives also had the potential to identify possible areas for 'expansive learning' (Engeström, 2001), discussed in Chapter 3. The survey questionnaire, therefore, formed Phase 1 of the study, and the case studies formed Phase 2. Figure 8 shows the research questions for both phases of the research and details the study's sub-questions linked to each of these phases. By linking them to the chapters in this thesis, I show how they are developed and refined throughout the study.

Figure 8: Research phases linked to research sub-questions

Initial research problem	
Chapter 1 (Introduction to the study)	<p>What do student-teachers on a PGCE, which includes both school-based experience and university course study, learn from both these sources?</p> <p>How is student-teacher learning influenced by university materials, university-employed tutors and school-based mentors?</p>
Over-arching research question	
Chapter 4 (Case study methodology)	<p>How can secondary PGCE <i>music</i>¹ student-teacher learning be understood in the light of the following?</p> <ul style="list-style-type: none"> a) The learning opportunities offered to students in school when they discuss practice with their mentor and tutor b) The complexity of contradictory approaches implied by different orientations to initial teacher education.
Phase 1 research questions	
Chapters 5 and 6 (Phase 1 study and results)	<p><i>Main Phase 1 research question</i></p> <p>How do student-teachers perceive the complexity of contradictory orientations to initial teacher education in practice?</p> <hr/> <p><i>Phase 1 sub-questions – linked to activity theory headings</i></p> <ul style="list-style-type: none"> a) Outcome – Why do PGCE students undertake a PGCE course? b) Object – What do they feel they are doing on a PGCE course? c) Rules – What written or unwritten rules or guidelines are most significant in helping individuals to achieve those aims? d) Communities – Which groups are most significant in helping students to achieve those aims? e) Division of labour – Which individuals are most able to help in student-teacher learning and how? f) Tools – Which physical elements are most significant in helping student-teachers to achieve those aims? g) Opportunities for expansive learning – What tensions and/or contradictions are perceived by student-teachers, and with whom?

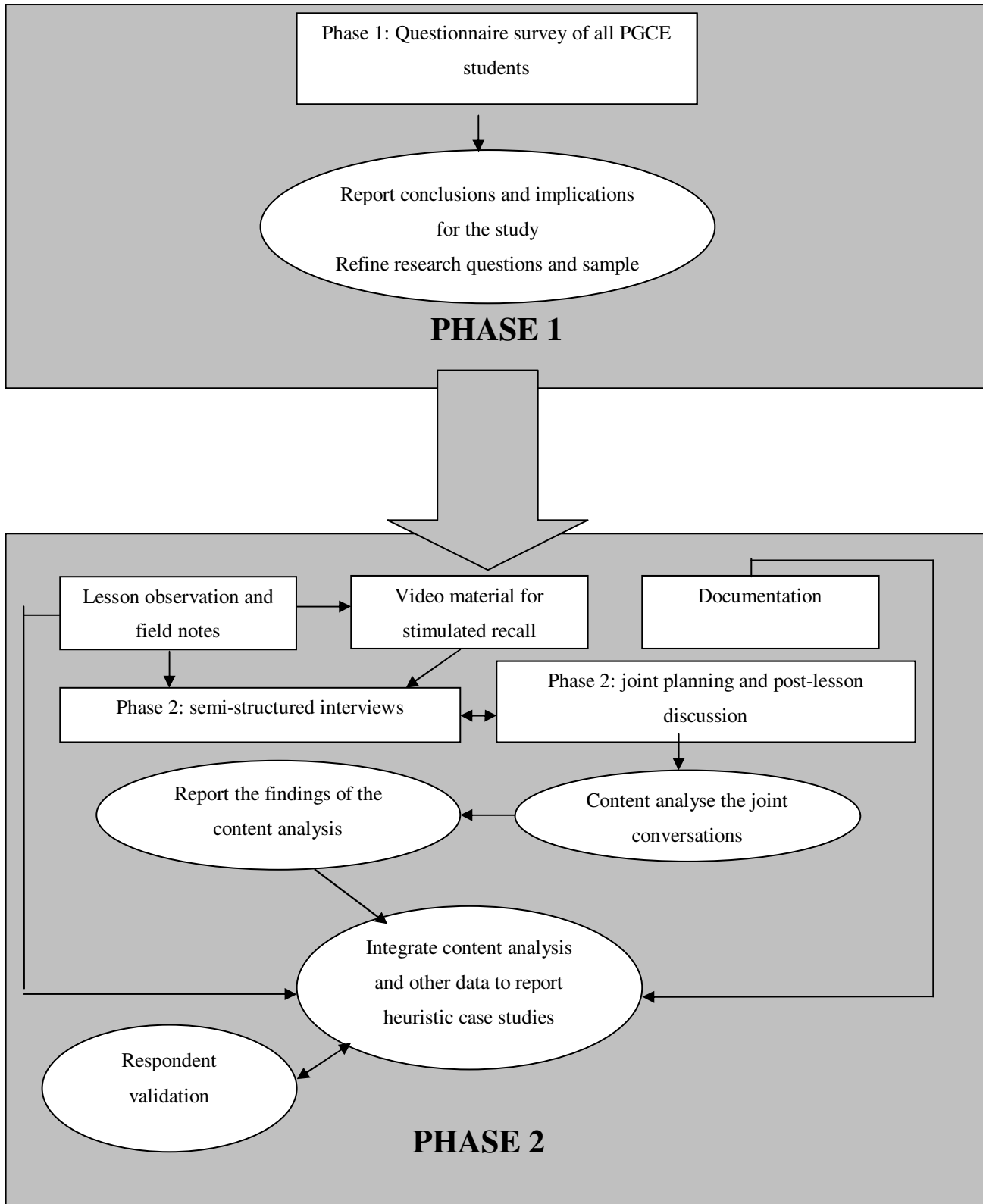
¹ Music student-teachers as a sub-set of student-teachers were chosen following the Phase 1 research.

Phase 2 research questions	
Chapters 5, 7 & 8	<p><i>Main phase 2 research question</i></p> <p>What learning opportunities are offered to students in schools when they discuss practice with their mentor and tutor?</p>
	<p><i>Phase 2 sub-questions</i></p> <p>In the context of cases which frame the analysis by identifying the orientations of the participants to music initial teacher education and to music teaching in general, this phase asks:</p> <p>a) In teaching conversations between participants, how, when, by whom and in what circumstances are different source drawn on?</p> <p>b) How are tensions, contradictions, disagreement or agreement handled during these conversations?</p> <p>In order to answer these questions this phase focuses on two three-way conversations about teaching between a mentor, student-teacher and tutor, and asks:</p> <ul style="list-style-type: none"> – Who is talking? – What are they talking about? – What sources do they draw on in these conversations? – What tensions are apparent in these conversations? – What agreement or disagreement can be observed in these discussions?

Figure 9 shows the research design developed to support answers to these research questions. Phase 1 of the research, a *survey questionnaire*, piloted some of the ideas and possibilities raised in the earlier chapters. It helped to refine the study's research focus and provided improved theoretical insights into the case studies. Phase 2 of the research focused on the learning opportunities that were presented as student-teachers, their mentors and tutors discussed teaching and learning in school music departments. In order to focus the

conversation on teaching and learning, and not on administrative or other matters, the participants were asked to plan a lesson jointly, to participate in the planned lesson and to discuss it afterwards. In order to find out and quantify who talked, what they talked about, what sources they drew on and what agreement or disagreement was evident, content analysis was used as data analysis strategy. The participants were also interviewed individually before the planning session and after the 'lesson participation' session. During the second individual interview, video material taken during the taught lesson was used to 'stimulate recall' of the lesson.

Figure 9: An overview of the research design



Phase 1 of the research process located the study's questions in a more broad understanding of the student-teachers' perceptions of tensions and contradictions in their learning: if contradiction between activity systems or tensions at the boundaries between communities is an important part of the learning process, how these were perceived by student-teachers as a group overall was an important question. The second phase of the research focused on the learning opportunities that were presented to student-teachers in conversations about teaching and learning in the school setting. The focus of these conversations centred on what was identified in Chapter 3 as a 'boundary' encounter: a meeting of school and university in a 'third space' (Gutierrez et al., 1995) where mentors, student-teachers and tutors planned a lesson, where they taught and participated in it and then discussed it afterwards. A central part of the investigation involved identifying and quantifying a series of issues: what was said, by whom, the sources that were drawn on, the extent to which the perspectives offered were in tension with one another and the extent to which the participants agreed or disagreed with one another. These questions directly addressed the research focus.

Content analysis, discussed in the previous chapter, was considered the most appropriate data analysis tool for this purpose. In order to set the case study context, semi-structured interviews were proposed as an appropriate tool for gathering data about student-teacher, mentor and tutor approaches and orientation to music initial teacher education. The interviews provided an understanding of the participants' personal biographies and beliefs and set the context for the joint conversations. The lesson in which the student-teacher, mentor and tutor participated was video-recorded at intervals for stimulated recall in a subsequent individual interview with the participant. The intention here was to gain access to the

participants' thinking about the teaching and learning process as they talked about a specific event that they were involved in, rather than in the abstract.

The data gathered in the first individual semi-structured interview and in the second stimulated recall interview were transcribed, anonymised and stored on a research database. With data gathered from other documents and from field observations, they provided a context for the content analysis data to be explored in more detail. Brief summaries of the case studies as well as transcripts of the interviews and discussions were presented to the research participants. The summaries included requests for clarification and questions that emerged from the content analysis process and their perspectives were taken into account when the final cases were developed.

5.2 Ethical considerations

In this section of the thesis I look at the ethical issues that a study of this kind raises and that are particularly important where human participants and their behaviours are being used to explore complex phenomena. The issue of ethical acceptability is also heightened by the specific circumstances of the data gathering. This was taking place in school during the school day when pupils were involved. In addition there is the factor that the researcher is also the Director of the programme which assesses student-teacher performance leading to qualified teacher status and which acts as an employer to subject tutors. This research, by this person, with these participants, at this time, asks important ethical questions. How should a researcher act ethically and be ethical in these circumstances? What rules govern a researcher's behaviour? What are the values that indicate which actions are most appropriate in these circumstances? What is an appropriate 'ethical framework' (Oates, 2006, p. 200) for researchers in these circumstances? Research such as this is likely to be an ethically complex

process with many ‘grey areas’ (Burgess, 1989). This section looks first at the ethical requirements of the university and the wider academic community. It then looks at the key ethical dilemmas as they apply to this study, and at the tensions that are faced in the field when implementing a code of ethics (Burgess, 1989, p. 74).

University-based research is required to gain approval by an ethics committee, and approval for this study was gained from the Open University’s Human Participants and Materials Ethics Committee (HPMEC) prior to the collection of data. This approval process required the submission of a research protocol pro forma. The study also sought and acquired approval from the Open University’s Student Research Project Panel (SRPP), and was registered with the university’s Data Protection Officer in order to conform to the Data Protection Act. The research project also conformed to the British Education Research Association (BERA) Guidelines (BERA, 2004). The BERA Guidelines identify a researcher’s responsibilities to the research participants, research sponsors and the community of educational researchers, and combine both rule- and value-based approaches to ethics. Key issues in relation to a researcher’s responsibilities to participants, it says, are:

- voluntary informed consent from participants
- avoidance of deception
- right of participants to withdraw
- making known any predictable detriment to participants
- the right of privacy for participants
- disclosure of the research findings.

Key issues in relation to the sponsors of research are:

- appropriateness of research methods
- the rights of researchers to publish their findings.

Key issues in relation to the community of educational researchers are:

- the researcher's responsibility to conduct research to the highest possible standards and so avoiding issues of misconduct
- an acknowledgement of authorship.

Implications of the research process for participants

This study, primarily, looks at three-way conversations between student-teachers, their mentors and their tutors when they talk about teaching pupils. Ideally, the research process would have observed this interaction as it happened naturally during the regular tutor visit to the student and mentor. These kinds of conversation are strongly encouraged by the PGCE programme team, but internal evaluations had indicated that tutors mainly spent their time dealing with administrative, rather than teaching, matters. In order to minimise adverse affects on participants it was considered important that the research process did not detract from the 'normal' conversations and activities that would take place, because this may adversely affect student-teacher progress and assessment outcome. An important ethical dimension to this study was the need to minimise any possibly detrimental affects on the participants, and clearly a change in normal practice which might actually cause, or be perceived to cause, adverse student-teacher progress should be avoided. Because of this, a decision was taken to provide funding for an additional tutor visit to the student in school. The purpose of this additional visit was to provide time for individual interviews with me, for a lesson-planning conversation between the mentor, tutor and student-teacher, participation in the planned lesson and to talk about it afterwards.

The focus of the research is on the 'third space' joint conversations, with the individual interviews and participation in lessons providing background data. Because the study's focus

is on what participants decide to discuss when asked to talk about teaching a class of pupils it was decided not to brief them in detail about the research project's aims, the underpinning literature or the conceptual framework being brought to the analysis, as this would cause considerable procedural reactivity. And it was for this reason that the participants were given only a limited brief about the project: to plan a lesson, to participate together in it and to talk about it afterwards.

Voluntary and informed consent

A letter and consent pro forma was sent to all three main participants, the mentor, the student-teacher and the tutor, and to the Headteachers of the schools that were used as sites for the case studies. The letter set out the beneficial aspects of the study and informed recipients of the right to withdraw at any point as well as their right to expect confidentiality. It pointed out, however, that because of the descriptive nature of the case studies it was not possible to preclude their identification as individuals. The letter also informed them of the intention to publish as part of a PhD thesis and through other academic outlets. It gave an assurance that the research process was entirely separate from person- or school-specific quality assurance, assessment or employment issues, and indicated that broader findings would be used in order to inform PGCE programme development. All of the participants agreed to participate in the research on this basis. Permission to conduct the research in school, and in particular to film for later stimulated recall in the lesson where the mentor, student-teacher and tutor were to participate, was gained from the Headteachers. On one occasion the school wrote to each of the children's parents in the class concerned, but on the other three occasions the senior member of staff responsible took the view that, as the video material was to be destroyed immediately after the data-gathering day, this was part of what might normally be expected in

a student-teacher's classroom and did not require additional permission. In these cases the school students, although only peripherally involved in the research process, did not give their consent. In all cases they were warned of my presence in advance and seemed to accept my presence as someone who would record parts of the lesson for later discussion by the 'teachers', after which the tape would be destroyed. They were not informed about the purpose of the research.

While participation in this research was voluntary, finding a suitable number of student-teachers, mentors and tutor participants was problematic in two respects. First, student-teachers who were experiencing other difficulties that might be exacerbated by research involvement were not chosen. Second, because potential participants would have received communication from me on several occasions in different forms, and it must have been clear that I had not been inundated with responses, this may have resulted in additional pressure to respond positively, especially given my role as Director of the PGCE programme.

The avoidance of deception

Part of the lack of clarity about the research process as far as the pupils are concerned comes from the delicate role of the student-teacher in the classroom. As can be seen from the cases later in this study, they are seen as teachers in the classroom by their mentors and by the pupils, and someone from 'the university' 'doing research' would underline their difference. The three central participants were also informed only of the general area of research. Drawing attention to the research literature and to the study's conceptual framework would almost certainly have altered what the participants talked about. While participants were not told the precise details of the research design or focus, they were informed that student-teacher learning was central to the study.

Right of the participants to withdraw

All of the main participants and the schools were advised of their right to withdraw from the study and, if they withdrew, for any data to be destroyed without the need for them to give a reason. The school pupils, as peripheral participants, were given permission in one school to be withdrawn from the process, although none took this opportunity. While this instruction to the main participants may seem to be straightforward, it provides a potential dilemma. As noted above, securing sufficient numbers of students, tutors and mentors who were willing to participate in the study proved to be a difficult part of the research process, and this would have been evident to those who finally agreed to participate. Although there is no evidence to suggest that any of them wanted subsequently to withdraw, and most said that they enjoyed the process, it may be possible that some of the participants felt obliged to participate once the research had started.

Detrimental impact on participants

Avoiding action that is detrimental to the participants is a key principle of this study. Action was taken to support additional student visits by tutors in order to minimise adverse reaction, and participants were assured that the role of researcher and PGCE Director were separate when person-specific/school-specific information was being considered. None of the participants appeared to have suffered any detrimental effects due to the study, and most said that they enjoyed it, but it is conceivable that publication of this thesis may have some professionally detrimental impact if others recognise them from the descriptions that are given. For the student-teachers the research process is potentially advantageous because of the opportunities afforded by enhanced mentor and tutor support.

Right of privacy

The publication of confidential material, even when made anonymous, is a problematic endeavour. Participants have the right to confidentiality and on occasions during the research process, gave information which was potentially slanderous, but which may be traced back to the individual through the more general description of the case. ‘Off the record’ conversations while the tape was on, or comments made after the recording stopped, as well as comments directly critical of another participant were kept as background data and not reported in the study. The participants were told in the introductory letter that their data would be made anonymous and that their identity would be known only by the researcher, my supervisor(s) and any others involved in the transcription process. This process has been adhered to throughout the study.

Disclosure of the research findings

The main participants and school Headteachers were informed of the intention to publish these cases in the form of a PhD thesis and through other academic outlets, and the mentors, student-teachers and tutors were given an opportunity to comment on summaries of the developing cases as part of the research process. These interim studies, which were presented from the perspective of each participant, were anonymised differently from the final cases in an attempt to protect confidentiality further. No objections to this process were raised by any participant.

How will the researcher's role affect the study?

Kvale (1996) suggests that researchers consider the possible impact of their role on the research process. Changes to the nature of the 'normal' tutor visit to the school meant that additional resources had to be found to accommodate additional support so that student-teacher progress and assessment was not adversely affected. The activities of planning, participating in a lesson together and talking about it afterwards are also likely to be new and different, but it is argued that this process was essential to ensure that conversations focused on teaching and not on other matters – understanding who talks about what will lead to a better understanding of the study's research question. It is also the case that tutors, as employees of the university, received additional payment for this visit, and student-teachers received additional support which may have affected their progress positively. Dench, Iphofen and Huws (2004, p. xii) draw attention to a general principle of socio-economic research which is that research 'should not involve any unwarranted gain or loss for any participant'. I have already argued that an additional visit was necessary to address negative concerns about student-teacher progress, and argue that an additional day's work for no payment by tutors would cause them unreasonable financial loss. Such payment, which was made at the same rate as 'normal' school visits, was necessary in order to enable tutors to participate, and I argue that this was not an excessive payment 'which amounts to a bribe' (Dench et al., 2004, p. xiii). It is conceivable that this additional visit and payment made the participants react more warmly to the research process, and although there is no evidence that this warmth affected what was said and by whom during the case study data collection sessions, this cannot be discounted.

The issue of procedural reactivity generated by the researcher and its impact on the research was a significant dilemma. This problem was compounded in this study by the fact that the researcher is also the Director of the PGCE programme. It was recognised that participants might, and probably would, change the way they behaved and the things they said during the research. It was accepted that it was impossible to eliminate this influence and, as Maxwell (1997) advised, because of this it was important to understand the influences at play and to use them productively. My 'other' role as Director of the programme enabled access to these conversations in ways that other researchers might find difficult. It provided an opportunity for beneficial consequences: it allowed the participants to feel as though they were able to make a direct impact on PGCE development; and potentially the outcomes of the research could have an immediate impact on practice.

Summary

This section has highlighted the ethical requirements of the university and other codes of practice, and has taken the opportunity to draw attention to some of the ethical dilemmas and issues facing researchers in the field. I argue that despite meeting the requirements for ethical research required by the Open University's code of ethics and meeting the BERA Guidelines (2004), researchers still experience ethical dilemmas which are, as Burgess (1989, p. 74) describes them, 'at the heart of reflexive practice'. I also argue that the ethical compromises made during this study are essential in order to minimise procedural reactivity, to avoid any negative impact on student-teacher progress and to avoid unreasonable financial loss on the part of the tutors.

5.3 Phase 1 data-gathering issues

Previously in this thesis I have argued that case study methodology, informed by an initial scoping questionnaire (Phase 1 of the study), integrating more quantitative methods through content analysis and complemented by stimulated video recall, provides a robust evidence base to support a detailed response to the study's research questions. This section details the data-gathering issues and plans for the initial scoping questionnaire (Phase 1) and sets the scene for a full discussion of the questionnaire results in Chapter 6.

Phase 1 data collection plans

While the research literature indicated that the 'third space' (Gutierrez et al., 1995) was a potentially fruitful area for exploration, and one that had the potential to develop understanding of current problems in initial teacher education, an open exploration of the tensions between multiple orientations in initial teacher education appeared to be novel and did not feature in the literature. Before beginning the process of developing the case study strategy and gathering data it was necessary to find out the extent to which PGCE student-teachers at the Open University, more broadly, sensed dissonance and tension as they participated in a course in initial teacher education. This 'snap-shot' of student perception would help to identify the extent to which boundary crossing was taking place. It would also help to focus the questions that related to the second phase of the study and, theoretically, to identify a suitable case study sample. A survey of student perceptions of tensions and contradictions on the course, matched against areas of the activity system, was seen as a way of providing a spring-board for the remaining research process.

The rationale for the questionnaire sample

The research participants were drawn from those involved in the Open University's flexible PGCE programme.

Table 5: The Phase 1 questionnaire research participant sample

<i>PGCE subject</i>	<i>Total number of survey questionnaires sent</i>
Spanish	20
German	17
French	56
Geography	48
Inspire (Science)	8
Mathematics	114
Music	94
Science	144
D & T	61
Total	562

This participant sample reflected a broad range of disciplines from student-teachers at varying stages of their course in initial teacher education. Student-teachers only (not mentors or tutors) were chosen for this survey because of the study's focus on student-teacher learning and on student-teacher perception of tension between perspectives. The perception of other participants was considered as part of the Phase 2 investigation. The questionnaire itself was designed to elicit their views and priorities about issues relating to each area of the activity system, and asked them to add missing elements and to place them in an order of priority. Respondents were also asked to point out, through a brief description, where this caused a perceived tension between themselves as student-teachers and their mentor or subject tutor, or with ideas on the course materials. Questionnaires were chosen as a way of making contact

with a large number of student-teachers at the start of the study so that their views and thoughts framed the data collection during the second phase of the research.

It was anticipated that the return rate for this questionnaire would be lower than that normally achieved in student evaluations. The reasons for this were that the questionnaire was necessarily complex, asking student-teachers to engage with difficult concepts, to make their own additions and to place them in order of priority. The length, complicated ordering process and open-ended questions were likely to affect the questionnaire return rate (Aldridge & Levine, 2001). A large research participant sample (n=562) took the likely low return rate into consideration.

The scoping questionnaire

The first part of the study used questionnaire methodology to gain a sense of the extent to which multiple and synchronous activity systems or orientations to teaching and initial teacher education were being enacted in a large and diverse population of PGCE students. The questionnaire, which asked student-teachers to reflect on areas of the activity system (see Appendix C), to add any additional responses and to prioritise them, was an attempt to view student-teacher thinking through the lens of activity theory, both to illuminate and to enlighten current thinking by drawing on responses from a wide and diverse population and to provide a focus for these thoughts.

The structure and clarity of the initial questionnaire was piloted with a small number (n=3) of student-teachers who advised on its content and structure. The initially revised questionnaire was piloted again by geography students (n=20) and modified before being sent to the full programme. The Phase 1 survey questionnaire (see Appendix C) asked a series of questions about student-teacher learning on the programme and asked for the respondent to

consider any other possible answers and to add them to the list of suggestions. Possible answers were provided as a means of maintaining the respondents' focus on the question and as a way of prompting their own contributions at the end of the question. The questionnaire then asked them to put them in order of priority in an adaptation of the 'vertical rating ladder' approach (de Vaus, 2002). At the end of each question student-teachers were asked to make any further comments in the form of an open-ended question.

The questionnaire focused on the following dimensions.

- Outcome – what do you think the PGCE will help you to do or to achieve?
- Object – what is your main priority/focus while you are on the course?
- Rules – which of these rules (for example, QTS standards, OU requirements, departmental policies and so on) are the most significant during the course?
- Communities – which of these groups (for example, your department, the Open University and so on) are most significant?
- Tools – which of these resources are most important (for example, schemes of work, university material)?
- Division of labour – which of these individuals have been most significant (for example, your mentor, your tutor and so on)?

The student-teachers were asked to consider if their priorities had caused any tension between themselves and other and the end of each question, asked to provide additional comments about each of these areas. Responses were grouped into the following variables, for analysis:

- age group
- sex
- ethnicity

- subject
- level of entry to the course (route)
- length of time on the course.

The percentage of respondents in each group who ranked a response as a top or second priority was calculated in order to establish a rank order for priority in each group. By doing this the preferences of the majority of the student-teachers for most of the questions was captured. The summary results (see Table 7 in Chapter 6) present the most frequently chosen options against each of the headings and present the percentage as a total of all respondents and as a percentage for age group, sex, subject and level of entry to the course. Comments made on the questionnaire returns were collated and re-presented in the form of tentative categorisation, as shown in Table 8 in Chapter 6.

Analysing the data

The questionnaire responses were collated and inputted into SPSS (Statistical Package for the Social Sciences) and *chi-square* tests carried out for each of the variables, attempting identify if any of the variables identified above showed significant differences. A *chi-square* test enables researchers to decide whether or not there are significant differences between variables, or if variation between variables is just a random event that could provide different results with a different sample. A *chi-square* test compares actual results with expected frequencies and uses the gap between the expected and obtained results and their frequencies (using a *chi-square* table) to work out the percentage number of occasions when the gap could have been achieved.

5.4 Phase 2 data-gathering issues

The Phase 1 survey questionnaire results are detailed in Chapter 6. It was clear from the responses that the vast majority of student-teachers perceived no tensions between the various perspectives that were offered to them. There were also notable and interesting exceptions to this over-riding finding and these are reported in Chapter 6. The first phase of the study confirmed that a detailed examination of a few cases was appropriate and that the case study research sample should be confined to music student-teachers.

Rationale for the case study sample

Having decided that an in-depth investigation into student-teacher learning was an appropriate extension to the Phase 1 study, it was necessary to identify a suitable sample. The following questions were considered at this point in the study:

- Should the Phase 2 investigation continue to focus on student-teacher learning from all subjects, or should the research focus on fewer subjects or on one subject?
- Should the Phase 2 investigation focus on student-teachers at a particular point in their course or should the student-teacher participants be drawn from all levels and from all routes?

The Phase 2 case study investigation required a small sample of student-teachers with their mentors and OU tutors. Maintaining the Phase 1 focus on all six subjects with a single researcher would have meant curtailing the investigation in each setting in order to find the time to carry out each study. Fewer than six cases were required if the data collection plans

detailed at the start of this chapter were to be undertaken. A focus on a single subject would provide a sensible way of delimiting the research and would also provide the opportunity for easier comparison between cases. As a former secondary school music teacher, a focus on music student-teachers was an obvious choice. It could be argued that my previous experience as a music teacher and having a detailed knowledge of secondary school music classrooms might lead to an uncritical and ‘taken-for-granted’ approach to the cases, but on balance, and in an attempt to exploit what Bruner (1996) terms ‘inter-subjectivity’ – a subjective identity shared by members of the same culture – it was decided to limit the case to music student-teachers, their mentors and tutors. I was also able to call on this previous experience when finding sufficient research participants later became problematic as a way of emphasising my classroom and music-based credentials.

Perhaps not surprisingly, finding an appropriate number of linked student-teachers, mentors and tutors who were willing to have the Director of the programme record and analyse their conversations was not easy. Given that the focus of the research question was the process of student-teacher learning, the prior experience of the student or their route on the course were not considered to be significant factors in sample choice. This opened up possible participation to all music student-teachers.

Participant student-teachers were identified at the start of their course in June 2005 and in subsequent months. All those music student-teachers who were starting the course during these months were contacted, together with their mentors in school and their subject tutors. The opportunity sample that resulted consisted of six student-teacher, mentor and tutor volunteers. One participant trio had to withdraw because of mentor maternity leave, and another withdrew because of developing problems with student-teacher progress. The resulting sample formed the basis of the research study:

- four music student-teachers
- four mentors linked to the student-teachers
- three tutors linked to the student-teachers (one person was a tutor to two students in the sample).

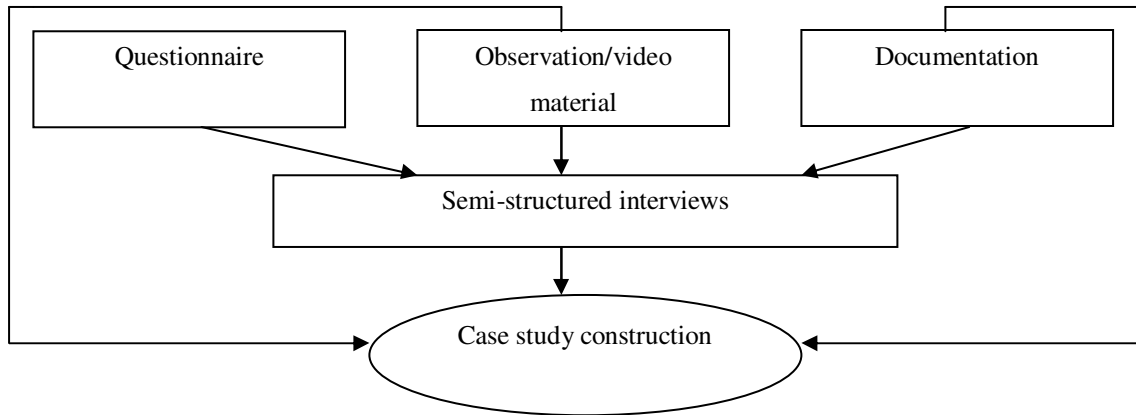
Four detailed case studies form the core of this research study drawing on data provided by lesson observations, semi-structured interviews with the research participants and from data gathered through written evidence. The following key data-gathering strategies were used:

- individual interviews with each participant, once before and once after the lesson, which were recorded, transcribed and uploaded on to the research database
- observation of the student-teacher, mentor and tutor jointly planning to teach a lesson, recorded, transcribed and analysed using a content analysis process
- observation of the lesson where the mentor, student-teacher and tutor participate, also partially filmed. This film was used in order to ‘stimulate recall’ in the second individual interview-
- observation of the student-teacher, mentor and tutor jointly discussing the lesson afterwards, recorded, transcribed and analysed using a content analysis process.

Each participant was interviewed before the lesson and after the lesson, usually before the joint planning session and after the joint discussion following the lesson, although this was not possible on two occasions. The purpose of conducting the interviews in two stages was to gather data from the participants before the research activity began which might, potentially, affect their thinking. Identifying their thoughts about student-teacher learning in the abstract and then observing the process in joint conversations, followed by a second ‘stimulated recall’ interview, provided the opportunity to check for internal consistency and differences in

responses both in terms of the individual and in terms of how individuals acted in the three-way conversations.

Figure 10: Research design flowchart



Reflections on the impact of the additional tutor visit

In Chapter 4, I set out the ethical issues which surrounded the need to provide tutors with additional resource to make an extra visit to student-teachers in order to carry out this research. I argued that it was appropriate to provide this resource in order to prevent any adverse affect on student-teacher progress. It was also needed to enable tutors to implement some of the ideas that had been introduced in staff development session while they worked with student-teachers and mentors, rather than focusing on administrative matters. During these development sessions tutors were encouraged to talk about teaching and learning with student-teachers and to bring the PGCE modular materials into the conversations. They were also asked to observe the student 'in action' with the mentor and to discuss what had been observed with the mentor and student-teacher after the lesson. The research process; planning,

jointly participating and discussing, was therefore an extension of the standard school visit and not something that was entirely new.

The additional resource and the research focus on a collaborative planning/teaching/discussing cycle was designed to provide tutors, student-teachers and mentors with the opportunity to talk about *anything* which they felt was important; opening up the possibility of discussions about student-teacher learning or pupil learning. The provision of this additional resource was therefore likely to lead to freer discussions, unconstrained by the perceived need to address other issues and was likely to lead to an enhanced focus on student-teacher learning.

I have previously discussed, normal tutor visits were strongly framed by administrative requirements and it is very possible that the freedom to discuss these things would have been unusual for the participants. Additional preparation or staff development for tutors might have helped them to think about these conversations in more detail in advance, but this was rejected in order to minimise procedural reactivity.

Observing the teaching

Each lesson was observed during the research process according to the research schedule, partly video-recorded for later 'stimulated recall' with each participant and partly recorded through observations recorded in a field note-book. In order to gain access to the school department I was offered a date or dates when the student-teacher, mentor and tutor were available, which coincided with some 'free time' and with a class who were considered to be 'suitable' for this kind of collaborative exercise in front of a guest to the school. I agreed to attend on the arranged dates if I was available. Clearly, with the choice of date and class being left to the school, for obvious reasons, the kind of class, their age, their prior attainment

and the subject matter they would be taught was beyond my control. These concerns were not considered to be significant because of the research question focus which is about student-teacher learning and not pupil learning.

Interviewing the participants

The research participants were interviewed according to the schedule, although two of the second interviews took place before the joint conversation. It is possible that this ordering of the conversations may have affected the participants' contributions in both the second interview and/or the joint post-lesson discussion. The reason for this change in order, which was not considered to be critical, was because of mentor availability. Participants were interviewed separately in order to identify any views or opinions which they might have been unable to express in front of the other participants. Group interviews were rejected because participants may have been inhibited in the discussion.

A semi-structured approach to both interviews was considered appropriate because it allowed the participants the flexibility to provide additional data which could be accounted for within the overall case study design. Structured interviews were rejected because they limit flexibility and would not provide the second phase contrast with the Phase 1 survey questionnaire. Unstructured interviews were rejected on the basis that they may not relate to the study's research questions. The interview schedule is included with this thesis as Appendix D. The questions within the schedule relate to the activity system headings and explore the participants' perspectives of each area prior to the joint planning session and during the 'stimulated recall' session. Each question relates to the sub-questions for the second phase of the research, and the sub-questions in turn relate to the study's over-arching question about student-teacher learning.

The key questions asked in order to set the context for each case study are set out in

Table 6.

Table 6: Context-setting questions asked of the research participants

Question	In order to explore ...
What makes a 'good' teacher?	... the participant's musical orientation. What sort of teacher, teaching or learning do they describe to exemplify the teacher they think they are or would like to become?
What makes a 'good' student music teacher?	... the participant's perspective on learner music teachers. What skills or attributes do music student-teachers need – and why?
How do people become 'good' teachers?	... the participant's thinking about music teacher learning.

Stimulated recall

In order to help participants reflect on the lesson in which they had jointly participated, 'stimulated recall' was chosen as an appropriate strategy rather than a second 'abstract' interview. The stimulated recall interview took place after the taught lesson and used video material gathered during the lesson in which they jointly participated. Using an adaptation of the 'target child observation' technique (Sylva et al., 1980) the student-teacher was videoed in the lesson for five minutes followed by ten minutes during which I recorded detailed field notes and then repeated until the end of the lesson. Typically, each lesson resulted in approximately 20-30 minutes of video material which formed the basis of individual semi-structured interviews of approximately 90 minutes in length. I describe this process in more detail in Chapter 4. The ethical issues that surrounded the gathering of data in this way and

where pupils were recorded on camera, if only peripherally, were addressed in Chapter 5 and in all cases the video material was destroyed after the lesson, as agreed with the participants.

The stimulated recall interviews, which happened with all participants in all cases, acted as a prompt to draw attention to their actions and thinking while the taught lesson was happening. Most of the participants expressed some initial concern at how they appeared and sounded, but once they got over this all the participants were able to offer a ‘running commentary’ on the lesson as it unfolded. The data from these interviews were transcribed and with the first individual interview were used to report the four case studies.

Observing the discussion between the participants

It was decided to take a ‘non-participative’ approach to the discussion session in order to address Adler and Adler’s (1998) concerns about the researcher’s influence on events – procedural reactivity. In practice, on occasions this was not entirely successful; participants would look to me for guidance or clarification, either about the PGCE programme or about the research process. In those circumstances I attempted to redirect participants back to their own conversation. My brief contributions were also recorded and transcribed.

The content analysis

The content analysis process formed the backbone of the Phase 2 research process. As discussed in Chapter 4, it provides a ‘reliable’ form of analysis when a research question’s focus is on content. In this study the primary focus is on ‘who’ talks about ‘what’ in joint conversations which lend themselves to a consideration of student-teacher learning. The conversations were recorded and transcribed for analysis on the basis of the following content analysis protocol. Identifying the unit of analysis prior to the analysis was an important

decision. In this study an analysis of student, mentor and tutor conversations on the basis of the word, word sense or paragraph is unlikely to provide appropriate insights into these conversations, which were to a large extent unstructured and improvisational. Words were likely to be repeated, or sentences incomplete, and paragraphs the result of an interpretation of the transcriber. At the other end of the continuum, an analysis at the level of the whole conversation would be too large to respond adequately to the research questions. An analysis at the level of the theme, on the other hand, is likely to provide sufficient data at an appropriate level, and it was decided that this would form the basis of the content analysis.

Dimension 1 – Who participates in the unit?

The identification of who was doing the talking, set against other dimensions, was centrally important when identifying who was referring to what source or who was agreeing with whom. Within each unit it was important to identify the level of interaction and engagement of each of the participants. Were tutors more engaged when theoretical ideas are being discussed? Were student-teachers more involved when issues of pupil learning were being discussed? This categorisation enabled categories from other dimensions to be counted against each participant and for cross-tabulated comparisons to be made. The three categories within this dimension are, therefore:

1. the mentor
2. the tutor
3. the student-teacher.

In a given unit any or all of these could be recorded. All contributions within the unit are coded against each participant enabling reports to be produced on the extent of unit participation.

Dimension 2 – Who initiates the unit?

When considering student-teacher learning opportunities as they were presented during these conversations it was important to consider who was directing the conversations. Identifying who initiated the main topics for conversation enabled the researcher to identify the main areas of concern for the initiator during the sessions.

The three categories within this dimension are, therefore:

1. the mentor
2. the tutor
3. the student-teacher.

Dimension 3 – Who asks questions, and what kind?

The third dimension was developed from the first. By coding who asked certain types of questions it was possible to identify the participants' areas of interest. Identifying 'open' questions or questions which require more than a 'yes' or 'no' response was important as it indicated an interest in probing the thinking of the person of whom the question was being asked. The following categories were, therefore, identified:

1. Asking 'open' questions
 - a. mentor asks question
 - b. student-teacher asks question

- c. tutor asks question.
2. Asking 'closed' questions
 - a. mentor asks question
 - b. student-teacher asks question
 - c. tutor asks question.
3. No one asks a question.

Dimension 4 – What is the topic of conversation in the unit?

Having identified who had initiated a unit, who had participated in it and what questioning strategies they employed within the unit it was also important to identify the content of the unit. Were the participants addressing issues that relate to student-teacher learning and teaching? Were they concerned with pupils and their perceived needs? Did they relate to practical issues or theoretical ideas?

The identification of units that included specific references to the research process was also included in order to measure the extent to which the research process, rather than, for example, pupil or student-teacher learning, was the focus of the conversation. The categories in this dimension are, therefore:

1. 'being' a teacher (the participant 'plays out' a teaching episode ...)
2. developing and maintaining relationships (with children and colleagues)
3. planning, teaching and assessment strategies (specific strategies when planning, teaching and assessing – 'use a notebook to record attainment')
4. specific practice events (specific lessons taught or to be taught – 'when I taught this lesson, this class ...')
5. resources for teaching and learning (tools for teaching and learning)

6. rules, regulations and requirements (the way that the school, department or university regulates what happens ...)
7. school student (pupil) prior, current and future learning ('they need to know ...')
8. solving 'in the moment' problems when teaching ('you addressed that issue promptly ...')
9. student-teacher assessment ('you did well in this aspect ...')
10. student-teacher learning ('we need to focus on helping you to address ...')
11. the research process
12. theoretical perspectives ('when you do x, y usually results ...')
13. none of these.

Dimension 5 – What sources of information or knowledge are being drawn on in the unit?

If participants explored boundaries between activity systems and identified contradictions between perspectives, multiple and varied sources would be raised in conversation drawing on formal, university-based ideas, ideas rooted in the classroom context and personal theories. These three areas were identified as important sources of tutor–student–mentor knowledge. In this study, *school-based ideas* refers to concepts and knowledge which are developed in the school context and which are described as generally held by groups of teachers within the school. They are referred to explicitly by the participants and could relate, for example, to school or departmental policies or to generally held perspectives on school ethos. *University-based ideas* refer to theoretical concepts and knowledge which are explicitly addressed in the PGCE course materials where the participant refers directly to the OU as a source of understanding. Lastly, *personally held beliefs* relates to opinions, views or understandings which are held individually and referred to as such. For example, if a

participant said that ‘in their opinion’ music notation should be taught at an early age, this would be recorded as a personally held belief.

Clearly, identifying sources of knowledge and understanding is a difficult process; sometimes there were combinations of sources and sometimes it was difficult to identify precisely the location of a source. Where sources were referred to directly (for example, ‘this is in Module 1A’) then categorisation was simple, but where sources were implied, the coder asked the question, ‘Could this statement made by the tutor have reasonably been made by the mentor?’ and vice versa. If a statement was specifically located in the school context with links to specific events, policies or practice then it was coded as being ‘school based’. If it was specifically about university ideas or materials or referred to with a high level of detail present in OU materials or guidance then it was coded as ‘university based’. Where the source was not clear, the coder recorded ‘source not identifiable’. When the conversation was personally based – for example, a participant might say, ‘As I always say ...’ – it was recorded as a ‘personally held belief’.

When a participant drew on a combination of sources it was recorded as a combination. The categories in this dimension are:

1. school-based ideas and resources
2. university-based ideas and resources
3. personal experience or theories
4. source not identifiable.

Dimension 6 – Are there any tensions or contradictions between sources or understandings?

Identifying whether or not there are any tensions or contradictions between sources or ideas is an important dimension of expansive learning. For this type of learning to take place,

contradictions have to be identified and worked through in order to achieve an ‘expanded’ notion of the activity system’s object. Such tensions might be recognised by some of the participants (making expansive learning a possibility) or they might be unrecognised (in which case, expansive learning might potentially occur.)

Identifying where the tensions occur might also provide a key (especially if they are unrecognised tensions) to possible sources of expansive learning. Are there tensions with personally held theoretical perspectives, or with an individual’s practice or with university ideas? Within this dimension it was important to consider Open University course materials as well as the participants’ practice to identify possible tensions. The categories within this dimension are, therefore:

1. Recognised tensions
 - a. With personally held theories
 - i. of the mentor
 - ii. of the tutor
 - iii. of the student
 - b. With practice
 - i. of the mentor
 - ii. of the tutor
 - iii. of the student
 - c. With university ideas.
2. Unrecognised tensions
 - a. With personally held theories
 - i. of the mentor
 - ii. of the tutor

- iii. of the student
 - b. With practice
 - i. of the mentor
 - ii. of the tutor
 - iii. of the student
 - c. With university ideas.
3. No tensions apparent.

Dimension 7 – Do the participants show agreement/support or disagreement/contradictory comment?

This final dimension is linked to Dimension 6, but whereas tensions or contradictions, even when they are recognised, might not be explored by the participants, active disagreement or dimensions of conversation which were openly contradictory might be seen as active explorations of dissonance. Similarly, active agreement or support might be seen as actively supporting concordance within the relationship.

As with other dimensions which centred on the relationships between the participants, it was essential to code support or agreement or disagreement precisely between the participants. The categories within this dimension are, therefore:

- 1. Agreement/support
 - a. Who agrees with whom?
 - i. Mentor agrees with student
 - ii. Mentor agrees with tutor
 - iii. Mentor agrees with others
 - iv. Student agrees with mentor

- v. Student agrees with tutor
 - vi. Student agrees with others
 - vii. Tutor agrees with mentor
 - viii. Tutor agrees with others
 - ix. Tutor agrees with student
2. Disagreement/contradictory comment
- b. Who disagrees with whom?
 - i. Mentor disagrees with student
 - ii. Mentor disagrees with tutor
 - iii. Mentor disagrees with others
 - iv. Student disagrees with mentor
 - v. Student disagrees with tutor
 - vi. Student disagrees with others
 - vii. Tutor disagrees with mentor
 - viii. Tutor disagrees with student
 - ix. Tutor disagrees with others
3. No agreement or disagreement evident.

Figure 11 summarises the content analysis schedule (also provided as Appendix E).

Figure 11: The summary content analysis coding schedule

Summary coding schedule	
1. What is the unit length?	
2. Who speaks within the unit?	<ul style="list-style-type: none">a. The mentor onlyb. The student-teacher onlyc. The tutor onlyd. The mentor and student-teachere. The tutor and student-teacherf. The mentor and tutorg. All participants
3. Who initiates the unit?	<ul style="list-style-type: none">a. The mentorb. The student-teacherc. The tutor
4. Who asks questions, and what kind?	<ul style="list-style-type: none">a. Asking 'open' questions<ul style="list-style-type: none">i. Mentor asks questionii. Student-teacher asks questioniii. Tutor asks questionb. Asking 'closed' questions<ul style="list-style-type: none">i. Mentor asks questionii. Student-teacher asks questioniii. Tutor asks questionc. No one asks a question
5. What is being spoken about in the unit?	<ul style="list-style-type: none">a. 'Being' a teacherb. Developing and maintaining relationshipsc. Planning, teaching and assessment strategiesd. Specific practice events (i.e. specific lessons taught or to be taught)e. Resources for teaching and learningf. Rules, regulations and requirementsg. School student prior, current and future learningh. Solving 'in the moment' problems teachingi. Student-teacher assessmentj. Student-teacher learningk. The research processl. Theoretical perspectives
6. What sources of knowledge are being drawn on?	<ul style="list-style-type: none">a. A combination of sourcesb. Personal experience or theoriesc. Open University ideas and resourcesd. School-based ideas and resourcese. Source not identifiable

7. Are there any tensions or contradictions between sources or understandings?

- a. Recognised tensions**
 - i. With personal theories**
 - 1. of the mentor
 - 2. of the tutor
 - 3. of the student
 - ii. With practice**
 - 1. of the mentor
 - 2. of the tutor
 - 3. of the student
 - iii. With university ideas**
- b. Unrecognised tensions**
 - i. With personal theories**
 - 1. of the mentor
 - 2. of the tutor
 - 3. of the student
 - ii. With practice**
 - 1. of the mentor
 - 2. of the tutor
 - 3. of the student
 - iii. With university ideas**
- c. No tensions apparent**

8. Do the participants show agreement/support or disagreement/contradictory comments?

- a. Agreement/support**
 - i. Who agrees with whom?**
 - 1. Mentor agrees with student
 - 2. Mentor agrees with tutor
 - 3. Mentor agrees with others
 - 4. Student agrees with mentor
 - 5. Student agrees with tutor
 - 6. Student agrees with others
 - 7. Tutor agrees with mentor
 - 8. Tutor agrees with others
 - 9. Tutor agrees with student
 - b. Disagreement or contradictory comment**
 - i. Who disagrees with whom?**
 - 1. Mentor disagrees with student
 - 2. Mentor disagrees with tutor
 - 3. Mentor disagrees with others
 - 4. Student disagrees with mentor
 - 5. Student disagrees with tutor
 - 6. Student disagrees with others
 - 7. Tutor disagrees with mentor
 - 8. Tutor disagrees with others
 - 9. Tutor disagrees with student
 - c. No disagreement or agreement in evidence**

Ensuring reliability in the content analysis process

Reliability in this study was gained using intra-coder and inter-coder forms of reliability. Accuracy reliability is where a passage of text that is known to have been correctly coded is coded a second time and compared with the correct version. This was rejected on the basis that the principal coder was also the person who developed the schedule and could not, therefore, test himself.

In terms of intra-rater reliability, Coder 1 used the coding scheme to code a passage of transcript and returned to the same text, re-coding it, after three months. The results of this process are detailed in Chapter 7 which details the Phase 2 results. In order to assess inter-rater reliability, Coder 2 agreed to implement the coding rules on an extract of the transcript. This was also coded by Coder 1 and reliability assessed using Cohen's *kappa*. Further amendments were made to the coding schedule, followed by further re-coding by both coders, and a second and improved reliability score was produced. These results are shown in detail in Chapter 7.

5.5 Summary

In this chapter I have set out a research design which satisfies the requirement for robust case study construction and details the data-gathering tools used at each stage of the research process. The chapter also sets out the ethical considerations and dilemmas for a study of this kind and discusses how this study addresses these critical issues. I then set out the data-gathering issues and processes for both phases of the study and, finally, conclude with a detailed description of the content analysis schedule, used as a central data-gathering approach. The next chapter looks at the results gathered from Phase 1 of the study.

THE RESULTS AND FINDINGS OF THE PHASE 1 STUDY

6.0 Introduction

In this chapter I discuss the results and findings of the Phase 1 questionnaire to student-teachers. The chapter begins with an analysis of the cohort to which the questionnaires were sent and compares this with the respondent profile. It looks at the priorities given by student-teachers with differing profiles, and at other issues and tensions that these perceived differences do, or do not create. During this phase of the study I address the questions shown in Figure 12 which were introduced in Chapter 5. The sub-questions for this phase of the research ask student-teachers directly to reflect on each activity system as a way of capturing tensions generated by different orientations to the *object*.

Figure 12: Phase 1 research questions

Phase 1 research questions
<p><i>Main phase 1 research question</i></p> <p>How do student-teachers perceive the complexity of contradictory orientations to initial teacher education in practice?</p>
<p><i>Phase 1 sub-questions – linked to activity theory headings</i></p> <p>a) Outcome – Why do PGCE students undertake a PGCE course?</p> <p>b) Object – What do they feel they are doing on a PGCE course?</p> <p>c) Rules – What written or unwritten rules or guidelines are most significant in helping individuals to achieve those aims?</p> <p>d) Communities – Which groups are most significant in helping students to achieve those aims?</p> <p>e) Division of labour – Which individuals are most able to help in student-teacher learning and how?</p> <p>f) Tools – Which physical elements are most significant in helping student-teachers to achieve those aims?</p> <p>g) Opportunities for expansive learning – What tensions and/or contradictions are perceived by student-teachers, and with whom?</p>

6.1 Summary of Phase 1 results

Questionnaires were sent to 562 Open University PGCE students following all of the PGCE subject courses. With one reminder, 235 responses were received, a response rate of 42%. All registered student-teachers, regardless of their length of time on the programme or their route, were sent the questionnaire. The questionnaire returns broadly matched the profile of student-teachers on the PGCE programme. An analysis of the questionnaire returns in terms of each key variable in relation to one another shows that a degree of caution should be exercised when considering each of these variables separately. For example, mathematics and

science responses also accounted for 56% of all responses from male student-teachers so care should be taken as the responses may be either typical of male student-teachers or typical of mathematics and science student-teachers or may be a combination of both.

The summary findings presented in Table 7 show the percentage of respondents who recorded these responses as being either a top- or second-placed priority.

Table 7: Summary questionnaire results

Activity system area	Description	Total (%)	Respondent age range					Sex		PGCE subject					Route while on the PGCE course					
			<25 (%)	25-30 (%)	31-40 (%)	41-50 (%)	> 50 (%)	Female (%)	Male (%)	MFL (%)	Geography (%)	Mathematics (%)	Music (%)	Science (%)	Design and Technology (%)	Pre route (%)	Route 1 (%)	Route 2 (%)	Route 3 (%)	Route 4 – Assessment only (%)
Outcome	To become a good teacher	90	80	89	91	93	81	90	90	93	93	93	78	94	92	100	92	87	80	67
Object	My own teaching	71	80	66	81	64	56	72	69	69	79	64	69	75	71	64	72	73	70	33
Tools	Departmental resources	49	40	46	47	57	38	49	51	25	71	48	58	41	63	29	49	52	60	100
Rule	OU requirements	49	60	46	47	48	63	48	51	50	57	54	44	41	54	36	53	42	40	33
Communities	Your department	72	70	86	73	69	56	74	69	58	64	75	83	67	67	43	72	77	100	33
Division of labour	Your mentor	83	90	86	84	80	75	82	83	95	79	84	83	78	83	64	82	90	80	67

Respondents made comments against each of the question areas as they completed the questionnaire, identifying perceived points of tension. The following brief summary of the findings addresses each activity area heading in turn in order to report the main findings. The *chi square* testing revealed very few statistically significant results: the similarities between sub-groups of respondents far outweighed the differences. It was possible, however, to identify smaller differences and trends which seem to be worthy of further investigation, and these are tentatively reported in this chapter.

Most respondents, however, did not draw attention to any tensions between their perspectives and the perspectives of their mentors or tutors. Each questionnaire had 43 opportunities to comment on tensions. With 235 questionnaire responses this could have resulted in a possible 10,105 comments for analysis. In the event, 255 statements about tensions were made: 2.5% of the total number of opportunities to comment on tensions. These 255 comments were made by a total of 104 respondents: 44% of all questionnaire respondents. One hundred and thirty two of these comments (52% of the total) were made by 19 respondents: 18% of those who noted a perceived tension. The comments that were made form the basis of a categorisation exercise reported in Table 9. In order to develop this table each comment was categorised under each activity system heading and then organised into groups of similar comments. A summary comment which captured each sub-comment was then made and checked against the raw data to ensure that its meaning had been captured. These formed columns beneath each activity system heading. The comments were then arranged into 'orientation' by placing similarly focused summary comments together, and testing the summary comments in other 'orientations' until all of the data had been accounted for. These data formed the rows in the summary table. Finally an 'over-arching' term for each orientation was conceived and tested against each of the sub-headings.

Outcome and object

The questionnaire responses illustrated a significant focus from all groups on the *outcome*, ‘becoming a good teacher’: 90% of all respondents either placed this as first or second in terms of priority. Eighty-three per cent of all respondents focused on ‘improving student learning’ as a desired outcome. Becoming a ‘good’ teacher was identified as a source of tension for six student-teachers as they undertook the PGCE programme. The first point of tension surrounded interpretations of what constituted a ‘good’ teacher. One student commented, ‘Tension has arisen due to definitions by my mentor and tutor as to what constitutes a ‘good’ teacher’ (Route 3/Science/White/Female/31–40 age group). Another student drew attention to the tensions which these different perceptions create in terms of learning to teach: ‘My two mentors had different ideas on how this would be realised ...’ (Route 1/Mathematics/White/Female/41–50 age group). Another tension identified in the responses was the tension between a mentor/tutor who stressed the need pass at a high level and the student-teacher’s whose focus was the desire to pass the course at a threshold level: ‘I feel my tutor is marking me against the perfect teacher – I just want to pass’ (Route 2/Design and Technology/White/Male/ 31–40 age group).

In response to the question concerning the student’s perceived *object* while they were on the course, developing ‘my own teaching’ was prioritised top or second by 71% of respondents, with developing ‘pupil learning’ prioritised by 61%. The standards for QTS also formed a significant focus for the respondent sample: 42% placed it as first or second priority. More males than females (56% compared to 35%) considered this to be a priority, as did those with more prior experience and more in-course exemption (Route 1, 38%; Route 2, 44%; Route 3, 50%; Assessment Only, 67%.) The standards for QTS were also referred to as a

source of tension in the additional comments returned on the questionnaire. Respondents commented on the tensions created between themselves and the university, between themselves and government requirements and between themselves and their school placements as they steered a way through the course and managed the requirement to gather evidence of attainment.

Student-teachers commented on the perceived tension between the requirement that the standards were demonstrated and the student's declared focus on pupil learning: 'while [they are] extremely important to me, the education of the pupils I teach is what I feel I am in the school ... for' (Route 1/Science/White/Female/ 25–30 age group). The following comments underline this point:

I felt that my teaching was dominated by getting evidence to match the QTS standards rather than doing what was best for the learning of the pupils.

(Route 1/Science/White/Female/ 41–50 age group)

Course materials are designed to tick off government requirements rather than to improve teaching skills.

(Route 1/French/White/Female/41–50 age group)

I understand the OU is merely implementing DfES policy but ...

(Route 1/Geography/White/Male/ >50 age group)

For these student-teachers, the standards for QTS (DfES, 2002) became in activity theory terms the '*object*' rather than a '*tool*' and, as they saw it, deflected from the primary purpose of teaching and learning.

Module study was considered to be the least significant '*object*' by most students, with 13% overall placing this as either the top or second priority. As the age group of respondents increased, module study became more important (Under 25, 0%; 25–30, 9%; 41–50, 12%; over 50, 31%). The role of the school-based mentor in relation to module study emerged as a

tension of '*division of labour*', where student-teachers expected mentor engagement with theory rather than sharing and reflecting on practice:

Mentors did not always appreciate the benefit of the 'theory' side of the [OU] course.

(Route 1/Science/White/Female/ 31–40 age group)

[My] mentor [was] often not keen to discuss theory; preferred to focus on practice.

(Route 1/Science/White/Female/31–40 age group)

The fact that student-teachers expected mentors to be engaged with 'theory' is interesting, as this was not articulated in the official description of the role articulated in the PGCE Handbook (see Appendix B).

School-based activities, which develop ideas introduced in modular study, were also a focus of perceived student-teacher tension. One respondent commented:

While my mentor has been very supportive of ideas in the course, I have found difficulties in working with some teachers in that they view some of the activities (especially those which may involve them!) as a waste of time!

(Route 1/Science/White/Female/31–40 age group)

These last three comments draw attention to boundary tensions between the student-teachers' perceptions of the mentor role and the mentors' perceptions of the role. The school-based activities, which include observation of experienced teachers, also highlight possible points of tension between the university and school activity systems or orientations to initial teacher education. One student noted, for example, 'My mentor wants me to get out there and teach and not waste time observing' (Route 1/Maths/White/Female/31–40 age group). Student-teachers' also perceived that their mentors wanted them to 'get on with the teaching' using them as a resource to improve the learning of their pupils. One student-teacher, for example, commented, 'My mentor's aim is to use the help that I can offer to help students' (Route

2/Spanish/White/Female/41–50 age group). Some student–teachers were also driven by the need to make a contribution to the department; for example, ‘Even though I’m still learning my objective is to be a valuable asset to the Maths department’ (Route 1/Mathematics/Mixed/Male/41–50 age group). Sometimes, student-teachers believed, mentors were worried about the possible negative impact of student-teachers’ teaching: ‘My mentor’s concern is to make sure that exam results are high and this has caused some tensions’ (Route 2/Maths/Black/Female/31–40 age group).

Rules

The questionnaire returns showed that ‘OU requirements’ (49% of respondents placing this as first or second priority) followed by ‘QTS standards’ (45% placing this as first or second) are the most significant rules supporting the multiple activity systems. More males than females put ‘QTS standards’ as their first or second priority (56% male, 35% female). Most tension in this area was perceived to have been created by Open University requirements as well as by the school or department’s requirement to teach according to schemes of work and to minimise the disturbance to teaching caused by the student-teacher. One student-teacher commented, ‘[My] mentor/school required me to follow lesson plans and schemes already set out so as not to cause disturbance. This does not fit in easily with course requirements’ (Route 1/D & T/White/Female/31–40 age group).

Practice and the resources to support it, in schools, also forms a set of implicit rules which student-teachers found difficult to address:

Knowing when it is appropriate to question and challenge teaching practice – strategies, tactics, approaches, methodology in your partner school [based on personal views and module study] can be difficult. There never seems to be enough time to plan and develop ideas and explain why I want to do things/try things in a different way. [I] sometimes feel that my creativity's limited by resource including [a] textbook-led approach. I sense pupils' boredom and share their views!

(Route 1/French/White/Female/31–40 age group)

This student-teacher recognised the tensions caused between school-based ideas and, in this case, more creative possibilities discussed in the university materials, but found it difficult to change this context and appeared to manage the situation by compliance.

Tools/resources

The questionnaire respondents commented on the lack of classroom *resources* and the impact this had on completing some tasks, especially those which required the use of ICT equipment. The *tools* and resources used by the department, which are socially and culturally created to act upon their *object*, may also be inadequate to support a student's perception of what is required to act effectively. Equipment for 'practical lessons' in science, for example, was set up to support a specific series of lesson plans and schemes, and it was perceived to be difficult for student-teachers to move beyond the resource or the planned scheme. One student-teacher wrote, 'Equipment for practical lessons was closely tied into the schemes of work. As a result of this, modifying any experiments required a lot of work and equipment' (Route 1/Science/White/Female/41–50 age group).

The resources provided by the school department were identified as the first or second priority by 49% of respondents. The limitation of textbooks, mentioned by a respondent in the previous section, were also a cause of tension as student-teachers attempted to engage the

pupils that they taught: '[They are] old fashioned, prescriptive, repetitive, lack relevance and student appeal (except year 7)' (Route 1/French/White/Female/31–40 age group).

The immediacy of the classroom context, contrasted against the wider issues addressed in university study, were also a cause of tension. Boundaries between the university and the school were mentioned as sources of tension by respondents:

There is an unseen tension between immediate delivery of [the] scheme of work and higher wider considerations in modules.

(Route 1/Maths/White/Female/41–50 age group)

What you study in the modules is often contrary to department practice.

(Route 2/Music/White/Female/25–30 age group)

Comments on the responses also drew attention to the Open University lesson planning pro forma. As an item that crosses from the university setting into the practice setting, from one activity system to another and crossing boundaries, it can be viewed as a boundary object. Comments on the responses indicated that as it moved from one system to another it changed from being a *tool* to a *requirement*, and one that is not perceived to be very helpful. One student-teacher commented, 'The OU lesson planning pro forma is a requirement, not an aid' (Route 2/Maths/no data/Male/<25 age group).

Other comments drew attention to the role that the government strategies play in the teaching and learning process. A key resource for one respondent was the Key Stage 3 National Strategy (DfES, 2005): '[I am] impressed by the resources available from the government' (Route 3/Maths/White/Female/ >50 age group). While these were not specifically identified by respondents as causing tensions, they do perhaps draw attention to a governmental orientation, which is separate but linked to the standards for QTS (DfES, 2002).

Communities

The most significant *community* for all respondents was the host department; 72% overall placed this as either first or second in the order of priority. The percentage of those who had this as a priority reduced with age (except for the under 25 age group) and was more important for female students (74%) than for male students (69%). Comments made in the question also blurred the boundaries between the *community* and the *division of labour*. The school department, as a community, was sometimes perceived to offer divergent views about effective teaching: ‘Different teachers have their own preferred style of teaching and classroom control. I found that many expected me to conform to their styles in their lesson and this influenced the way I taught some lessons’ (Route 1/Science/White/Female/41–50 age group). This last comment illustrates the complexity of the school setting. Student-teachers in some schools were expected to conform to the styles of others and this became a *rule*. When the *object* is to replicate existing teaching, copying behaviour becomes the main mode of enculturation – a division of labour.

Tensions were also evident in the amount of time schools were prepared and able to spend supporting student-teacher learning. The following comment drew attention to these demands but touched on division of labour and the purpose of the process of initial teacher education discussed earlier in this chapter:

The science team are very good to work with. My mentor is excellent when I see him, but he has VERY LITTLE TIME to spend. The school situation means I am teaching 14 x 50 minutes lessons/work and am responsible for all the groups – marking books, tests, parents’ evening. The mentor/coordinator have barely enough time to observe my lessons.

(Route 2/Science/White/Female/>50 age group)

Differences in approach between the partnership communities, which also relate to purpose and division of labour, were also a source of tension for some student-teachers. One wrote:

Personally, I think I would have benefited from more time in school carrying out observations. Although the OU suggests observations are carried out – school prefers teaching to begin as soon as possible with very limited observations.

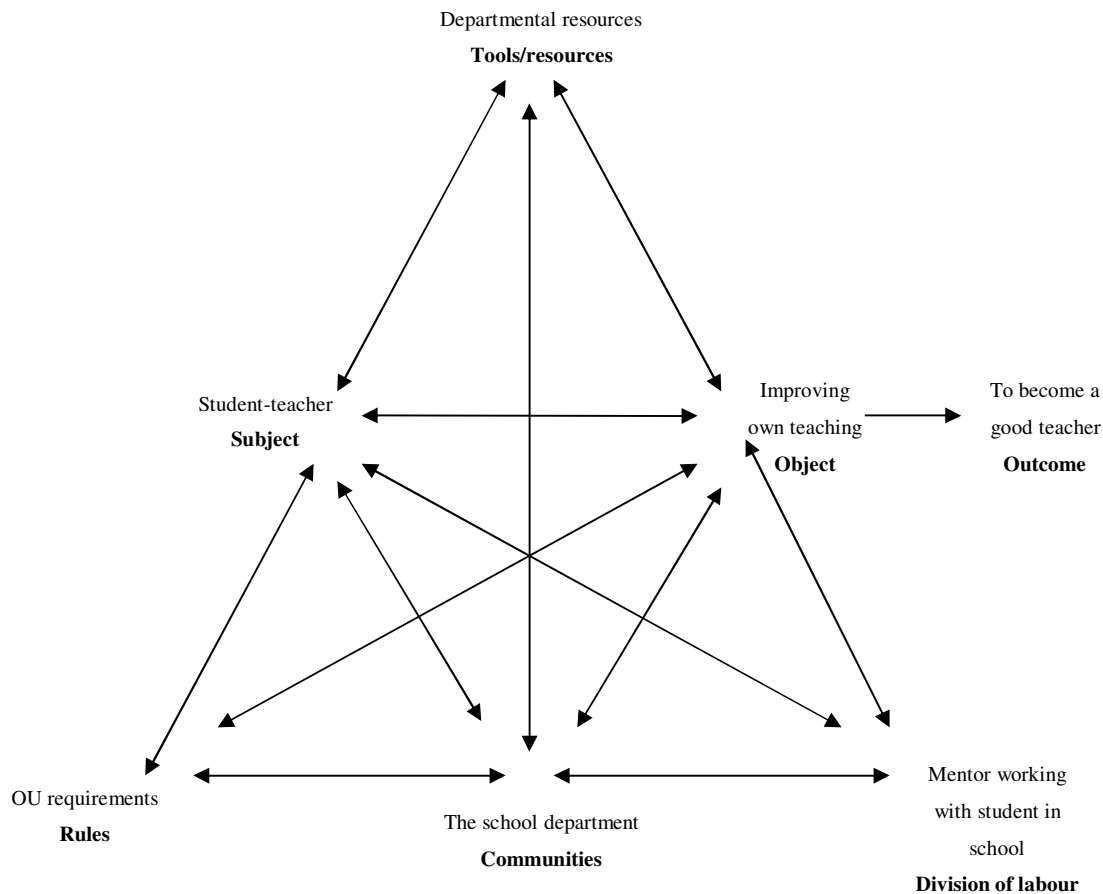
(Route 1/Science/White/Female/31–40 age group)

Division of labour

For all student groups, the mentor was the most significant person involved in the programme (83%) followed by the OU tutor (45%), and comments on the questionnaires were extremely positive about the roles that both the mentor and tutor play in the programme. Other comments reported how the classroom context offered opportunities and restrictions and support the perception that different orientations to teaching shape and are shaped by resource. One respondent drew attention to the role that assessment plays in shaping a particular type of relationship: ‘I have learned to please my tutor at the expense of effective teaching – it’s an assessment game’ (Route 2/D & T/White/Male/31–40 age group).

The responses to the questionnaire indicate that the orientation shown in Figure 13 predominated.

Figure 13: A typical orientation to teaching using activity system headings



Importantly, the questionnaire results show that there are many student-teachers who did not share this orientation. Responses by age group, sex, subject and route through the course show substantial minorities of students who did not place any of these areas as either first or second in terms of priority. The questionnaire responses illustrate tension as student-teachers responded, or did not respond, to sometimes complementary and sometimes conflicting advice and requirements. The comments made on the questionnaires offer some clues as to where these tensions can be seen: between the OU and the school; between the OU

and the student; between the student and the school; and in some cases between multiple orientations operating within one setting.

6.2 An emerging picture from the Phase 1 investigation

It is now possible to identify common threads between some of the tensions raised in the questionnaires and to start a process of categorisation of student-teacher orientations and their perceptions of the orientations of others. It is important to note that it is a provisional contention that these orientations are not mutually exclusive but can be engaged in simultaneously by individuals or groups involved in the programme and that they can change over time. Some student-teachers may also be engaging in orientations to initial teacher education that have not been uncovered by this scoping questionnaire. The next section in this thesis takes the tensions that have already been discussed and speculates on the different types of orientation which might create such tensions; for example, some student-teachers complain about the tensions created by school demands to become immersed in teaching quickly. The speculation that follows is that the school is prioritising the teaching of pupils as opposed to student-teacher learning, and will scaffold this with certain tools, rules and ways of dividing the training tasks. Tensions which sit in this cluster relate to the inadequacy of university study in helping the student-teacher to prepare for the act of teaching, or in misunderstandings about the division of labour, with expectations that the mentor will have a full understanding of the modular materials. So, the student-teacher perception is that the school and university are promoting different *objects*, in activity theoretical terms, which are a potential source of tension.

The 'student-teachers as learners' orientation

Student-teachers noted in their responses that there is a requirement for module study and related activities, which should be carried out in the school setting. Observations form an important part of these activities. Student-teachers claimed that completing these activities created tension, and perceived that this is because the school did not have sufficient time to allow these, or they are not valued, or because structural elements such as resources, schemes of work or textbooks would not permit deviation from the normal school teaching timetable.

The 'needing to pass the course' orientation

Student-teachers who wanted to 'just pass' identified tensions with others who wanted them to become 'good' teachers. With the additional complexity that there appeared to be many different versions of what constitutes a 'good' teacher. For student-teachers with this perspective, the process of completing the course was an 'assessment game', often at the sacrifice of a preferred way of teaching or working. This was directed either at university requirements and assessment or at the school. Key tensions between this orientation and others concerned the use of resources; for example, tensions were noted between the Open University requirements and the realities of the school situation, or involved accepting 'old-fashioned' textbooks as a teaching tool in order to gain approval from the school and to pass the course.

The 'becoming one of them' orientation

Key tensions caused by this orientation were highlighted in terms of the division of labour, with students engaging in teaching earlier than was expected by the programme and engaging with activity which resulted in a replication of the teaching in the department. This

was done through adherence to the tools and rules of the department and acceptance into the community. Edwards et al. (2002) characterise this sort of engagement – student-teachers behaving ‘as if’ they are the teacher: they act as ‘proxy teachers’ (Edwards & Protheroe, 2004).

The ‘implementing government policy’ orientation

The standards for QTS (DfES, 2002) were addressed on the OU PGCE by the OU/school partnership and it was this provision, inspected by Ofsted (2002), which allowed the continuation of PGCE programmes in England. Other governmental initiatives, such as the National Strategies (DfES, 2005), also fall into orientation. Student-teachers responded that government standards and, by proxy, university study materials, were over-prescriptive, time-consuming and deflected from the primary purpose of teaching. One respondent also commented that the government resources and Key Stage 3 National Strategy, for example, were valuable resources for learning on the programme.

The ‘being useful’ orientation

This orientation places pupil learning or attainment at its core and sees student-teachers as a useful resource to enhance pupil learning or as a threat to pupil learning if they fail to teach according to departmental expectations. Tensions in this orientation were seen mainly in relation to the mentor concern for pupil learning, placing this as an ‘object’ of initial teacher education with the consequent recognition of the student-teacher as a tool. Edwards (1997) noted that student-teachers are often treated as ‘guests bearing gifts’, as additional adults in the classroom with an ambiguous role but one which does not focus on the student-teacher as a legitimate learner, and this has resonance with this orientation.

6.3 Categorisation of orientations

Each of these orientations is highly provisional and is based on the tensions noted by a small minority of student-teachers. Considerably more research is needed in order to explore these categorisations in more detail. It is possible, however, to classify the tensions raised by the respondents along broad themes. Table 8 draws on the evidence provided in the responses to the questionnaires and speculates about the orientations to the PGCE programme which might have created these tensions.

Table 8: Different orientations and their dimensions

Orientation	Object	Tools	Rules	Communities	Division of labour
Student-teachers as learners	The focus of this orientation is on developing teachers as thinking professionals	Modular materials as well as school-based activities and teaching activities are essential tools to assist student-teacher learning	University requirements, which encompass standards for QTS and National Strategies are key guidelines	The university/school partnership forms complementary communities	University tutors focus on helping student-teachers to see the relevance of modular materials in the classroom. Mentors use their knowledge of the context to improve student-teacher learning
Needing to pass	The focus of this orientation is to convince the assessors that a pass grade should be awarded	Those with this orientation appropriate the tools of the assessor community in order to convince them that they have met the assessment requirements	Assessment regulations dominate this activity system	The university/school partnership is seen as discrete, with assessors 'played off' against each other	Individuals or groups carry out their assessment functions but are manipulated by other members
Becoming one of them	The focus of this orientation is to become enculturated in the school community	Departmental schemes of work, lesson plans and often linked resources are used as if the student is a teacher	School and department rules predominate	The school department is seen as the most important community member	This is characterised by early attempts at class teaching, minimal observation and prescriptive advice and guidance
Implementing government policy	Meeting government requirements, either the standards for QTS or delivery of the National Curriculum or National Strategies, forms the focus for this orientation	The standards for QTS are an important tool, as are the National Curriculum and National Strategies	Standards for QTS, National Curriculum and National Strategies as well as university and school documentation and requirements support this delivery	The government, by proxy, through the university/school partnership is important	Governmental resources are used by the partnership in order to aid delivery
Being useful	The focus of this system is on pupil learning and/or attainment	The student-teacher is seen as a resource in this model	Improvements in pupil learning, often through meeting teacher-set targets or through assessment mechanisms, support this system	The school pupils and parents form part of the community as those who are served by this system	The mentor acts as a gatekeeper allowing the student to contribute or not, depending on the impact on pupil learning

6.4 Summary

This phase of the research had the following research question: How do student-teachers perceive contradictory orientations to initial teacher education and the complexity which this creates? In order to address this question and to identify the hypothetical potential for ‘expansive learning’ (Engeström, 2001), activity theoretical headings were used to frame a questionnaire. Sub-questions a to f (see Figure 12) have been addressed in detail through this chapter, but sub-question g, which relates to the potential for expansive learning and the main Phase 1 research question, has been left until now. The data drawn from this questionnaire supports the notion that there are multiple and synchronous orientations at play when student-teachers learn to teach. Even though most student-teachers appear to share the same socially created construct in terms of their priorities, a considerable minority have different preoccupations, and although all sub-groups analysed share the same over-riding priorities, there seem to be some minor differences when the responses are looked at by age, sex, subject and route on the programme. The consequences are that some student-teachers, and those who support them, are synchronously engaged in multiple and changing perceptions of what learning to teach is about, and that for a substantial number of these student-teachers, when the others who are involved in their programme are not engaging in a way which matches their own orientation, this is a cause of tension.

The vast majority of student-teachers, however, identify no tensions despite the complexity of orientation discussed in Chapter 2. There are three possible reasons for the lack of perceived tension, of the sort noted by Knight (2007) in his discussion of the assessment of ‘wicked competences’:

1. that the questionnaire was not 'fit for purpose'
2. that there really are no tensions between student-teachers and other participants involved in their initial teacher education and that it was incorrect to speculate that this was the case
3. that there was a degree of 'false consciousness' among student-teachers who did not see contradictions which were manifest in practice.

Given the responses of some student-teachers, that there were indeed tensions, it seemed likely that the questionnaire format did allow respondents to record contradictions, and so the second and third reasons seem more likely. Given that this is the case, further fine-grained study is required which looks at what students, their mentors and their tutors say and do, and not what they report. With a lack of dissonance or contradiction perceived by most student-teachers in the survey, the opportunities for expansive and systemic learning appear to be limited.

RESULTS OF THE PHASE 2 CONTENT ANALYSIS

7.0 Introduction

The Phase 2 data collection process was undertaken over a twelve-month period and was then analysed using the content analysis process. In the first part of this chapter I detail the inter-rater reliability study for the content analysis process and also provide the results of an intra-rater reliability exercise. The second part of the chapter looks in detail at the summary results of the content analysis from each of the four case studies. Detailed results are included in this chapter and show the unit-by-unit categorisation against each dimension. Figure 14 shows the research questions for this phase of the study with linked sub-questions addressing the study's over-arching research question. The analysis is in two parts: the first quantifies the 'third space' (Gutierrez et al., 1995) discussions; and the second, in the next chapter, contextualises these data within the four case studies using the theoretical perspectives discussed in Chapter 3.

Figure 14: Phase 2 research questions

Phase 2 research questions
<p><i>Main Phase 2 research question</i></p> <p>What learning opportunities are offered to students in schools when they discuss practice with their mentor and tutor?</p>
<p><i>Phase 2 sub-questions</i></p> <p>In the context of cases which frame the analysis by identifying the orientations of the participants to music initial teacher education and to music teaching in general, this phase asks:</p> <p>a) In teaching conversations between participants, how, when, by whom and in what circumstances are different sources drawn on?</p> <p>b) How are tensions, contradictions, disagreement or agreement handled during these conversations?</p> <p>In order to answer these questions this phase focuses on two three-way conversations about teaching between a mentor, student-teacher and tutor, and asks:</p> <ul style="list-style-type: none">– Who is talking?– What are they talking about?– What sources do they draw on in these conversations?– What tensions are apparent in these conversations?– What agreement or disagreement can be observed in these discussions?

7.1 The content analysis reliability study

A recording of a ‘planning’ interview conducted at Greenfield School was transcribed and then analysed by me, hereafter called Coder 1, using the protocol developed and presented in Chapter 5. Coding for the content analysis was completed and analysed using NVivo

software². The same transcription was provided to Coder 2, who conducted a content analysis of the interview transcription following the rules set out in the protocol. Coder 2 analysed a substantial section of this recording (1357 words) which presented opportunities to code from a variety of categories within each dimension. The data gathered from both analyses were compared and analysed using a variety of statistical methods³. PRAM (program for reliability assessment with multiple coders) software developed by Neuendorf and her content analysis students at Cleveland State University was used for this purpose.⁴ Table 9 provides a summary of these analyses.

Table 9: A summary of the result of the initial reliability study

	Dimension 2	Dimension 3	Dimension 4	Dimension 5	Dimension 6	Dimension 7	Average
Percentage agreement	0.79	0.90	0.88	0.69	0.79	0.97	0.88
Holsti's coefficient of reliability							0.88
Cohen's kappa	0.37	0.29	0.14	0.30	-0.01	0.37	0.24

² NVivo is a qualitative software package which can be used to analyse and quantify qualitative data.

³ The researcher applied the tests of percentage agreement (where results range from 0.00 – no agreement – to 1.00 – perfect agreement), Holsti’s agreement (very similar to percentage agreement with a similar range for reporting) and Cohen’s *kappa*. Although criticised by Krippendorff (2004, pp. 246-249), Neuendorf (2002, p. 150) reports that Cohen’s *kappa* is the most widely used reliability coefficient. It indicates the reliability beyond chance. A value of less than 0.00 indicates agreement that could be achieved by chance only, and a value of 1.00 indicates perfect agreement. *kappa* is criticised because it gives credit only to ‘beyond-chance’ agreement, ‘a tough challenge’ (Neuendorf, 2002, p. 151).

⁴ See <http://academic.csuohio.edu/kneuendorf/content/reliable/pram.htm>

Identifying unit length

The length of the unit presented the most differences between the coders. Coder 2 identified a greater number of units within the extract; whereas the first coder had identified these changes in theme as digressions, for the second coder these emerged as new themes for analysis.

Table 10 shows the level of agreement between Coder 1 and Coder 2. Both Coder 1 and Coder 2 agreed five times on the start and end of a unit. Coder 2 identified a greater number of unit starts and ends: eight more than Coder 1. When a change in speaker is taken as a potential start/end of unit, Coders 1 and 2 agreed 44 times that there should not be a change in unit. This gives an unweighted *kappa* of 0.4911. This means that 49% of the agreement has been achieved 'beyond chance'. This in turn compares with a raw agreement of 49 out of 57, which gives a percent agreement of 86%. Significantly, the table shows that all of Coder 1's decisions about the starts and ends of units were in agreement with Coder 2's decisions. Both coders were in 100% agreement about the starts and ends of these units. The disparity between the two coders appears to rest on the difference between the ways that digression had been coded.

Table 10: Reliability study agreement on length of unit⁵

		Coder 2		
		Yes	No	Total
Coder 1	Yes	5	0	5
	No	8	44	52
	Total	13	44	57

On re-reading the discussion data I was persuaded that the identification of shorter units would be helpful in providing greater fine-grained analysis. A subsequent version of the schedule defined a digression in more precise terms: digression lasting for two or fewer sentences should not be identified as a new unit, whereas digression of three or more sentences should be seen as a new theme.

Who speaks in the unit? (Dimension 1)

This dimension was not subject to the inter- or intra-rater reliability process on the basis that once the length of the unit had been identified, the identification of those who speak in it is an unproblematic process.

Who initiates the unit? (Dimension 2)

The identification of the person who initiates the unit is clearly linked to the initial identification of unit length. When Coder 1’s units were mapped against Coder 2’s responses to this question, we can observe (see Table 9) that there is 79% agreement between both

⁵ Cohen’s *kappa* is derived as follows: The coders agreed 49 times out of 57 times. The expected frequency is calculated by multiplying the row total with the column total and dividing by the overall total $(5 \times 13)/57 + (45 \times 44)/57 =$ Sum expected frequency of 41.28. Number of agreements minus 41.28 = $49 - 41.28 = 7.72$ and gives the number of agreements beyond chance. Divide this by the number of possible correct agreement minus 41.28 = $57 - 41.28 = 15.72$. i.e. $7.72/15.72$ – this gives a *kappa* of 0.49 – a 49% chance that agreement has been reached ‘beyond chance’.

coders and a *kappa* of 0.37. Greater consistency in identifying the length of unit increased reliability in this dimension. No revisions to the schedule were needed to enhance reliability in this dimension.

Who asks questions, and what kind? (Dimension3)

The inter-rater reliability data for this dimension pointed to a high level of agreement (90%), but a low ‘beyond chance’ agreement of 29%. This was due to the high number of variables in the first version of the schedule within this particular dimension. When this dimension is considered closely and those categories for which there is less than 70% agreement are identified, three categories in particular showed the least agreement. Some errors in coding had been made and it was also apparent that Coder 1 was using his knowledge of the interviews and of the recordings to identify when questions were being directed towards certain individuals, where this was not apparent on the transcription.

It became apparent that too much detail was being required by this dimension and not all of it was helpful in answering the research question. As a result, it was decided to reduce the number of categories within this dimension and to focus on the asking of questions. A subsequent revision to the schedule removed some of the more detailed categorisation and made it clear that all elements of speech within the unit should be categorised.

What is being talked about in the unit? (Dimension 4)

With an average of 88% agreement with a low *kappa* of 0.14 due to the high number of variables, this area required a thoughtful alteration to the schedule. When an agreement ‘cut-off’ point of 70% is used, the two variables which were most problematic were 5d (specific practice events) and 5g (school student prior, current and future learning). Careful reading of

the marked transcripts indicated that whereas Coder 1 used 5g, Coder 2 used 5d to code the same text. Both of these categories required re-wording to make the difference between these categories clearer: 5d was now to be used when the conversation refers to specific lessons taught or to be taught ('when I taught this topic', etc.) whereas 5g was to be used to code sections of text that refer to student learning ('they need to learn ...')

What sources of knowledge are being drawn on? (Dimension 5)

Inter-rater reliability in this dimension showed agreement of 0.69 with a *kappa* of 0.3. Problematic variables (when an agreement point of 70% is used) were: 6a, 6b, 6d and 6e. The low level of agreement in this dimension was caused by Coder 2 linking text to 6e (source not identifiable) when Coder 1 linked the same text to 6a (a combination of sources). The reason for this difference appeared to be Coder 1's 'interpretation' of an apparent source, where he tried to 'read' the source into a comment. Coder 1 was persuaded that this level of subjectivity is inappropriate and subsequently clarified the text to ensure that this was expressly prohibited.

Are there any tensions or contradictions between sources or understanding? (Dimension 6)

With agreement of 0.79 and a *kappa* of -0.01 this was the least 'reliable' of the dimensions. A *kappa* of less than 0 indicates that chance allocation of categories would yield greater consistency. Of these, 7aiii, 7biii and 7c were the most unreliably allocated categories: 'recognised tensions with university ideas', 'unrecognised tensions with university ideas' and 'no tensions apparent'. There appeared to be two main sources of disagreement. First, Coder 2 more readily allocated 'no tensions apparent' than Coder 1, who identified possible tensions with course materials and with practice. The second area of confusion lay in the options for

categorisation which did not allow for the identification of the perspective: whose personal theories and whose practice were in tension with what?

A subsequent version of the schedule provided greater clarification around the identification of possible or actual tension and provided the option to record the perspective of the tension: what is in tension with what?

Do the participants show agreement/support or disagreement/contradictory comment?

(Dimension 7)

This was the final dimension in the content analysis and showed agreement of 97% and a *kappa* of 0.37. The category within this dimension with less than 70% agreement was 8c, ‘no disagreement or agreement in evidence’. The apparent reason for this disparity seemed to lie in Coder 2’s allocation of one category over a unit, whereas Coder 1 opted for multiple coding. Some clarity over the detail required by the coding was made in a subsequent schedule in order to minimise disagreement in this dimension.

Conclusions of the first inter-rater reliability test

The inter-rater reliability exercise showed areas of the schedule which required further revision before more coding took place. In particular it identified the determination of the unit length as a key factor which affected analysis within the other dimensions: identifying where a unit starts provided a ‘key’ when considering what is being talked about and what sources are being drawn on. Greater clarity about the distinction between a new unit and digression within an existing unit helped to resolve this issue.

The second inter-rater reliability test and intra-rater reliability test

Coder 1 revised the schedule and re-coded the discussion transcript using the revised rules. He then coded a new extract and Coder 2 coded a section of extract of this. Further analysis took place to assess the level of agreement between the two coders. Using the revised rules the inter-rater agreement shown in Table 11 was achieved.

Table 11: Inter-rater agreement following revised rules

Percentage agreement	0.976
Holsti's coefficient of reliability	0.976
Cohen's kappa	0.774

The second inter-rater agreement, showing a Cohen's *kappa* of 0.774, represents what is commonly agreed to be a high level of intercoder reliability (Neuendorf, 2002, p. 143). Using the new rules, Coder 1 also completed an intra-reliability exercise, coding a third extract and then re-coding after an interval of three months. See Table 12 for a summary of the results of the intra-rater reliability testing.

Table 12: The intra-rater reliability results following the schedule amendments

Percentage agreement	0.99
Holsti's coefficient of reliability	0.99
Cohen's kappa	0.898

A Cohen's *kappa* of 0.898 signifies that there is a 90% chance that these results have been achieved 'beyond chance'. A *kappa* at this level suggests a very high level of intra-rater agreement and a high level of confidence in the integrity of the content analysis data.

7.2 Results of the content analysis

The summary results⁶, shown in Table 13 present the percentage of units in which each category appears in each of the four studies and as a total in all four cases. These data are presented again showing the *number* of categorised units in each case, and collectively, in Appendix F as Table 39. The coding method has previously been described in this thesis and the schedule is included as Appendix E. These results are included within the thesis for ease of reference. This table shows the percentage number of units which relate to each category. For example, the top-right figure indicates that mentors are engaged in 48% of units. Moving down this column three rows, the analysis shows that mentors initiated 27% of the units. These percentages are a result of counting the number of occurrences for each participant in each category and expressing this figure as a percentage of the number of units identified during that session. For example, the mentor contributes to 46% (the top-left figure) of units during the planning conversation at Brookside School. This is derived as follows: There are 79 identified units in this session (see Table 17). Table 39 in Appendix F shows the mentor engaging in 36 of these units: $36/79 \times 100 = 46\%$. Each cell is calculated on a similar basis.

⁶ Note: percentages have been rounded to the nearest whole number

Table 13: Summary results of the unit content analysis⁷

			Brookside planning total percentage (%)	Brookside post-lesson total percentage (%)	Castle Town planning total percentage (%)	Castle Town post-lesson total percentage (%)	Greenfield planning total percentage (%)	Greenfield post-lesson total percentage (%)	Middlewich planning total percentage (%)	Middlewich post-lesson total percentage (%)	Total percentage (%)
Involvement		Mentor	46	39	49	34	50	48	62	53	48
		Student	84	63	94	78	93	80	63	29	75
		Tutor	71	57	72	90	73	68	54	57	68
Initiator		The mentor	29	28	20	14	28	32	30	35	27
		The student-teacher	18	24	41	36	31	26	27	18	29
		The tutor	53	48	38	50	41	42	43	47	45
Asking questions	Open	Mentor asks 'open' question	1	0	3	9	4	0	0	0	2
		Student-teacher asks 'open' question	0	0	4	2	6	2	0	1	2
		Tutor asks 'open' question	0	2	6	10	8	0	6	0	4
	Closed	Mentor asks 'closed' question	13	2	7	2	6	2	5	4	6
		Student-teacher asks 'closed' question	3	4	6	3	13	6	6	1	6
		Tutor asks 'closed' question	37	4	9	21	22	4	17	7	16
		No question asked	46	87	63	53	57	86	65	85	66

⁷ Note: this table continues over four pages

		Brookside planning total percentage (%)	Brookside post-lesson total percentage (%)	Castle Town planning total percentage (%)	Castle Town post-lesson total percentage (%)	Greenfield planning total percentage (%)	Greenfield post-lesson total percentage (%)	Middlewich planning total percentage (%)	Middlewich post-lesson total percentage (%)	Total percentage (%)
What is being spoken about in the unit	'Being a teacher'	0	20	1	5	0	2	2	3	3
	Developing and maintaining relationships	0	7	2	10	0	2	0	0	2
	Planning and teaching and pupil assessment strategies	37	22	43	24	35	30	27	43	34
	Practice (specific teaching and learning events)	51	26	40	28	49	46	29	41	40
	Resources for teaching and learning	9	4	3	2	1	2	19	0	5
	Rules, regulations, requirements	1	2	0	5	5	0	17	6	3
	School student prior and future learning	3	13	1	2	5	4	5	3	4
	Solving 'in the moment' teaching problems	0	0	1	0	0	4	0	0	1
	Student-teacher assessment	0	0	0	0	0	4	6	4	2
	Student-teacher learning	0	4	4	17	0	0	0	0	3
	The research process	0	0	1	0	3	0	0	0	1
	Theories (a generalised view of practice)	0	0	3	3	6	0	2	0	2
	None of these	0	2	2	3	0	6	2	0	2
	Sources	Combination of sources	3	0	0	0	4	2	0	1
Personal experiences or theories		23	48	17	17	38	34	13	24	24
OU-based		0	0	0	0	3	4	3	4	4
School-based		24	22	17	22	9	6	32	40	21
Source not apparent		51	30	66	60	49	54	52	34	52

		Brookside planning total percentage (%)	Brookside post-lesson total percentage (%)	Castle Town planning total percentage (%)	Castle Town post-lesson total percentage (%)	Greenfield planning total percentage (%)	Greenfield post-lesson total percentage (%)	Middlewich planning total percentage (%)	Middlewich post-lesson total percentage (%)	Total percentage (%)	
Tensions	Recognised	1) with personal theories									
		a) of the mentor	0	0	0	0	4	0	0	0	1
		b) of the student	0	0	4	0	4	0	0	0	1
		c) of the tutor	1	2	0	0	5	0	0	0	1
		2) with practice									
		a) of the mentor	0	0	0	0	3	0	2	0	1
		b) of the student	0	11	12	9	6	26	2	18	10
		c) of the tutor	1	2	0	0	1	0	0	0	1
		3) with university ideas	1	4	2	5	5	2	0	0	2
	Unrecognised	1) with personal theories									
		a) of the mentor	0	0	0	0	1	0	0	0	0
		b) of the student	0	0	4	0	0	0	0	0	1
		c) of the tutor	0	2	0	2	0	0	0	0	0
		2) with practice									
		a) of the mentor	1	0	0	0	0	0	0	0	0
		b) of the student	0	0	0	0	0	0	0	0	0
		c) of the tutor	0	0	0	0	0	0	0	0	0
3) with university ideas	6	7	6	10	11	14	11	6	9		
No tensions apparent		89	72	71	72	60	58	86	76	73	

			Brookside planning total percentage (%)	Brookside post-lesson total percentage (%)	Castle Town planning total percentage (%)	Castle Town post-lesson total percentage (%)	Greenfield planning total percentage (%)	Greenfield post-lesson total percentage (%)	Middlewich planning total percentage (%)	Middlewich post-lesson total percentage (%)	Total percentage (%)
Agreement or disagreement	Agreement or support	Mentor agrees with others	0	0	0	0	0	0	2	0	0
		Mentor agrees with student	3	4	3	3	0	2	2	3	2
		Mentor agrees with tutor	4	0	4	5	8	4	2	7	4
		Student agrees with mentor	5	9	5	0	9	10	3	3	5
		Student agrees with others	1	0	1	3	0	0	0	0	1
		Student agrees with tutor	18	13	15	5	15	22	8	6	13
		Tutor agrees with mentor	1	2	5	3	4	8	3	9	4
		Tutor agrees with others	0	2	0	0	0	0	0	0	0
		Tutor agrees with student	5	2	8	12	4	4	2	1	5
	Disagreement or contradiction	Mentor disagrees with others	0	0	0	0	1	0	0	0	0
		Mentor disagrees with student	0	2	1	0	4	0	0	0	1
		Mentor disagrees with tutor	1	0	0	0	1	0	2	0	1
		Student disagrees with mentor	0	0	0	0	3	0	0	0	0
		Student disagrees with others	0	0	0	0	0	0	0	0	0
		Student disagrees with tutor	0	2	2	0	1	0	2	1	1
		Tutor disagrees with mentor	0	0	0	0	0	0	0	0	0
		Tutor disagrees with others	0	0	0	0	0	0	0	0	0
		Tutor disagrees with student	0	0	2	0	4	0	0	0	1
	No agreement or disagreement being made		62	63	57	67	59	50	76	70	63

Table 14 shows the *content* of the units to which each participant made a contribution in both the planning and post-lesson discussion. For example, the mentor at Brookside School made a contribution to 46% of all units in the planning session. This can be seen by looking at the top-left figure in Table 13. The figures in the top row in Table 14 show the content of the units to which the mentor contributed: the 46% of units comprised 18% (planning), 22% (practice) and 6% (resources). Each row follows the same format; so of the 84% units to which the student contributed during the planning session (see Table 13), 27% were concerned with ‘planning’, 44% with ‘practice’, 9% with resources, 1% with ‘rules’ and 3% with ‘school student prior learning’ ($27\% + 44\% + 9\% + 1\% + 3\% = 84\%$).

Table 14: An analysis of unit content during the planning and post-lesson discussion⁸

		Being a teacher' (%)	Developing and maintaining relationships (%)	Planning and teaching and pupil assessment strategies (%)	Practice (specific teaching and learning events) (%)	Resources for teaching and learning (%)	Rules, regulations, requirements (%)	School student prior and future learning (%)	Solving 'in the moment' teaching problems (%)	Student-teacher assessment (%)	Student-teacher learning (%)	The research process (%)	Theories (a generalised view of practice) (%)	None of these (%)
Brookside planning	Mentor	0	0	18	22	6	0	0	0	0	0	0	0	0
	Student	0	0	27	44	9	1	3	0	0	0	0	0	0
	Tutor	0	0	25	37	5	1	3	0	0	0	0	0	0
Brookside post-lesson	Mentor	7	0	15	11	2	2	2	0	0	0	0	0	0
	Student	11	4	13	24	2	0	7	0	0	0	0	0	2
	Tutor	13	7	7	11	2	2	9	0	0	4	0	0	2
Castle Town planning	Mentor	1	2	21	19	1	0	1	0	0	2	0	1	1
	Student	1	2	42	39	3	0	1	1	0	4	0	2	1
	Tutor	1	2	36	22	2	0	1	1	0	3	1	3	2
Castle Town post-lesson	Mentor	3	5	2	12	0	3	0	0	0	3	0	2	3
	Student	5	10	17	19	0	2	2	0	0	17	0	2	3
	Tutor	5	10	24	26	2	3	2	0	0	16	0	2	0
Greenfield planning	Mentor	0	0	14	26	0	4	1	0	0	0	0	6	0
	Student	0	0	29	46	1	5	5	0	0	0	3	4	0
	Tutor	0	0	30	29	1	4	4	0	0	0	3	4	0
Greenfield post-lesson	Mentor	0	2	14	26	0	0	0	0	0	0	0	0	6
	Student	2	2	22	38	2	0	4	2	2	0	0	0	6
	Tutor	2	2	18	30	2	0	4	4	4	0	0	0	2

⁸ Note: this table continues over two pages

		Being a teacher' (%)	Developing and maintaining relationships (%)	Planning and teaching and pupil assessment strategies (%)	Practice (specific teaching and learning events) (%)	Resources for teaching and learning (%)	Rules, regulations, requirements (%)	School student prior and future learning (%)	Solving 'in the moment' teaching problems (%)	Student-teacher assessment (%)	Student-teacher learning (%)	The research process (%)	Theories (a generalised view of practice) (%)	None of these (%)
Middlewich planning	Mentor	2	0	13	19	16	3	3	0	5	0	0	0	2
	Student	0	0	17	25	10	6	3	0	0	0	0	0	2
	Tutor	0	0	22	11	5	8	3	0	2	0	0	2	2
Middlewich post-lesson	Mentor	3	0	21	22	0	4	1	0	1	0	0	0	0
	Student	0	0	15	13	0	0	1	0	0	0	0	0	0
	Tutor	3	0	22	22	0	3	3	0	4	0	0	0	0
All	Mentor	2	1	15	20	3	2	1	0	1	1	0	1	1
	Student	2	2	23	31	3	2	3	0	0	3	0	1	2
	Tutor	3	3	23	23	2	3	3	1	1	3	0	1	1

Table 15 shows the source of the units to which the participants contributed expressed as a percentage. For example, the mentor during the planning session at Brookside School contributed to 8% of units which were categorised as drawing on ‘personal experiences or theories’ and 16% of units which were categorised as drawing on ‘school-based’ knowledge. The figures in this table are calculated on the same basis as those in Table 14. For example, the mentor at Brookside School contributed to 46% of units (as in the top left-hand figure in Table 13). In the units in which the mentor engaged, 3% are categorised as drawing on a ‘combination of sources’, 8% on ‘personal experiences’, 0% ‘OU-based’, 16% ‘school-based’ and 19% ‘source not apparent’ ($3\% + 8\% + 0\% + 16\% + 19\% = 46\%$). Each row is calculated using the same procedure.

Table 15: An analysis of source by participant during the planning and post-lesson discussion

		Combination of sources (%)	Personal experiences or theories (%)	OU-based (%)	School based (%)	Source not apparent (%)
Brookside planning	Mentor	3	8	0	16	19
	Student	3	22	0	20	39
	Tutor	3	19	0	14	35
Brookside post-lesson	Mentor	0	9	0	11	20
	Student	0	22	0	11	30
	Tutor	0	30	0	13	13
Castle Town planning	Mentor	0	5	0	9	35
	Student	0	16	0	17	62
	Tutor	0	15	0	8	50
Castle Town post-lesson	Mentor	0	7	0	14	14
	Student	0	14	0	21	55
	Tutor	0	10	0	16	52
Greenfield planning	Mentor	3	24	1	6	18
	Student	4	31	1	9	48
	Tutor	4	23	3	5	39
Greenfield post-lesson	Mentor	2	20	0	2	24
	Student	2	20	4	6	48
	Tutor	0	20	4	2	42
Middlewich planning	Mentor	0	11	3	25	22
	Student	0	3	3	21	37
	Tutor	0	3	3	10	38
Middlewich post-lesson	Mentor	1	13	0	32	6
	Student	0	7	0	10	12
	Tutor	1	16	1	10	28
All	Mentor	1	12	1	15	20
	Student	1	17	1	14	41
	Tutor	1	17	1	10	37

Commentary on the content analysis

The content analysis process focused on planning and post-lesson discussions in four schools and in which the school-based mentor, student-teacher and university tutor were present. The transcripts from these sessions amounted to 46,760 words. Table 16 shows the extent of these conversations by word count.

Table 16: Word length of the planning and post-lesson discussions

	Planning	Post-lesson	Total
Brookside	5616	4649	10265
Castle Town	9528	5557	15085
Greenfield	8003	3717	11720
Middlewich	5003	4687	9690
Total	28150	18610	46760

The conversations were divided into the numbers of units shown in Table 17.

Table 17: The number of identified units in each case study

	Planning	Post-lesson	Total
Brookside	79	46	125
Castle Town	108	58	166
Greenfield	80	50	130
Middlewich	63	68	131
Total	330	222	552

The extent of the planning and post-lesson conversations varied between each of the case study departments. External factors such as the school timetable affected the length of time available for these discussions but in each case the conversation came to a ‘natural’ end

with participants agreeing that the meeting had run its course. The content analysis process enumerated data drawn from conversations between mentors, students and tutors, as a method of answering the main research question for this phase of the study: what learning opportunities are offered to students in school when they discuss practice with their mentor and tutor? In particular the content analysis identifies:

- who is talking
- what they are talking about
- what sources they draw on when talking
- what tensions emerge as they talk
- what agreement or disagreement emerges in these conversations.

The first three dimensions of the content analysis indicate the extent to which each of the participants engage in the planning and post-lesson discussions:

- identifying who participates in each of the units is an indication of the extent to which each of the participants is engaged in the discussion
- identifying who initiates the units indicates which areas are of concern to each of the participants and who is leading the conversation
- identifying who asks what sorts of questions is a further indicator of the extent of engagement linked to areas of interest or concern.

Participation (Dimension 1)

Over the four case studies the student-teachers engaged in the most units. Participating in 75% of the 552 units, their involvement is higher than the tutors', at 68%, and the mentors' at 48%. This last result is somewhat surprising. As they are planning to teach a lesson in the

mentor's department and talking about it afterwards it might be expected that the mentor would participate on at least the same number of occasions as the university tutor. On only one occasion (Middlewich planning) does the mentor engage in the discussion more than the tutor.

Mentor participant engagement in the conversations varied considerably; from 62% (Middlewich planning) to 34% (Castle Town post-lesson discussion). Student-teacher participation varied from 94% (Castle Town planning) to 29% (Middlewich post-lesson discussion). Tutor participation varied from 73% (Greenfield planning) to 54% (Middlewich planning).

Overall participation in the planning units was generally higher than participation in the post-lesson units, meaning that units were more dominated by a single person in the post-lesson discussion than in the planning discussion. In all cases except for two (the tutor at Castle Town and the tutor at Middlewich) the percentage engagement was lower in the post-lesson discussion. In the case of the student at Middlewich, her engagement in the post-lesson discussion was considerably lower than in the planning discussion with a drop from 63% to 29%. Table 18 compares the average percentage unit participation in each case in the planning and post-lesson discussions.

Table 18: a comparison of engagement in the planning and post-lesson discussions

	Brookside	Castle Town	Greenfield	Middlewich	Average
Planning	67%	72%	72%	60%	67.75%
Post-lesson	53%	67%	65%	46%	57.75%
Difference	-14%	-5%	-7%	-14%	-10%

The variation in the amount of unit participation between case studies and the variation between unit participation in planning and post-lesson discussion pose interesting questions

around the factors which might encourage or inhibit engagement in these discussions. One answer might relate to the nature of planning conversation, in which the participants contributed to each idea or unit and frequently in short bursts, compared with the post-lesson discussion, which frequently took the form of post-lesson feedback, dominated by an individual. Other answers might relate to the context or the particular individuals or with regard to their position in terms of power in relation to the others. These questions are explored more thoroughly in the context of the case studies, where other data are presented.

Unit initiation (Dimension2)

The data that result from an analysis of who initiates the units are also interesting. Given the school-based location of this activity and the fact that the discussion is about planning a lesson in which the student-teacher is taking a leading role, it might be expected that units would be initiated on a roughly equal basis. This is not the case: tutors initiated most units, at 45%; student-teachers initiated 29% of units; and mentors initiated the fewest, at 27% of units. There was an exception in the planning session at Castle Town in which the student-teacher initiated most units: 41%, compared with 38% for the tutor and 20% for the mentor. Tutor initiation increased slightly from 44% in the planning conversations to 47% in the post-lesson conversations, and student-teacher initiation of units fell from 29% to 26% in the post-lesson discussions. Table 19 compares unit initiation during the planning session with initiation during the post-lesson discussion.

Table 19: A comparison of initiation during planning and post-lesson discussion

			Planning percent (%)	Post-lesson percent (%)	Total percentage (%)
Initiator		The mentor	27	27	27
		The student-teacher	29	26	29
		The tutor	44	47	45

As with the participation dimension, above, it is possible to observe variation with each of the groups of participants. Mentor initiation varied from 14% (Castle Town post-lesson) to 35% (Middlewich post-lesson); student-teacher initiation varied from 18% (Brookside planning and Middlewich post-lesson) to 41% (Castle Town planning); tutor initiation varied from 38% (Castle Town planning) to 53% (Brookside planning). As with participant engagement discussed above, the reasons for these variations may be various and complex and a full consideration can be offered only in the light of a discussion about the context in which these conversations took place.

Asking questions (Dimension 3)

The identification of the number, type and originator of questions in the conversations, I have argued, aids an understanding of who is directing the flow of the conversation and into what areas: asking questions signifies interest and focus. The first observation to make about this dimension of the content analysis is that questions were not asked in 66% of the units. Of

those 34% of units where questions were asked, most questions were asked by the tutor (20%). Both the mentors and student-teachers asked questions in 8% of the units.

There was considerable variation in the numbers and types of questions being asked in each of the case studies. Closed questions, requiring a specific and frequently one-word answer, predominated. In each case study the tutor asked more closed questions than the other participants, except for Brookside post-lesson discussion where the student-teacher asked a similar number (4%). Reasons for this might link to the fact that tutors need to know a considerable amount of information when participating in planning discussions, and it is the case that more closed questions were asked by tutors when planning than were asked in the post-lesson discussion (except at Castle Town), but it is also the case that the tutor at Castle Town asked more closed questions than the others at Castle Town. Table 20 illustrates this point.

Table 20: A comparison between closed questions asked during planning sessions and closed questions asked during post-lesson discussions

	Planning discussion	Post-lesson discussion
Mentor average	8%	3%
Student-teacher average	7%	4%
Tutor average	21%	9%

Asking ‘open’ questions, moving the conversation into unknown areas and possibly signifying an exploration of the ‘third space’, were recorded much less frequently in the content analysis. On average, ‘open’ questions were asked in 8% of the units, with tutors asking most of these types of questions (4%) compared with mentors (2%) and student-teachers (2%). The case studies later address the issue of pace in the planning session and planning for pace in the teaching. The issue of pace appears on several occasions during these

case studies Brief, short questions which drive the planning forward to reach a rapid conclusion and which model an active, fast-moving and engaging teaching style for pupils, can perhaps be seen as a structural device to achieve pace in the discussion.

To summarise these first three dimensions of the analysis: the data present an overall picture which, although containing some variation to be explored in the case studies, shows tutors leading both the planning and post-lesson discussion, participating more than mentors and initiating more units than both mentors and tutors. They ask more questions than the other participants and in the majority these are ‘closed’, possibly signifying the tutor’s intention to direct the meeting with pace and their need to understand the context in order to make a useful contribution. A more detailed consideration of possible reasons behind this pattern will be given in the case study contexts in the next chapter.

What is being spoken about in the unit? (Dimension 4)

There was a focus on practice in 40% of the 552 units: specific teaching and learning events, either in the past, present or future. ‘Planning, teaching and pupil assessment strategies’ were referred to in 34% of the units. Much of the focus of the discussion was, therefore, on pupil activity: ‘What will they do at the start of the lesson?’ ‘What will they do next?’ Other categories within this dimension were also recorded but far less frequently. In all of the discussions except for Middlewich post-lesson, ‘practice’ was the most talked about topic of conversation.

The focus on practice is particularly interesting when set against the data for participation, unit initiation and questioning. As discussed previously, an analysis of these data shows that university tutors are leading a conversation which is essentially about planning for pupils that they do not know. This raises interesting questions about the tutor’s role in relation

to this exercise and might be seen as the tutor demonstrating ‘expert’ teaching credentials.

This is a question which returns when the data are considered in the light of each of the case studies.

Although each category was recorded at least once in the totals, topics other than ‘strategies’ and ‘practice’ tended to be more isolated and linked to specific areas of concern.

The following discussions, outlined in Table 21, stand out from this analysis.

Table 21: Discussions which focus on topic areas that are different from others (>5% difference)

Unit topic	Unusually high number of references to this area	Percentage average of references in the remaining conversations
‘Being a teacher’	Brookside – post-lesson discussion – 20%	2% average in other cases
Developing and maintaining relationships	Castle Town – post-lesson discussion – 10%	2% average in other cases
Resources for teaching and learning	Middlewich – planning – 19%	3% average in other cases
Rules, regulations and requirements	Middlewich – planning – 10%	3% average in other cases
School student prior and future learning	Brookside – post-lesson discussion – 13%	3% average in other cases
Student-teacher learning	Castle Town – post-lesson discussion – 17%	1% average in other cases

Identifying, in detail, why these particular conversations focus on these specific categories will form an important part of the case study analysis and for the remainder of the thesis.

A comparison of the unit topics in the planning session and in the post-lesson discussion shows a decrease in the strategy, practice and resource categories and increases in other areas, perhaps not unsurprising as the discussion moves away from planning to teach.

This, too, provides the basis for more detailed exploration later in the thesis. This is shown in Table 22.

Table 22: A comparison of the topics of conversation between the planning and post-lesson discussion

		Planning percent (%)	Post-lesson percent (%)	Total percentage (%)
What is being spoken about in the unit	'Being a teacher'	1	7	3
	Developing and maintaining relationships	0	5	2
	Planning and teaching and pupil assessment strategies	35	30	34
	Practice (specific teaching and learning events)	42	35	40
	Resources for teaching and learning	8	2	5
	Rules, regulations, requirements	4	3	3
	School student prior and future learning	3	5	4
	Solving 'in the moment' teaching problems	0	1	1
	Student-teacher assessment	2	2	2
	Student-teacher learning	1	5	3
	The research process	1	0	1
	Theories (a generalised view of practice)	3	1	2
	None of these	1	3	2

Table 14 showed the content of the units in which each participant engaged in the pre and post-lesson discussion expressed as a percentage. These data show a spread of engagement. Table 23, on the other hand, re-presents these figures as a percentage of each

participant's own contribution: so while mentors contributed to 15% of the units where 'planning and teaching and pupil assessment' was discussed (see Table 14), this could have been due to the fact that they contributed less overall. When looked at as a percentage of *all* the units in which they participated this figure rises to 30% (see Table 23), which is roughly the same as the other participants. Table 23, therefore, indicates the relative importance of each area to each participant in relation to their contribution. The figures in this table were generated as follows. The mentor at Brookside School contributed to 36 units (see Table 39 in Appendix F). Of those 36 units (which are 100% of this person's involvement) 39% were categorised as discussing 'planning', 47% 'practice' and 14% 'resources' (39% + 47% + 14% = 100%). Other rows in the table follow a similar format.

Table 23: Participant engagement in topics as a percentage of their total involvement (as percentage)

		Being a teacher (%)	Developing and maintaining relationships (%)	Planning and teaching and pupil assessment strategies (%)	Practice (specific teaching and learning events) (%)	Resources for teaching and learning (%)	Rules, regulations, requirements (%)	School student prior and future learning (%)	Solving 'in the moment' teaching problems (%)	Student-teacher assessment (%)	Student-teacher learning (%)	The research process (%)	Theories (a generalised view of practice) (%)	None of these (%)
Brookside planning	Mentor	0	0	39	47	14	0	0	0	0	0	0	0	0
	Student	0	0	32	53	11	2	3	0	0	0	0	0	0
	Tutor	0	0	36	52	7	2	4	0	0	0	0	0	0
Brookside post-lesson	Mentor	17	0	39	28	6	6	6	0	0	0	0	0	0
	Student	17	7	21	38	3	0	10	0	0	0	0	0	3
	Tutor	23	12	12	19	4	4	15	0	0	8	0	0	4
Middlewich planning	Mentor	3	0	21	31	26	5	5	0	8	0	0	0	3
	Student	0	0	28	40	15	10	5	0	0	0	0	0	3
	Tutor	0	0	41	21	9	15	6	0	3	0	0	3	3
Middlewich post-lesson	Mentor	6	0	39	42	0	8	3	0	3	0	0	0	0
	Student	0	0	50	45	0	0	5	0	0	0	0	0	0
	Tutor	5	0	38	38	0	5	5	0	8	0	0	0	0
Castle Town planning	Mentor	2	4	43	40	2	0	2	0	0	4	0	2	2
	Student	1	2	44	41	3	0	1	1	0	4	0	2	1
	Tutor	1	3	49	30	3	0	1	1	0	4	1	4	3
Castle Town post-lesson	Mentor	10	15	5	35	0	10	0	0	0	10	0	5	10
	Student	7	13	22	24	0	2	2	0	0	22	0	2	4
	Tutor	6	12	27	29	2	4	2	0	0	17	0	2	0
Greenfield planning	Mentor	0	0	27	51	0	7	2	0	0	0	0	12	0
	Student	0	0	31	50	1	5	5	0	0	0	3	4	0
	Tutor	0	0	41	39	2	5	5	0	0	0	3	5	0
Greenfield post-lesson	Mentor	0	4	29	54	0	0	0	0	0	0	0	0	13
	Student	3	3	28	58	3	0	5	3	3	0	0	0	8
	Tutor	3	3	26	44	3	0	6	6	6	0	0	0	3
Total	Mentor	5	3	30	41	6	5	2	0	1	2	0	2	3
	Student	3	3	32	42	4	2	5	0	0	3	0	1	2
	Tutor	5	4	34	34	4	4	6	1	2	4	1	2	2

This table, which expresses participant engagement in these topics as a percentage of *their* total engagement, reveals some interesting contrasts. As I have just identified, mentors, for example, engaged in 15% of units overall which discuss planning, teaching and pupil assessment strategies (see Table 14). But as a percentage of the units in which they actually participated this rises to 30% and is broadly comparable with the student-teachers (32%) and the tutors (34%). When talking about practice, student-teachers engaged in 31% of the modules overall, followed by tutors (23%) and mentors (20%) (see Table 14). When set as a percentage of the units in which they participated (see Table 23), this rises to 41%, which is comparable with the student-teachers (42%) and is higher than tutors (34%).

Sources (Dimension 5)

All of the sources identified in the content analysis schedule were referred to in the planning and post-lesson discussions. Where the source of the conversation could be identified, personal experiences or theories was categorised most frequently at 24%. Units which directly identified the school as a source counted for 21% and references to Open University materials counted for 1% of units. The number of units which drew on personal experiences varied considerably, from 48% (Brookside post-lesson discussion) to 13% (Middlewich planning), as did references to school-based sources (40% in the case of Middlewich post-lesson discussion and 6% in Greenfield post-lesson discussion). Table 24 compares the percentage of references to each of the sources in the planning and the post-lesson discussion.

Table 24: A comparison of sources between the planning and post-lesson discussion

			Planning percent (%)	Post-lesson percent (%)	Total percentage (%)
Source		Combination of sources	2	1	1
		Personal experiences or theories	23	31	24
		OU-based	1	1	1
		School-based	20	22	21
		Source not apparent	54	45	52

Of the eight conversations analysed, Open University materials were directly referenced only seven times (1% of all units) and were mentioned in only four out of the eight discussions.

Table 15 shows the total percentage of unit sources in which each participant engaged. Table 25 re-presents these data to show these as percentages of the units in which each participant contributed. For example, if a mentor contributed to 75% of units and 100% of these units referred to school-based sources, then the tutor would be recorded as making a 100% contribution to this category. These figures were calculated as in Table 23. The mentor at Brookside during the planning session was involved in 6% ('combination'), 17% ('personal experience'), 0% ('OU-based'), 36% ('school-based') and 42% ('not apparent') – a total of 100%.

Table 25: Participant engagement in sources as a percentage of their total engagement

		Combination of sources (%)	Personal experiences or theories (%)	OU-based (%)	School-based (%)	Source not apparent (%)
Brookside planning	Mentor	6	17	0	36	42
	Student	3	26	0	24	47
	Tutor	4	27	0	20	50
Brookside post-lesson	Mentor	0	22	0	28	50
	Student	0	34	0	17	48
	Tutor	0	54	0	23	23
Middlewich planning	Mentor	0	18	5	41	36
	Student	0	5	5	33	58
	Tutor	0	6	6	18	71
Middlewich post-lesson	Mentor	3	25	0	61	11
	Student	0	25	0	35	40
	Tutor	3	28	3	18	49
Castle Town planning	Mentor	0	9	0	19	72
	Student	0	17	0	18	66
	Tutor	0	20	0	11	68
Castle Town post-lesson	Mentor	0	20	0	40	40
	Student	0	15	0	23	62
	Tutor	0	13	0	20	67
Greenfield planning	Mentor	5	46	2	12	34
	Student	4	34	1	9	51
	Tutor	5	31	3	7	53
Greenfield post-lesson	Mentor	4	42	0	4	50
	Student	3	25	5	8	60
	Tutor	0	29	6	3	62
Total	Mentor	2	25	1	30	42
	Student	1	23	1	21	54
	Tutor	1	26	2	15	55

Both analyses, again, provide an interesting perspective. Counting the number of units which draw on personal theories, and to which mentors contributed (see Table 15) reveals that mentors contributed to 12% of these types of unit. When looking at the same categorisation from the perspective of the units to which they contributed (see Table 25), this increases to 25% and is similar to the student-teachers (23%) and tutors (26%). This analysis also shows that mentors seem to be more explicit in terms of identifying their sources, having contributed to 20% (see Table 15) of units where the source is not apparent, compared with student-teachers at 41% and tutors at 37%. However, when this is considered as a percentage of their own contribution (see Table 25) this rises to 42%, compared with student-teachers at 54% and tutors at 55%. So it appears that university tutors were not only directing conversations about practice, but they were also frequently drawing on personal experiences, or apparently personal theories, in their conversation. Direct references to Open University materials were made infrequently, and exploration of why that is the case forms another central issue which emerges from this analysis.

Tensions (Dimension 6)

This dimension was divided into those tensions which are recognised and commented on by the participants and those tensions which received no comment. This dimension was further divided, providing a detailed picture of this critically important facet of tutor, mentor and student-teacher discussion. The first finding to note is that tensions were not apparent in 73% of the units, and this ranged from 89% (Brookside planning) to 58% (Greenfield post-lesson discussion). Where tensions were identifiable, overall, recognised tensions (18%) outweighed unrecognised tensions (10%).

In terms of recognised tensions, tensions between what was being said and the personal theories of the mentor, student-teacher and tutor were noted infrequently and accounted for 3% of the categorisations in this dimension. The planning and post-lesson discussions at Greenfield, however, accounted for the majority of these tensions and this is more fully explored in the detailed case study. By far the biggest area of recognised tension was with the practice of the student-teacher: a tension between what was being said and current or past teaching practice. In the main, these tensions are evident when criticisms or alternative ways of approaching teaching are presented to the student-teacher; for example, the high rate of categorisation (26% compared to an average of the rest of 7%) between what was being said and student-teacher practice in the Greenfield post-lesson discussion reflects a conversation in which alternative approaches to lesson pace, structure and pupil musical engagement were frequently mentioned. Table 26 shows a comparison between the planning and post-lesson discussion and highlights the increase in the recognised tension between what was being said and student-teacher practice.

Table 26: A comparison of tensions in the planning and post-lesson sessions

			Planning percent (%)	Post-lesson percent (%)	Total percentage (%)
Tensions	Recognised	1) with personal theories			
		a) of the mentor	1	0	1
		b) of the student	2	0	1
		c) of the tutor	2	1	1
		2) with practice			
		a) of the mentor	1	0	1
		b) of the student	5	16	10
		c) of the tutor	1	1	1
		3) with university ideas	2	3	2
		1) with personal theories			
	a) of the mentor	0	0	0	
	b) of the student	1	0	1	
	c) of the tutor	0	1	0	
	2) with practice				
	a) of the mentor	0	0	0	
	b) of the student	0	0	0	
	c) of the tutor	0	0	0	
	3) with university ideas	9	9	9	
	No tensions apparent		76	70	73

Ten per cent of the units exhibited unrecognised tensions, in other words tensions which were not explored or commented on by the participants, and most of these were with Open University materials or ideas. At an average of 9% and with a minimum of 6% and a maximum of 14% (Greenfield post-lesson discussion), nearly one in ten units contained references which were in tension with ideas published in Open University materials and which were not acknowledged.

As mentioned at the beginning of this section, the over-riding result is that tensions were not apparent in 73% of the units. This ranged from 89% (Brookside planning) to 58% (Greenfield post-lesson discussion) and presented a significant diversity of approach. A more thorough investigation of the contexts which promote tension and agreement and disagreement is undertaken in the following chapter.

Agreement or support and disagreement or contradiction (Dimension 7)

Sixty-three per cent of units contained no observable agreement or disagreement between the participants and, where it was possible to identify these attributes, agreement or directly supportive comments accounted for 34% of comments, against 4% where there was observable disagreement or contradiction. There was no discernible difference in agreement or disagreement between the planning and post-lesson discussions. The most frequent instances of agreement were between the student-teacher and the tutor – student-teachers agreeing with tutors in 13% of the units. This is quite different from the rate at which other participants agree or support each other more generally, which appeared in 4–5% of the units. This ranged from 22% (Greenfield post-lesson discussion) to 6% (Middlewich post-lesson discussion). The level of student-to-tutor agreement in the Greenfield post-lesson discussion was particularly interesting. It is possible to speculate that the student-teacher was fearful of the consequences

of adverse assessment, and this raises interesting questions about the relationships between the participants and their relative positions of power. This is discussed in more detail in the next chapter.

7.3 The developing picture

A return to the research questions for this part of the research project shows how these data begin to address the core issues underpinning the thesis. The intention of the content analysis process was to provide data which answered these questions, in the context of joint planning and post-lesson discussion:

- Who is talking?
- What are they talking about?
- What sources do they draw on when talking?
- What tensions emerge as they talk?
- What agreement or disagreement emerges in these conversations?

Exploring the data which inform these questions and locating these findings within the broader case study context will enable a thorough investigation of the study's principal questions: What learning opportunities are offered to student-teachers in school when they discuss practice with their mentor and tutor? How can student-teacher learning be understood in the light of these learning opportunities?

Mentors engaged in the fewest units and initiated the fewest, too: of the 48% in which they engaged they initiated 27%. Along with student-teachers, they engaged in units which ask fewer questions and although they contributed most to units where practice and planning teaching strategies are discussed, these were still fewer in number than the other participants.

When looked at from the perspective of the units to which they contributed, they focused slightly more on resources, rules and regulations.

As a percentage of all units, mentors contributed to those where school-based sources were discussed most, and were engaged in more units where the source was apparent than the other participants. When considered from the perspective of units to which they contributed they contributed to relatively the same percentage of units which refer to personal experiences but more units which considered school-based resources. Mentors also contributed to more units where the source was apparent.

As with the tutors, mentor theories or practice was rarely the subject of recognised or unrecognised tension in the units. Units showed the same levels of mentor agreement and disagreement to the tutor, in 2% of units.

Student-teachers participated in a great majority of the units, but of the 75% of units where they engaged they initiated only 29% overall. Overall, they asked the same number of questions as the mentors, but even when mentor and student-teacher questions are added together, tutors still asked more questions. Student-teachers contributed most to units where practice was discussed and more than the other participants, and they also made a high-level contribution to units where strategies were discussed. When looked at as a percentage of the units in which they participated, both of these areas account for 74% of their contribution.

Student-teachers, like tutors, mainly contributed to units where personal experiences or theories were present, and like mentors they contributed to more units than the tutor where school-based sources were discussed. When considered as a percentage of only the units to which they contributed, student-teachers were linked to fewer units which discussed personal experience or theories than the other participants.

Most tensions, where student-teachers were concerned, surrounded their practice, when alternative view points or perspectives were offered and compared with actual student teaching. Mentors and tutors both agreed with student-teachers in 5% of the units and there was rare disagreement or with the student-teacher.

University tutors took the lead in most conversations, initiating most of the units in all sessions except one. They asked a greater number of ‘closed’ questions, especially during the planning session, and were involved in a significant number of the units. They participated in 68% of units and they initiated 45% of the units. Tutors contributed to 23% of units where practice was discussed and 23% where teaching strategies were concerned. As a percentage of all units this is higher than the mentor but lower than for student-teachers, who contributed to discussions about practice in 31% of all units. As a percentage of the units in which tutors participated the referenced to practice rise to 34%, but this is lower than the other participants.

Where the source was apparent, tutors mainly contributed to units where personal experiences or theories were identified. They contributed to relatively fewer units where school-based sources were in evidence. When this was taken from the perspective of just the units in which they contributed, tutors still referred to personal experiences or theories more than the other participants and to relatively fewer units which referred to school-based resources. When this perspective was taken, tutors contributed to more units where the source was not apparent. Tutors’ own practice or personal theories were rarely the subject of recognised or unrecognised tensions. Tensions did not appear with university ideas or materials, and were only recognised or commented on in 2% of units and recorded as unrecognised in 9% of units.

Tutor agreement with the mentors (at 4%) was reciprocated and tutor agreement with student-teachers was slightly higher, at 5%. What is interesting here is that student-teachers

agreed with their tutors in 13% of units – higher than their agreement with their mentors which was, 5%. Disagreement by and with tutors was very rarely identified.

7.4 Summary

This detailed picture of student-teacher, mentor and tutor engagement when planning to teach a lesson and in post-lesson discussion, when refined to the level of the individual case studies, presents some interesting perspectives and questions which are addressed in the next chapter. Overall, but with some exceptions, what emerged were conversations in which practice and teaching strategies are discussed, and which draw primarily on sources that reflect personal theories or experience. Few tensions between perspectives emerged and agreement far outweighed disagreement. In these conversations, tutors made a major contribution in moving the conversations forward by initiating units and by asking questions, most of which were ‘closed’. Student-teachers engaged in the units, but their involvement was shaped by the questions that were asked of them and their own focus on identifying what the pupils needed to ‘do next’ – in other words, practice. Mentors remained largely quiet in these conversations, responding to the tutor’s framing of these discussions. When they did contribute, they were likely to present their own personal perspectives or refer to a school-based source. In essence, the conversations focused on a discussion of ‘what works’, ‘what has worked’ and ‘what will, or might, work’. The data showed interesting variations at the level of each case study.

The content analysis on its own, although interesting and rich in statistical information, provides only a partial answer to principal research questions in this study. In order to explore these data fully it is necessary to place them in their contexts, to retrace the research steps and to look at these findings in the contexts from which they emerged.

ADDRESSING THE RESEARCH QUESTION THROUGH FOUR CASE STUDIES

8.0 Introduction

In the last chapter I set out the content analysis results of planning and post-lesson discussion in four different settings. The analysis uncovered some interesting contradictions and in broad terms, identified discussion that was largely directed by the tutor and focused on pupil activity. The content analysis data also showed differences between the cases and, although not frequent in number, they showed units which were contrary to the main findings: units in which mentors and student-teachers took the leading role; where different, infrequently categorised units occurred; where sources other than personal opinion were drawn on; and where there were tensions and disagreement. In this chapter I set out the context of the four case studies and integrate the broader content analysis data as well as the more refined case-by-case data with their cultural and historical contexts. I address each of the research questions for this phase in turn using the conceptual framework discussed in Chapter 3. Further perspectives on answers to the research questions are offered, setting the scene for an exploration of the implications for student-teacher learning discussed in more detail in Chapter 9 of this thesis.

8.1 Background to the data collection

Previous sections in this thesis have described the case study data collection process in detail and have highlighted the benefits and drawbacks of case study methodology for research. In this study, the term *case* refers to the planning, teaching and discussion process of

a mentor, tutor and student-teacher and the context in which this process takes place. The case study is able to attend to participant identity, beliefs and motivation, the resources and tools on which they draw, the rules and regulations which apply to their work, the communities which support it and the way the labour is divided. In essence the cases are framed by an activity theoretical perspective expanded by the problematised nature of identity and located on an expansive/restrictive environmental continuum.

As well as contextualising the detailed content analysis of the planning and post-lesson discussions, each case study draws on individual semi-structured interviews with the mentor, tutor and student-teacher before the planning session and after the teaching session when the participants reviewed the teaching session through video-stimulated recall. The case studies also call on publicly available information from school websites or inspection reports, and other school or departmental documentation where this was available. Brief summaries of the cases were presented back to the participants who were asked for their comments on a summary and on draft conclusions that were being drawn from the content analysis. These additional comments have been taken into account in these reports as data was gathered, sorted and re-presented. Bringing together the interview data, stimulated recall interview data, field and documentary data, together with the content analysis data, I have previously argued, presents a coherent, robust and complementary approach to data collection to support a response to the study's research questions.

8.2 The structure of the case study reports

The case study reports begin with a brief description of the context in which the planning, teaching and post-lesson discussions takes place, with reference where possible to the school's Ofsted report, departmental documentation and my field notes. Each case, except

for the case in Northern Ireland, begins with a quote from the schools' Ofsted inspections and these are only available for the three schools in England. They are intended to set the scene for the cases that follow but it should be noted that these data have been gathered for other purposes and with a methodology that is considered by some, for example Campbell and Husbands (2000), to be weak. The context in which school-based conversations takes place is important as it will shape what is being discussed. The case studies then continue to present a brief history of each of the participants. As with the brief description of the context, these pen-portraits are intended to locate the discussion about the content of these conversations in the participants' biographies. If personal biography and identity are important factors that shape how student-teachers learn, it is important to recognise the way in which past experiences might shape their current approaches to teaching and learning. Participants' perspectives were elicited through a series of key questions during semi-structured individual interviews through the questions outlined in Figure 8 in Chapter 5.

8.3 Addressing the research questions from the case study perspective

Responses to these questions contextualise the studies, providing a brief illustration of the context, a short biography and an indication of the participants' thinking about student-teacher learning and progression. A detailed analysis of the planning and post-lesson discussions in each case, integrated with the content analysis, then follows. A final section in this chapter summarises and integrates the case study findings. Figure 15 shows the key questions asked in these case studies.

Figure 15: Phase 2 research questions

Phase 2 research questions
<p><i>Main phase 2 research question</i></p> <p>What learning opportunities are offered to student-teachers in schools when they discuss practice with their mentor and tutor?</p>
<p><i>Phase 2 sub-questions</i></p> <p>In the context of cases which frame the analysis by identifying the orientations of the participants to music initial teacher education and to music teaching in general, this phase asks:</p> <p>a) In teaching conversations between participants, how, when, by whom and in what circumstances are different sources drawn on?</p> <p>b) How are tensions, contradictions, disagreement or agreement handled during these conversations?</p> <p>In order to answer these questions this phase focuses on two three-way conversations about teaching between a mentor, student-teacher and tutor, and asks:</p> <ul style="list-style-type: none">– Who is talking?– What are they talking about?– What sources do they draw on in these conversations?– What tensions are apparent in these conversations?– What agreement or disagreement can be observed in these discussions?

Rather than taking a disaggregated approach, and considering each question in turn, the case study reports begin the process of making connections between these discrete questions, leading in the final chapter to a consideration of the over-arching research question. The research questions for this phase, informed by the study's conceptual framework, are first considered on a case-by-case basis and are then combined in a cross-case analysis towards the end of the chapter.

Brookside Sports College: introduction

Background

The mentor in this case study is Sarah, the student-teacher is Hannah and the tutor is Richard. Hannah is completing her final school experience placement at Brookside Sports College. Her school-based mentor is Sarah who came to music classroom teaching after thirteen years of instrumental teaching and completing a PGCE as a mature student in Birmingham. Hannah's part-time Open University tutor is Richard, an experienced teacher, currently teaching as Head of Music in a local school.

Brookside Sports College for pupils aged 11–16 is situated in a rural county in the South Midlands of England. Its Ofsted inspection (2005) noted:

This voluntary-aided, Church of England secondary modern school is much smaller than most other secondary schools. It has been undersubscribed, but now has about 50 more pupils than at the time of the previous inspection. Numbers are rising rapidly and the school is well oversubscribed for the next intake. The school gained status as a specialist Sports College in 2002. It received the awards of Artsmark in 2001 and Sportsmark in 2003. Pupils' attainment on entry to the school in Year 7 is currently below average, but in previous years was well below average. Boys and girls come from a wide range of social and economic backgrounds that are broadly average overall and include a sizeable minority from socially disadvantaged circumstances. About one in ten pupils comes from a minority ethnic background. Seven pupils are at an early stage of learning English. The proportion of pupils with special educational needs, about one in five, is average. The proportion of pupils with a statement of special educational needs is above average. Most of these pupils have special or moderate learning difficulties or have emotional and behavioural difficulties. The proportion of pupils joining or leaving during the school year is higher than that found in many schools.

(Ofsted, 2005)

Ofsted's judgement in 2005 was that this was a 'satisfactory' school, with many features of a 'good' school. The report did not comment separately on the music department.

The college's music department consists of a single room with additional practice rooms, and appeared to be well stocked with keyboards which were set up throughout the main teaching area, with percussion and other resources to the side of the room and in a store

area. The school admits pupils between the ages of 11 and 16, and music is taught in each year group. There are extra-curricular music groups, and at the point when research visits were being made to the school, the school choir was set to join together with other local choirs for a joint performance. The music department is, essentially, a one-person department, with another teacher taking three lessons each week and extra-curricular activities being run on a six-week course basis in order, the school explained, to involve as many students as possible. This year's activities included the vocal group, a folk group and a samba band, activities that were chosen by the mentor and which she runs.

The following sections present each case study participant in turn, alphabetically by role.

Sarah – the mentor

Sarah said that she was interested in music from a young age and she remembers listening to a performance of *The Little Drummer Boy* by older children and being heavily influenced by this formative event. Her father was an enthusiastic singer and instrumentalist and in her interview she described the way she taught herself recorder and then took up the clarinet at secondary school. Sarah went to a secondary school run by nuns and, she claimed, had an 'inspirational' teacher of music, noting that the music curriculum focused on singing from the National Songbook. After secondary school, Sarah took a degree in music. Following a brief career break with her first child, Sarah began instrumental teaching and this continued for about thirteen years. She then completed a PGCE in Birmingham. After teaching at a school in a local county town and a spell of seven and a half years at a school in Birmingham, Sarah moved to Brookside, where she has taught for about three years.

Sarah has been involved in developing the Music Strategy (a development of the National Strategy for Music) with the County Music service alongside Richard (tutor).

Hannah – the student-teacher

Hannah started playing the cello when she was ten years old and she was fascinated by the link between emotion and music: ‘the way it really latched into your emotions’. She had previously learned the piano, and so could read bass clef, and was approached when she was at middle school with the offer of lessons. She enjoyed music at school, inspired by her teachers, and took A levels at a sixth-form college. She subsequently took a music degree. After a while doing peripatetic music teaching for the local authority Hannah decided it would be ‘a good idea’ to become qualified and work as a classroom-based music teacher in order to gain more job security.

Richard – the tutor

Richard expressed a lifelong interest in the playing the piano and he was strongly influenced by listening to a performance at his home by a friend of the family who was a graduate of the Royal College of Music. From the age of six it was his ambition to play the piano as well as this person. His family ‘managed to find some money’ to pay for piano lessons at a local convent with a sister who had worked with Franz Liszt and was a ‘well-respected pianist’.

Richard described his music education at secondary school as non-existent:

In the first year we had a wonderful old lady who used to make us sit round the grand piano in the hall and sing hymns. Subsequently we had a new music teacher ... who used to make us sit down and answer quiz questions like ‘this composer’s name sounds like some white powder that you get in a tube’ and the answer was Schubert – or sherbert. Or he would play us his latest Pink Floyd album and we’d sit quietly and listen to it ...

(Richard: individual interview 1)

Richard went to the Coventry School of Music and studied with teachers who were both graduates of the Royal Academy of Music. He said he ‘worked hard’ at Coventry, practising piano for five hours a day, and with scholarships and other bursaries he was admitted to the Royal Academy where he studied with Dennis Murdoch. As a ‘backup’, Richard completed a PGCE at the University of London with Keith Swanwick. He returned to the Royal Academy and completed the ‘advanced performers’ course’ and then got a job in Iceland from which he performed piano in Iceland, Scandinavia, Denmark and the USSR. Richard described an extensive and successful career as a performer, reflected in his study with a series of eminent musicians. His focus on classroom teaching when he returned to the UK coincided with a decline in the amount of time he devoted to piano practice. Richard is a full-time teacher who works part-time for the Open University as a tutor and moderating the FirstClass conference. He is also taking a significant role in updating the PGCE modules.

The case study participants

Sarah, Hannah and Richard share a trajectory of identity, in relation to music identity, which has its roots in the western European musical tradition and with personal expertise in performance. They share an approach to music making which, in AT terms, has musical participation as performance as its *object*, a formal approach to music education, and with an emphasis on the *tools* of performance, namely notation, repetitive practice, imitation and instrumental skill. They also share an understanding of the underlying principles of western European harmonic structure, phrasing and intonation – its conceptual grammar. In terms of a *division of labour* this is a musical genre where the acts of composition and performance are perceived separately and the audience is seen primarily as passive recipients. Their stories referred to similar *communities*, similarly influential groups or individuals who were able to

inspire a passion for music, and Richard in particular stressed his credentials as a performer with frequent reference to the eminent teachers and performers he had been taught by or worked with.

Figure 16: A suggested activity system for the Brookside case study participants

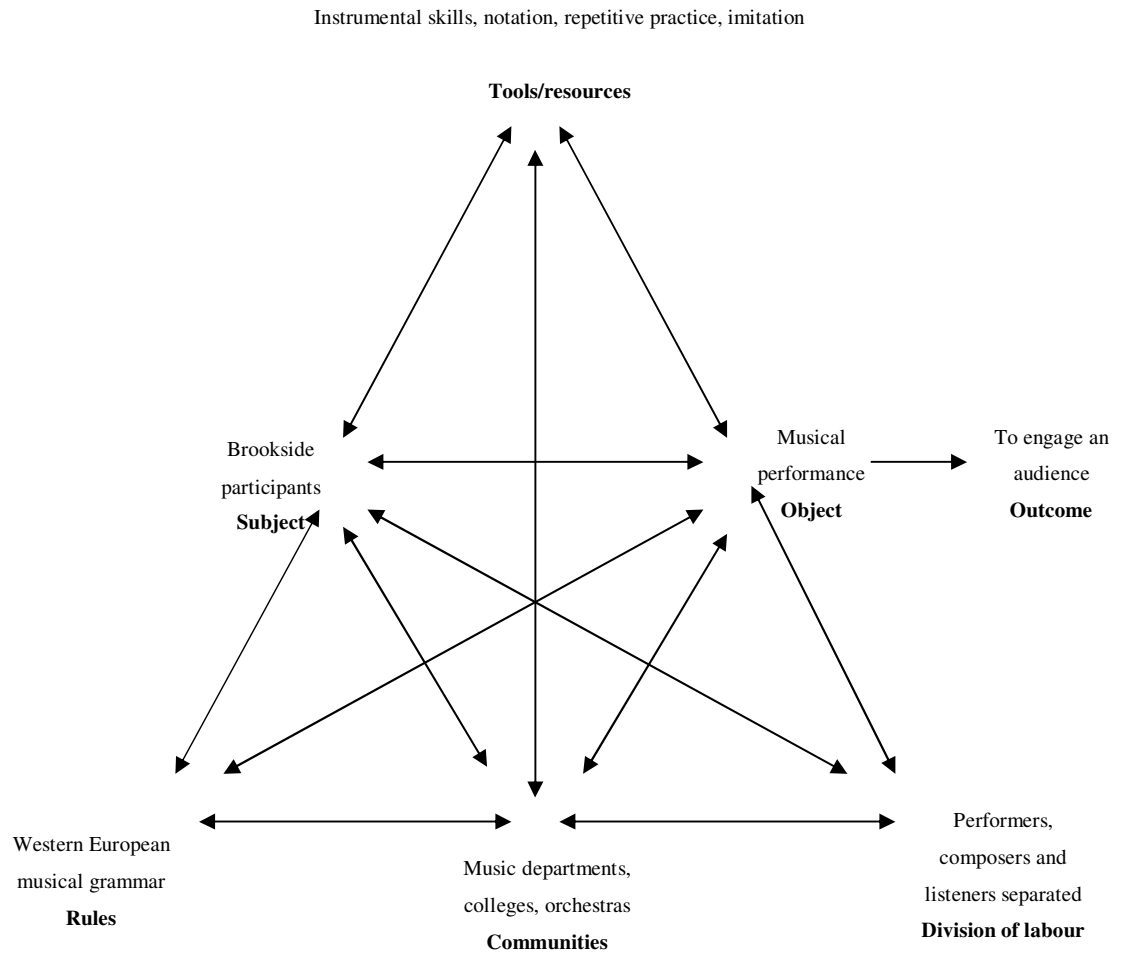


Figure 16 illustrates the how the participants' trajectories might be explained in AT terms, where there is a considerable amount of 'shared' history, similar approaches and little inherent dissonance. There appears to be little opportunity for musical 'expansive learning' of the kind that might have happened if, for example, Sarah was a rock drummer and Hannah was a folk singer. As described by Engeström et al. (1995), this lack of dissonance could lead to 'groupthink' or close-mindedness.

What makes a 'good' teacher?

Hannah (student-teacher), Richard (tutor) and Sarah (mentor), when questioned individually, responded with very similar answers to this question. Sarah described the essential need for 'passion' for the subject of music, a need to be open to different musical styles with an enthusiastic approach. Enthusiasm, especially when an 'uninspiring' topic like 'notation' is taught, is a point that was stressed by Hannah:

Somebody who is enthusiastic about the subject, who can relate well to pupils, and really get the information across in a good way ... [Music] needs to be put across in a really fun and interesting way. There are some topics in music which aren't awfully inspiring for teachers to put across well. But it's part of the challenge.

(Hannah: individual interview 1)

Richard, the tutor, emphasised the need to inspire all children;

A good music teacher ... would be somebody who can inspire all of the kids in a class, challenge all of the kids in a class, engage all of the kids in a class and make sure they are all making progress. And what I mean by progress is imparting knowledge that will enable them to develop as musicians and learners rather than teaching them things by rote.

(Richard: individual interview 1)

These three participants described, in essence, a charismatic, passionate and inspirational teacher – what a teacher should 'be' – but contained in these descriptions are indications that other perspectives might also be apparent. Hannah (above), for example,

talked of the challenge of making uninspiring topics, like the teaching of notation, ‘fun and interesting’. Underpinning both of these responses is a model of the music teacher as a transmitter of information to pupils: Hannah talked of getting ‘the information across in a good way’ and Richard talked of ‘imparting knowledge’. For Richard, the teaching and learning of underpinning theoretical knowledge was important as this provides the basis for pupils’ development as musicians and learners. For him, learning music by rote is not the way to develop these attributes. The notion of teacher as an imparter of information and a provider of theoretical knowledge from which pupils can develop as musicians is a contested position, but one that might be seen to have its roots in a traditional western European classical tradition. Given Hannah and Richard’s background, it is perhaps unsurprising that they took this approach but it is one that contrasts with folk, pop or some other types of World music. A ‘good’ teacher, in this sense, is one who can motivate students to belong to a *community* which has at its core sets of knowledge, as practice, which have to be imparted and learned in order for the students to be admitted into that practice. In Lave and Wenger’s (1991) terms this can be seen as a process of ‘legitimate peripheral participation’: a process where learning is *belonging* to a community of practice, *becoming* a member of the community; *doing*, or engaging, in the practice of the community; and *experiencing*, or making learning meaningful (Wenger, 1998, p. 5).

What makes a ‘good’ student music teacher?

The process by which student-teachers learn to become teachers, for these participants, focuses on ‘performance’ and the ability to respond quickly to advice. Sarah identified Hannah’s ability to put suggestions into action immediately: ‘to take on board any advice you give’ is highly regarded. Hannah agreed, as well, that it is important for ‘good’ student-

teachers to take on board ideas from more experienced teachers: ‘they’ve tried it; it doesn’t work, so they’re helping you by saying, “do it this way instead”’ (individual interview 1). These comments by Sarah (mentor) and Hannah (student-teacher) highlight the problematic, yet contextual, nature of mentor advice and its appropriation by the student-teacher for more general purposes. Sarah’s comment that the student-teacher is able to ‘immediately put advice into action’ indicates a high level of responsiveness from the student-teacher to mentor advice but also highlights a mentoring conversation which focuses on student-teacher behaviours rather than on developing student-teacher thinking.

Becoming a ‘good’ teacher

The process of becoming a teacher for these participants is linked to a view of ‘good’ teaching and being a ‘good’ teacher learner, and perspectives offered by these participants illustrate the inter-connectedness of these perspectives. Hannah, for example, saw the process of learning to teach as a process of taking ‘your own subject knowledge and instrumental knowledge and being able to transfer that into a classroom setting. And then being able to put it in language ... that students obviously will be able to understand’ (individual interview 1). By doing this, she emphasises the notion of teacher as ‘impartor’ of knowledge and of the primacy of her skill and knowledge developed from a western European musical heritage: learning to teach becomes a process of converting that knowledge into pedagogically useful information.

Richard focused on the need for teachers to ‘be’ inspiring and engaging, in the way that key teachers in his biography inspired him. In his view this is a function of confidence and classroom presence and dealing with colleagues: ‘It’s about how you deal with people in general and learners at their various different ages’ (individual interview 1). In terms of the

process by which student-teachers develop this confidence, Richard emphasised the need to work alongside the mentor ‘trying things out’:

Because teaching is not a science, it’s a bit of a mish-mash, to be perfectly honest. There’s a bit of science in there about how you might do certain things; there’s a lot of hear-say; and there’s a lot of finding out about how other people do it and how they cope. And I think that we, as experienced teachers, just pull all of those things together, with our own experience.

(Richard: individual interview 1)

Teaching as ‘a mish-mash’ or, as discussed in Chapter 3, a bricolage process of some ‘science’, ‘hear-say’ and finding out how others ‘do it and how they cope’, is an important principle that is at odds with a more rational and skill-oriented approach of learning to play an instrument. It becomes an important theme later in this thesis.

The next section of this chapter looks in detail at the joint planning and post-lesson discussions and integrates the fine-grained case-by-case data drawn from the content analysis process as well as the headline summary data from the process overall.

Brookside Sports College: issues arising from the data integration

Having identified key contextual features of personal biography and belief in relation to music teaching and music teacher education, this section of the data analysis returns to the main research themes of this phase of the study: Who is talking? What are they talking about? what sources are they drawing on? What tensions emerge? What agreement or disagreement occurs in the conversations?

The planning session at Brookside focused on teaching a lesson in 1990s pop music – as part of a sequence of lessons that had looked at music in the 1960s, 70s and 80s – to a group of Year 8 pupils that Hannah later described as ‘a difficult, challenging class’. Her mentor (Sarah) described them as a group who were difficult to ‘capture’ at the start of a lesson, important contextual information which placed the pupils at the heart of the lesson and

identified them as contributors to its success. As part of the *community* within the activity system, how they reacted to the *resources* they encountered during the lesson would significantly impact on whether or not the participants were able to work on the system's *object*. Hannah (the student-teacher) set the context and identified student performance as the lesson's *object*. She opened the conversation with the following statement:

Today they've been working on 'I have a dream' from the 70s and Abba. They've learnt a bit about the melody and the bass line of that song. So I was hoping to take it forward to looking at 'Sweet Dreams' by the Eurythmics, and perhaps learning part of that song as the overall topic for the Year 8s.

(Hannah: planning conversation)

In doing this Hannah was focusing on pupil activity and resource; she had a clear idea of what she wanted the pupils to do (to perform) and what resource she would use ('Sweet Dreams'). Hannah's focus on pupil activity or practice was something that the mentor and tutor mirrored. Overall, these three participants talked about practice in 51% of the units in the planning conversation, and this is a greater percentage than in any of other case studies, as they talked about teaching (see Table 14 in Chapter 7).

In a multi-voiced setting with multiple perspectives it is interesting to note that Hannah participated in 84% of the planning units and 63% of the post-lesson discussion units. This was more than Richard (71% and 57%) and Sarah (46% and 39%). On the other hand, she initiated far fewer units than either Richard (53% in the planning session) or Sarah (29%). Of the units that each participant initiated, Table 27 shows the percentage number of units allocated to each category.

Table 27: Percentage of content of planning units initiated by each participant

	Hannah (%)	Richard (%)	Sarah (%)
'Being a teacher'	0	0	0
Developing and maintaining relationships	0	0	0
Planning and teaching and pupil assessment strategies	50	26	48
Practice (specific teaching and learning events)	29	62	43
Resources for teaching and learning	21	5	9
Rules, regulations, requirements	0	2	0
School student prior and future learning	0	5	0
Solving 'in the moment' teaching problems	0	0	0
Student-teacher assessment	0	0	0
Student-teacher learning	0	0	0
The research process	0	0	0
Theories (a generalised view of practice)	0	0	0
None of these	0	0	0

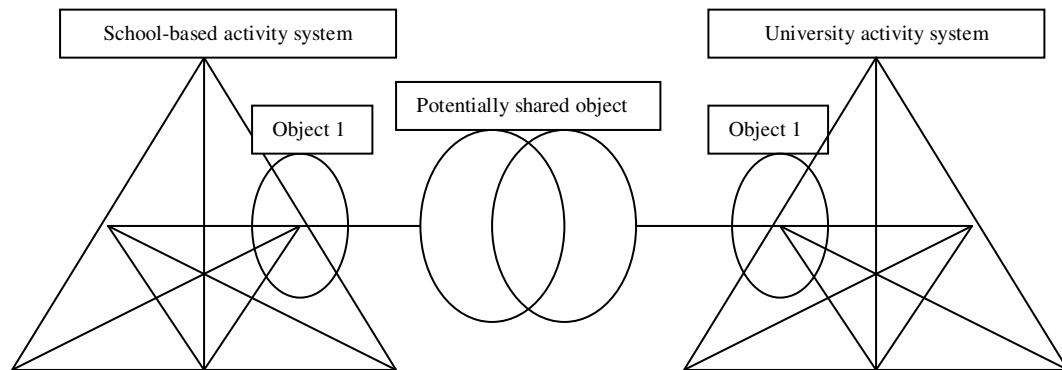
Richard initiated the highest number of the units in the planning session and of the 53% (n=42) units he initiated, 62% are about practice. This pattern was maintained when both the planning and post-lesson conversations are taken into account. Table 28 shows the number of units initiated by each participant in each area, and their percentage.

Table 28: Number of units linked to content area initiated by each participant in both conversations

	Hannah	Richard	Sarah	Hannah	Richard	Sarah
'Being a teacher'	2	5	2	8%	8%	6%
Developing and maintaining relationships	0	3	0	0%	5%	0%
Planning and teaching and pupil assessment strategies	10	13	16	40%	20%	44%
Practice (specific teaching and learning events)	8	31	13	32%	48%	36%
Resources for teaching and learning	4	2	3	16%	3%	8%
Rules, regulations, requirements	0	1	1	0%	2%	3%
School student prior and future learning	1	6	1	4%	9%	3%
Solving 'in the moment' teaching problems	0	0	0	0%	0%	0%
Student-teacher assessment	0	0	0	0%	0%	0%
Student-teacher learning	0	2	0	0%	3%	0%
The research process	0	0	0	0%	0%	0%
Theories (a generalised view of practice)	0	0	0	0%	0%	0%
None of these	0	1	0	0%	2%	0%

Figure 17 is a reminder of the 'third generation' activity theoretical model that might be applied to this encounter. A conversation between university and school colleagues might provide different perspectives on a shared *object*, and that might in turn lead to *expansive learning* opportunities.

Figure 17: A 'third generation' activity theory model as it might apply to university and school-based initial teacher education



In terms of the extent to which each participant had become involved and had initiated units, and in terms of what units were initiated, it is clear that the focus of all participants was on pupil activity, and that this was primarily being directed by the tutor. In addition, Richard (tutor) also asked a large number of closed questions (in 37% of units). The following questions, taken from the planning extract and on the audio recording, were asked of the student-teacher in quick succession and illustrate the pattern:

Richard: What's the song called?
 Have you got notation for it?
 Do you want them to learn to be able to perform the song?
 You want them to be able to play the bass riff?
 How long's the lesson going to be? One hour?
 Will they have the notation skills to read it?
 The first thing you want is to play the bass? How many bars long is it?
 How long do you think it will take them to learn that?

(Richard: planning conversation)

Richard was clearly taking control of this conversation, perhaps in response to the mentor's relatively quiet and undemonstrative approach, controlling its pace and direction by using questioning that channels the planning process, and with an AT focus on *tools* and *resources*.

It was Richard who, in the pre-planning individual interviews, spoke about the need for ‘good’ teachers to inspire, and commented that the teaching process is ‘a mish-mash’ of hear-say and finding out how people do things. His approach to this conversation was to model the planning process that he goes through himself, as a teacher, with a focus on pupil activity and with quick-fire questions to imply pace, focus and control; facets, as he would see them, of ‘good’ teaching:

We need to make sure that first of all ... they know that the first target is that they’ve got to be able to play this riff. That’s number one, OK? And number two, when they can play they have got to be able to play it together in time, OK? And number three – we’re going to think of something else for them to do.

(Richard: planning conversation)

Richard’s focus on pupil activity is frequently conveyed through ‘modelling’ or hypothetical scripting:

I just want to make sure we’ve got more than enough, OK? You could say to them ‘what we’ve got is a skeleton of the piece. We’ve got the bass and the tune here, and the pop group adds these chords in’ and if you feel you’ve got ten minutes, say to them ‘I want you to experiment with these chords, Find these chords on the keyboard’ ... and say ‘right you’ve got to play them in time – in the same time as this group is doing on the recording’. You could say to them ‘this is in a way a bit separate, this is an additional thing that we might add in later ...’

(Richard: planning conversation)

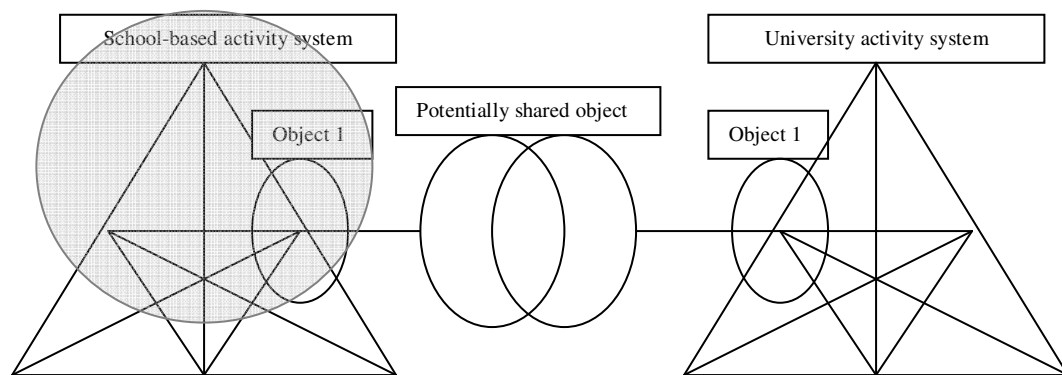
During the post-lesson discussion, Richard’s comments also focused on his evaluation of himself as a teacher in the classroom. This group, which the participants later described as ‘difficult’ had provided some challenges in terms of behaviour management during the observed lesson and required what Hannah later described as ‘heavy crowd maintenance’. Richard was allocated to a small group of pupils and commented, ‘One of the boys assigned to me decided that being by me was not necessarily the best place to be, and ended up with you, I think’ (post-lesson conversation). Richard then used this incident of a way of exploring the way that he normally acted with his own pupils and reflected on the difficulties that student-

teachers face when they are in schools for short periods of time. This accounts for the unusually high number of units that focus on ‘being a teacher’ in the Brookside conversations.

Rather than presenting a totally alternative perspective, in the form of an alternative activity system, Richard used his identity as a teacher to provide a complementary perspective from within the dominant school-based system. By focusing questions and *tools* and *resources*, by modelling through hypothetical scripting, and by drawing attention to the problems he faced with this group, Richard provided access to his own experiential capital and offered these as another resource in the school context.

The tutor-directed conversation or the learning opportunities that were presented to the student-teacher in these conversations seemed to centre on a tightly defined area of the school-based activity system (see Figure 18).

Figure 18: Brookside activity system focus



Hannah’s responses to this form of approach, together with her own preoccupation with identifying suitable *resources* (see Table 27 above which shows that 21% of the units she initiated were about resources), accounted for a substantial amount of her engagement in the

units. This could also explain Sarah’s (mentor) lesser engagement in the planning process: if closed questions were asked of the student by the tutor, re-directing the focus of the conversation or adding to it would have been difficult for the mentor. In fact, it was the mentor who asked the single ‘open’ question in the planning discussion: ‘Just thinking about your other aim, about the sounds, the components, the difference between 50s/60s, ... through from the 50s. What part of that do you want to include in this lesson, perhaps in the sounds that you use?’ (planning conversation). This question, asked by Sarah (mentor), invited the student-teacher to think about the timbral differences between the music of the 1980s, which had already been ‘covered’, and the subject of this lesson, the 1990s, and how these might be incorporated into the lesson. The question also bears the imprint of Sarah’s recent involvement in the Music Strategy with, as she described it, ‘a focus on genre’. Sarah’s main contribution to the conversations was to provide context-specific information. Table 29 shows the source of the units that each participant initiated by number and by the percentage of units they initiated.

Table 29: Brookfield participants – number of sources linked to initiated units (planning and post-lesson)

	Hannah	Richard	Sarah	Hannah	Richard	Sarah
Combination of sources	1	1	0	4%	2%	0%
Personal experiences or theories	8	28	4	32%	44%	11%
OU-based	0	0	0	0%	0%	0%
School-based	4	11	14	16%	17%	39%
Source not apparent	12	24	18	48%	38%	50%

Sarah initiated more units which draw on a school-based source in real terms and a much higher percentage of units than the other participants. Note the way in which Richard initiated a high number of initiated units that drew on personal experiences or theories. Sarah's focus on prior teaching provided essential background to the planning process. For example, the class they were to teach 'know about intervals' but they had 'not used' the term 'thirds' and 'they did this a while ago so are likely to have forgotten'. Richard, typically, modelled his approach to the teaching of this area: 'And then you can say "to enable us to do this we just need to do a bit of revision about intervals ... or thirds. Who can tell me what a third is? Who understands it? Prove it"' (planning conversation).

I have already noted how Richard (tutor) initiated the most (in terms of number and in terms of percentage of his own units initiated) units which draw on personal experiences or theories. This emphasis, especially given his belief in 'a mish-mash' or bricolage model of teacher education – some 'science', some 'hear-say' and some finding out how others 'do it and how they cope' – is particularly interesting. Richard, in an individual interview, had previously discussed the importance of musical theoretical knowledge in order to enable independent development as musicians. In this planning conversation he took this notion a step further:

Richard: I know it's your low ability class but even so wouldn't it be good if they'd got that as well so they could actually see it? You could say to them ... 'This is how the professionals would do it.'

You could say 'this is written out as a musician would read it, and it's there just for your understanding, so that you can see it. And some of them might be inspired and say 'I'm curious – what does that mean?', 'How does it work?' OK?

(Richard: planning conversation)

Later, in an individual interview, Richard referred to the development of this kind of understanding as 'deep knowledge', transferable to other contexts:

With children like this who are not very able and are difficult to focus, how do we encourage effective and deep learning, rather than just some kind of surface approach? So yes, they can play C, A flat and G until the cows come home but will they be able to apply that learning to something else that they will be doing in two weeks' time?

(Richard: individual interview 2)

This idea, that all musicians read conventional notation, and that learning notation is equal to 'deep learning' is one that is contradictory to university teaching materials, which point out the multiplicity of appropriate notations, including no notation, for different genres, and in particular Pop and Rock music, which was the focus of this lesson. Note, too, Richard's casual use of the term 'ability' to describe the 'bottom set' group, a non sequitur that is also the subject of much of the university PGCE materials. Contrast with personal theories which are borne out of practice:

Richard: One thing that I find that kids love is that you can nominate those who you know can do it and you say to them exactly this, 'I'm going to recruit you as a teacher. You are now officially a teacher, and your task is to ensure that he or she can do it, OK? You're my assistant, OK?'

(Richard: planning conversation)

Contrast this, too, with Richard's final comments in the planning conversations, where he talked about recording the groups' performances for teaching purposes:

Richard: If you've got a tape recorder or something you could say, 'Right, we're going to tape it and then we'll listen to it and see what you think.' [Hannah – Yes] It might sound absolutely awful – it might be recognisable.

If it sounds absolutely awful but it is recognisable then you could ask them this question, 'How could we change it so that it becomes like the original band's version. What have we got to do?'

Hannah: OK.

Richard: Because very often you'll find that so many of them will just play it, and they'll play it without thinking. And they'll play it without thinking musically. One of the key things to ask them is, 'Is that musical?' And if not, why not? And if it was, why was it?'

(Richard and Hannah: planning conversation)

This latter focus, on pupils' musical engagement, *is* central to the PGCE programme and had previously been discussed in detail at tutor staff development sessions. Whereas engaging pupils musically is a core aim of the OU PGCE programme, Richard's conception of the use of notation was not. But, for the student, these two ideas were presented, and received, almost identically: for the student, the provenance of these ideas remained unclear. Richard's remarks concerning notation, ability and musical theory to underpin 'deep learning' in music education were, at best, contentious issues, but the other participants did not comment on this as a tension or disagree with them as concepts. As noted in Chapter 7, the lack of recognised or unrecognised tensions in the Brookside conversations was the highest of all the cases, with no tensions apparent in 89% of planning modules and no tensions apparent in 72% of the post-lesson discussion unit, with the student-teacher agreeing with the tutor in 18% of the planning units and 13% of the post-lesson units. The tutor-directed nature of the discussion, together with issues of politeness and power imbalance, not to mention the presence of the researcher as Director of the PGCE, might all have contributed to this remarkable level of agreement, but perhaps there is another reason. If, as Hannah put it, learning to teach is about responding quickly to advice – 'they've tried it; it doesn't work, so they're helping you by saying, "do it this way instead"' – the focus becomes an unquestioning approach to 'what works'. Richard's stories of his own teaching and Sarah's acquiescence, with their focus on what has worked, becomes a recommendation for 'what *will* work'.

Figure 19: The AT focus in the Brookside case study

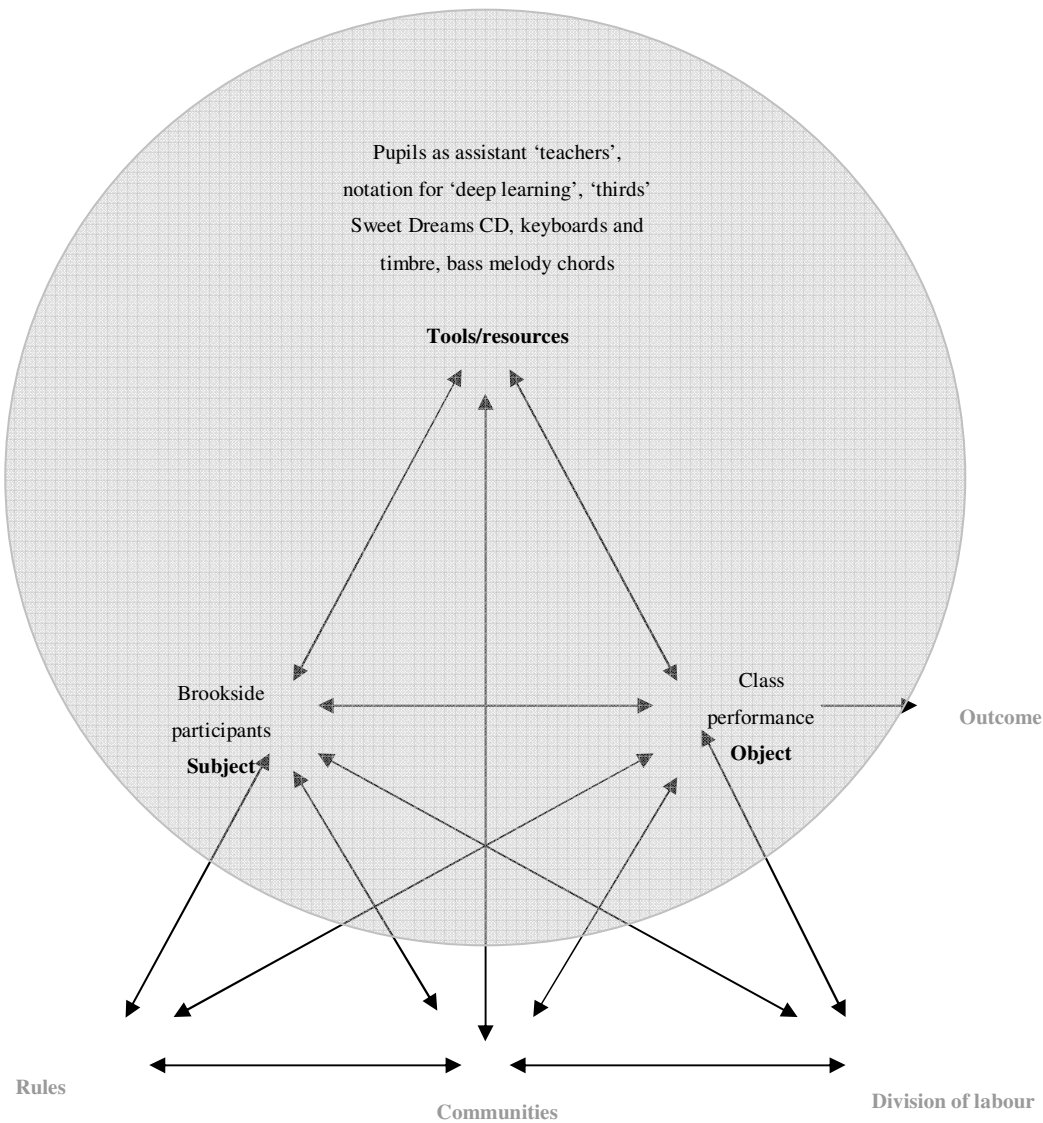


Figure 19 draws together the bricolage elements from the Brookside participants' discussion and highlights the key resources that were referred to in the conversations. From Hannah's perspective, she had been able to tap into an additional rich source of professional experience that had worked effectively in other circumstances, and with 'good' student-teacher learning identified by her and her mentor as a quick and effective response to advice, she illustrated how effective she was in this process in her teaching.

Castle Town College: introduction

Background

The mentor in this case study is Susan, the student-teacher is Peter and the tutor is Maria. Peter is approaching the end of the second level of the PGCE programme and is a student-teacher in a co-educational selective grammar school in Northern Ireland. His school-based mentor is Susan, who is teaching in her second post and in her first job as a Head of Department. Peter's tutor, Maria, is an experienced former music teacher and is based in England. Castle Town College is housed in well-kept new buildings, with purpose-built facilities behind a high perimeter fence in Belfast. The music department is well-stocked and has two main rooms joined by a large stock cupboard/office area. More senior pupils have open access to all areas of the department. The department has additional practice rooms and has access to other areas of the school for practical work. The school's website emphasises its history and its record of high pupil attainment in public examinations. The school's music curriculum is highly organised and has been developed into workbooks which take pupils through a programme of music study in Years 7, 8 and 9 (Years 8, 9 and 10 in Northern Ireland.) The workbooks contain practical activities and set out the musical concepts, symbols and terms that pupils are to learn at specific points during the year. No publicly available Ofsted or similar reports were available for this school, in Northern Ireland which is subject to a different inspection and reporting regime from similar schools in England.

Susan – the mentor

Susan said she had a musical upbringing. She learned the piano from an early age and later the flute. She studied science at university, followed by an MA in music and she then

completed a PGCE in England. Susan was brought up in the South of Ireland and this meant that she didn't study music at school as it was not on the curriculum. She had done no composition work before completing her PGCE. She had previously taught music as third in the department at a grammar school where she did not teach pupils who were being prepared for examinations.

Peter – the student-teacher

Peter said that he enjoyed music from an early age, listening to his parents' music collection and being encouraged by them to play the piano. He attended an independent preparatory school which, he said, 'had the luxury' of a music specialist. At his secondary school, music classes were streamed into non-instrumentalists and instrumentalists and at the time Peter, who was being taught with pupils of a similar level, found this to be a positive thing. Peter studied music at university then studied for an MA in Sonic Arts and then, after taking on part-time work as an instrumental teacher, started the Open University PGCE.

Maria – the tutor

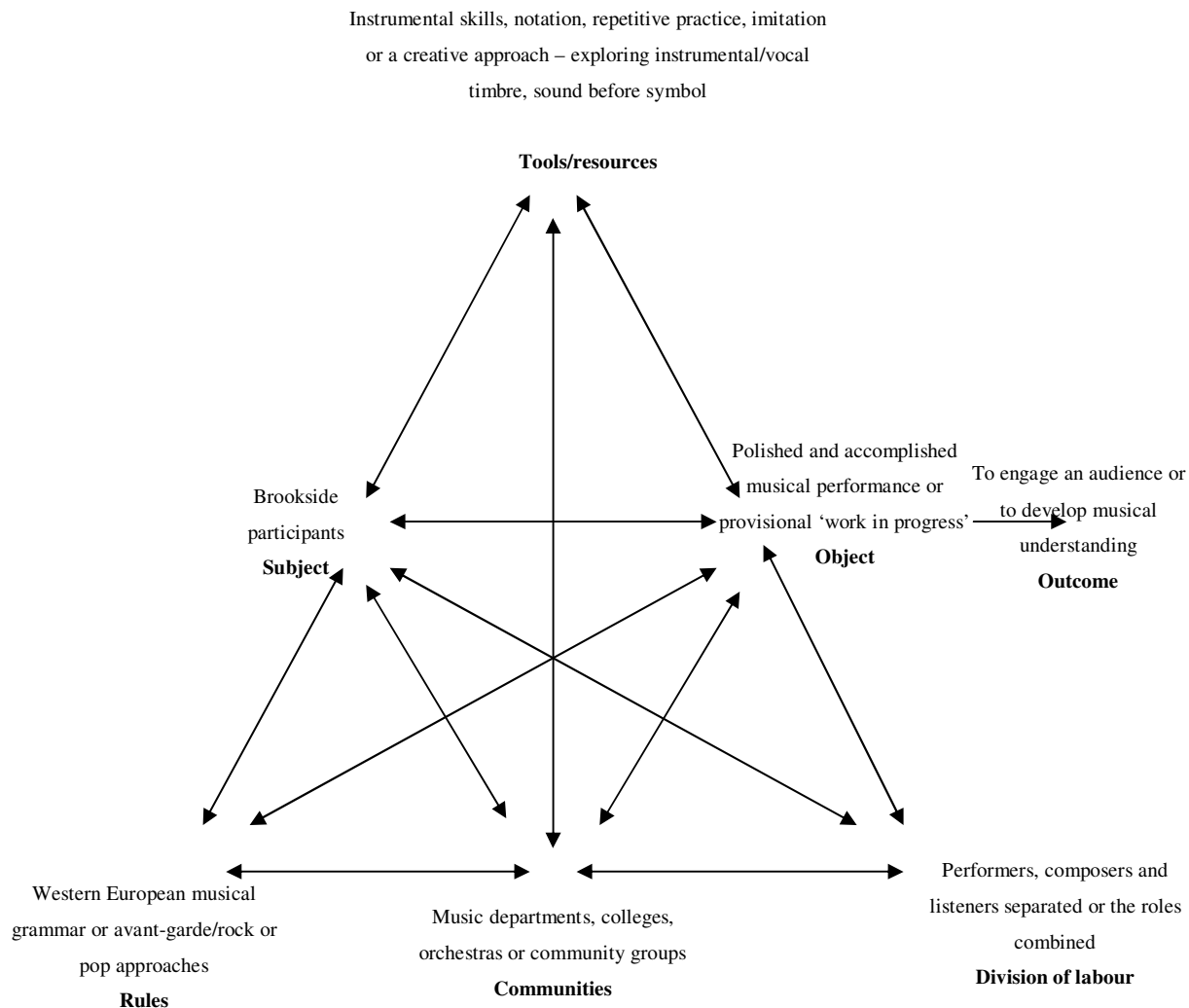
Maria spoke about a rich and eventful musical background. As a young child she sang and played the piano. She took up the trombone and then played for the City Youth Orchestra and eventually received a scholarship to attend a local college of music. Maria took A levels, went to university and studied English, which she later taught. As a teacher in school she started to teach music with no music-specific training, support or even music schemes of work. Maria described this as a 'one-woman show', 'just amusing them with things to do with music'. Her pedagogical thinking progressed by reading books by John Paynter and Murray

Schafer, music educators whose work is seen by Spruce (2002) as forming part of the progressive/musical phase of school music curriculum development.

The case study participants

Just as in the previous case study, the participants at Castle Town share a common, western European musical heritage: they share a common understanding of what music is and how *resources/tools, rules, communities* and *division of labour* apply to this genre of music. Each of them has a background as a performer, and Susan's and Peter's musical backgrounds are particularly traditional, with Susan not studying composition until her PGCE programme and Peter's experiences at a traditional independent school. Castle Town is a selective grammar school which places great store in its traditions and in academic excellence. It creates an ethos that supports a conventional western European music syllabus, with a focus on developing a music theoretical knowledge base around already identified listening exercises, performances and compositional activity. Maria's background is less conventional. With a self-taught approach to music education, drawing from some of the more *avant-garde* music educators in the 1970s and 1980s, she has a more liberal approach to music education, one in which sounds and composition come before notation and propositional music theoretical development. This possible tension between perspectives opened up the potential for dialogue around the nature and purpose of music education in schools. This is illustrated in Figure 20.

Figure 20: A typical activity system for the Castle Town case study participants showing possible areas for dialogue



What makes a ‘good’ music teacher?

Susan (mentor), Peter (student-teacher) and Maria (tutor) took slightly different perspectives on the qualities of ‘good’ music teaching, and although these are not mutually exclusive they provide some insights into the perspectives they brought to the planning and post-lesson discussions. Susan focused her response on the relationships that ‘good’ teachers

build up with their pupils, and the need to engage pupils musically, often in groups, rather than 'talking at them all the time'. She wanted music to be an 'exciting subject' for all pupils and not a subject that isn't 'accessible to anyone but musicians'. Susan used the term 'musician' as short-hand for those who have additional instrumental lessons, but there was an implication here that all of those who find western European classical music interesting, those who are *peripherally engaged* in the dominant community by learning an instrument, are musicians in the way that those who do not learn instruments are not. Peter (student-teacher) commented that 'good' teachers 'need to have a love for the subject ... you have to have a passion for the subject. Also, a passion to transfer it to young learners' (individual interview 1). Maria said that 'good' teachers have to have 'life and vitality', inherent qualities that can only be encouraged but that are needed before other less intuitive aspects can be developed. She commented:

Music teachers are born and not made in some senses ... You need to have the knowledge ... learning theories and behaviour and motivation and all those sorts of things ... but you need to have excitement about music really and about people ...

They're going to be teaching things that are lively ... teaching things that keep them interested as well. They're going to be teaching music from all sorts of different cultures, backgrounds. They're going to have some history in there but linked to practical things that they're doing. And they're always going to base it on sound ...

(Maria: individual interview 1)

Three contrasting perspectives appeared which shaped the way that the subsequent conversations unfolded and reflected each individual's trajectory of identity: Peter's emphasis on 'transfer' of music to learners; Susan's focus on the building of relationships in order to make music interesting for 'non-musicians'; and Maria's emphasis on excitement and practical music making, tempered with a 'born and not made' approach. Importantly, each of these perspectives implied different *tools* and *resources*, and different relationships both to the

school pupils as *community* members and to the ways that activities were developed – the ways that *labour is divided* in the classroom. Each of these different perspectives provided different, and potentially contradictory, approaches to the activity of making music with pupils in classrooms.

What makes a 'good' student music teacher?

The participants at Castle Town focused on student-teacher involvement in extra-curricular activity and the need to cope with the demands of 'being a teacher', including the need to manage the demands of classroom music teaching. In this traditional, selective grammar school, leadership of bands, orchestras and choirs by members of staff was seen as an important part of the teaching job. Failing to participate in this aspect of the teacher's role was seen as a significant weakness. This perspective took the discussion away from the activity of working in the classroom (although Susan later used this to suggest that it might be a way to develop classroom relationships with pupils) and viewed teaching activity in its broadest sense. Being a 'good' student-teacher, for these participants, meant participating in the full range of activities of the *community*, and taking a conventional leadership/conductor/accompanist role in the *division of labour*. Learning to become a music teacher was a matter of engaging with the full *designated identity* of the teacher (Sfard & Prusak, 2005).

Peter (student-teacher) expressed some frustration at the way that learning to teach music, as he saw it, is an 'on the job' activity. It is clear from Peter's other responses that he found 'not knowing' especially uncomfortable, especially when pupils saw him as a teacher in school: 'Sometimes that's quite challenging, where you maybe are approached by a pupil on ... certain subject content that you're not so strong with, that you know you need to develop'

(individual interview 1). This example shows, in Sfard and Prusak's terms (2005), a tension between Peter's *actual identity* as a novice teacher and his *designated identity* as an accomplished and knowledgeable teacher.

Becoming a 'good' teacher

Responses to this area of questioning in this case resonated with answers given to other questions. Susan's (mentor) response, for example, focused on the need to learn 'to build relationships with pupils' and get involved in extra-curricular activities. Peter (student-teacher) identified his own communication with pupils, at the correct level, as a barrier to his own progress. Maria pointed up the need to be 'open and reflexive or reflective'. Building relationships, appropriate communication and reflexivity in teaching are all different orientations to the teacher's role with slightly different approaches to the *object* implying different teacher attributes and different ways of approaching the role. Such differences open up the possibility of dissonant perspectives in the 'third space' conversations. Susan (mentor) identified the importance of different and sometimes contradictory opinions in the process of learning to teach: 'I think conflicting ideas can actually be a good thing ... because that means the student needs to think, "Right, here's two very, very different ideas ... what's correct?" and let them think about it' (individual interview 1). Putting to one side the notion that only one idea is 'correct', this opens up the possibility of *expansive learning*. Identifying dissonant perspectives is the first step, but what is missing here is the focus on systemic learning; the learning here focuses on the student-teacher making sense of the perspectives, rather than a three-way discussion of the differences.

Castle Town College: issues arising from the data integration

The next section in the thesis looks at the issues that emerge when the content analysis data, discussed in Chapter 7, are reconsidered in the light of the planning and post-lesson discussions. The planning session opened with Peter (student-teacher) setting out the context for the lesson. The pupils in the Year 8 (Year 7 in England) group were working through their workbooks and were half way through a project on *Carnival of the Animals*.

Peter: They've covered binary form composition and started their personal composition in their workbooks. But they haven't written it in its final form – they've only done it for one week. And they've also started some group work composition, similar to this, again, based on the *Carnival of the Animals*. So the next step would be the next section of the work ... and I think we'll probably go with the group work as we discussed.

(Peter: planning conversation)

Peter's work at Castle Town was framed by the departmental workbooks which set out in some detail this particular scheme of work and which showed the school's focus on the development of pupil music theoretical knowledge. Peter was obliged to 'cover' the work using this workbook and his focus was on pupil activity as a way of framing teaching: looking back he considered what had been 'covered' and looking forward he focused on how the class would be organised. The *object*, in Peter's eyes was curriculum coverage.

Peter (student-teacher) participated in a very high number of the planning units (94%) and, differently from the other cases, initiated more of the planning units (41%) than the other participants, with the mentor initiating 20% and the tutor initiating 38%. The approach taken by Maria (tutor) at the beginning of the planning session encouraged this more proactive and involved approach:

It seems to me that perhaps, what I'd like to see ... is as if you were having a mentor session together and you were talking about what Peter's going to do the next week. And then I'll put some input in, you know, if I feel I'd like to put some things in as well.

(Planning conversation)

This encouragement only appeared to have worked with Peter (student-teacher) and not Susan (mentor) who only initiated 20% of the planning units and 14% of the post-lesson discussion units. Susan's participation in the post-lesson discussion, at 34%, is lowest of any of the case studies analysed. Perhaps one reason for Susan's quiet approach is that she had already structured the lesson through the production of the pupil workbook; she had taken the major decisions about pupil activity and the direction and focus of the lesson in advance, and in its broadest sense, this was not for negotiation.

Table 30: Castle Town – participant-initiated content when planning as a percentage of all units initiated

	Peter (%)	Maria (%)	Susan (%)
'Being a teacher'	0	2	0
Developing and maintaining relationships	2	0	5
Planning and teaching and pupil assessment strategies	36	54	41
Practice (specific teaching and learning events)	51	22	50
Resources for teaching and learning	7	0	0
Rules, regulations, requirements	0	0	0
School student prior and future learning	0	2	0
Solving 'in the moment' teaching problems	0	2	0
Student-teacher assessment	0	0	0
Student-teacher learning	2	5	5
The research process	0	2	0
Theories (a generalised view of practice)	2	5	0
None of these	0	5	0

When looked at as the number and percentage (Table 31) of units initiated in both planning and post-lesson discussion it is possible to identify some interesting features.

Table 31: Castle Town – the number of initiated units linked to content in both planning and post-lesson discussion

	Peter	Maria	Susan	Peter	Maria	Susan
'Being a teacher'	2	2	0	3%	3%	0%
Developing and maintaining relationships	4	2	2	6%	3%	7%
Planning and teaching and pupil assessment strategies	21	30	10	32%	43%	33%
Practice (specific teaching and learning events)	29	16	14	44%	23%	47%
Resources for teaching and learning	4	0	0	6%	0%	0%
Rules, regulations, requirements	2	1	0	3%	1%	0%
School student prior and future learning	0	2	0	0%	3%	0%
Solving 'in the moment' teaching problems	0	1	0	0%	1%	0%
Student-teacher assessment	0	0	0	0%	0%	0%
Student-teacher learning	3	10	1	5%	14%	3%
The research process	0	1	0	0%	1%	0%
Theories (a generalised view of practice)	1	3	1	2%	4%	3%
None of these	0	2	2	0%	3%	7%

The first thing to note is the 'practice' focus of the school-based participants and the 'teaching strategy' focus of the university-based tutor, who also initiated most units that talked about student-teacher learning. Maria mostly initiated units about teaching strategies while Peter and Susan mostly initiated units about practice. The student-teacher (Peter) focused some units on *resources* (overall 6% of the units he initiated were linked to this area) and the tutor (Maria) initiated units that spread across the categories. Maria drew on her experiences as a tutor to suggest different teaching strategies and alternative approaches to the lesson: different ways to

approach the class organisation and assessment. In AT terms these strategies are seen as *resources*. With a tightly defined *object* to the lesson, expressed as curriculum coverage by Peter, these suggestions offer different ways of presenting and handling the curriculum workbook.

The summary tables in Chapter 7 (Table 13) show the higher level of post-lesson discussion at Castle Town about ‘developing and maintaining relationships’. In the background to this case we read of Susan’s (mentor) comments about the importance of developing good relationships with pupils, through extra-curricular activities and saw Maria’s (tutor) focus on ‘good’ teachers needing ‘life’ and an interest in people. Peter’s reserved style and traditional approach to music teaching were seen as an impediment to him developing this facet to his teaching. He, too, saw the need to relax more with the pupils and to develop appropriate relationships. In the post-lesson discussion he commented:

Peter: I did actually get a laugh out of my class, year nine, last week.

Maria: Did you? Go on then tell us.

Peter: I wish you had have been there ... Yes, I got a laugh.

Maria: That’s good.

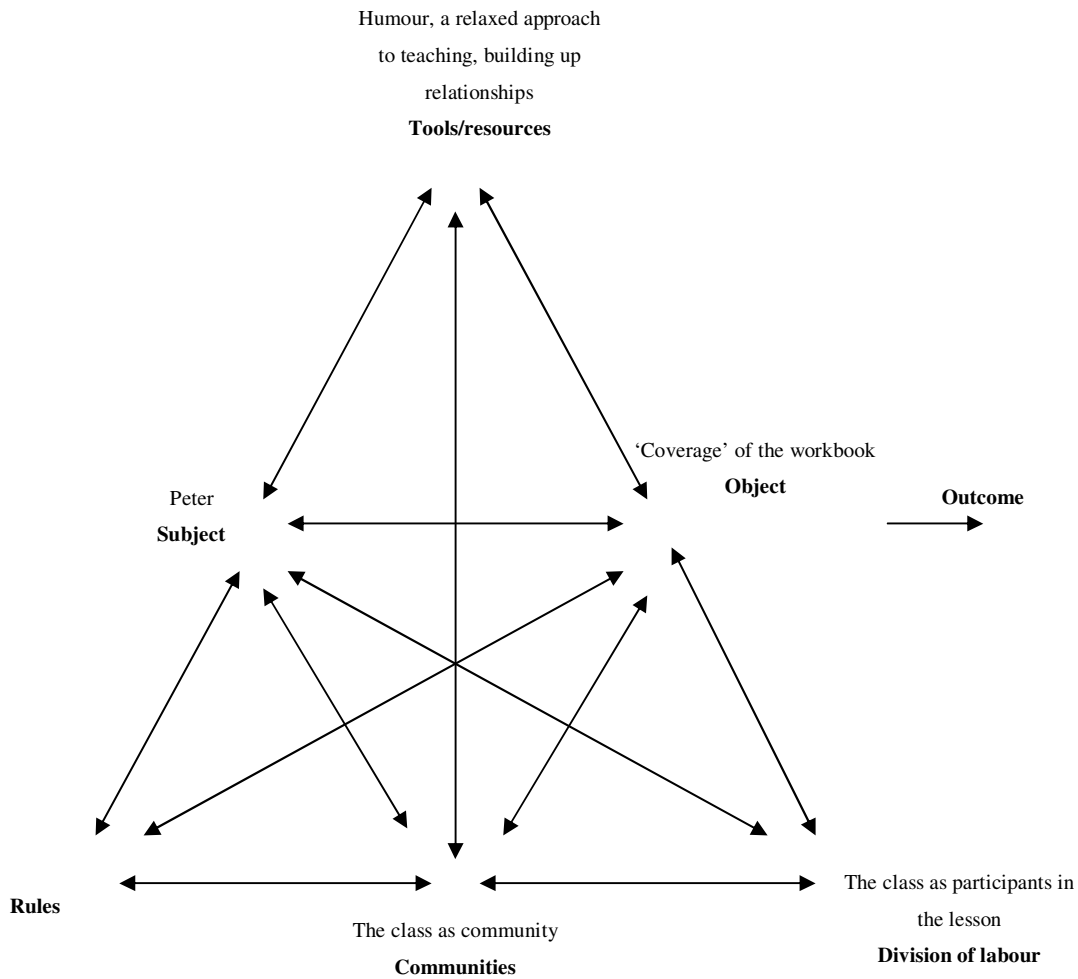
Susan: Excellent.

Peter: You can ask the class if you want to check!

(Peter, Maria and Susan: post-lesson discussion)

In AT terms, this focus on relationship building presented a tension, for Peter, with a desire to maintain class discipline, an internal desire to ensure good behaviour by regulating pupil activity through formal structures. This theme is picked up later in the case study, when establishing provenance behind ideas and concepts is looked at.

Figure 21: An activity system orientation on building relationships



Much of the opening planning conversation at Castle Town centred on the school’s scheme and workbook; identifying what had already been ‘covered’, what remained to be done and how the pupils would be organised. Maria was involved in this early part of the conversation, asking for clarification and drawing attention to her earlier feedback to Peter which suggested that he spread the work over two weeks; but as noted earlier, in the planning conversation she did not initiate as many of the units as the student-teacher and followed his

lead. The school's workbook, which set out the curriculum to be 'covered', was perhaps a major contributory factor here; the tutor's role was limited to finding different ways of approaching something which was non-negotiable. Maria's first significant contribution was almost 1500 words into the planning transcript and brought into the conversation the issue of differentiation:

Maria: Can ... you think of anything, sort of, off the cuff now, or could we perhaps discuss ways in which you are going to be able to bring some differentiation into this?

Peter: Erm, ok.

Maria: In the group work.

Peter: In the group work.

Maria: Yes. And so that ... Let's think about why we've got differentiation there to begin with, which is that we want everybody to be working to their potential. Everybody to feel they actually can achieve something. So, it's not just, 'Well, you can do two bars and you can do four and you can do six.' It's: 'I've achieved something musical, in its entirety ... entirety.' And even if that was playing the same rhythm the whole time on the tambourine, I've achieved something.

Peter: Well, OK, suppose instead of just saying to them, 'Go and play' or 'Go and use those instruments', that's what I usually say, maybe something we could try is, again, just discuss how they are going to work as a team and each individual role, what instrument they are going to play and how they'll play it.

Maria: No, I think what I want to see you doing is *planning* the differentiation, not saying, 'We'll see what the outcome is.' So not putting them into a group and talking about it, but you actually knowing in your mind what you're expecting from which pupils before the lesson begins.

(Maria and Peter: planning conversation)

Maria's challenge to Peter identified the issue of 'differentiation' in a selective school as being an important issue for discussion. In the planning conversation she said,

And I think when you're looking at, sort of, going on to Level 3, that's what you must try and pin your mentor down to. I'm not suggesting you haven't done this. What I'm suggesting is that Peter should actually say, 'Well, if I'm going to do this differentiation ...', particularly in, sort of, a Northern Ireland situation where it doesn't tend to happen so much, you should be able to say to the member of staff, 'I need to know where these pupils are already or where they have been'.

(Maria: planning conversation)

Differentiation is an issue that is covered in considerable detail in the Open University materials, and a student at this point in the course (at the end of Level 2) might be expected to demonstrate a more sophisticated awareness of the issue than he presented in this conversation, and this appears to have prompted Maria's line of thought. As a significant point of difference between OU materials and practice this is an ideal opportunity for an exploration of dissonant perspectives. Note, however, the way that Maria presented these ideas, from a personal perspective, modelled through hypothetical scripting. The provenance of the ideas in this extract is, however, unclear: was this Maria's opinion, her own personal theory, or was she drawing on Open University materials? Is this an idea that applies to all classes in all schools or is this specific to the school or the class? Later in the planning conversation Maria initiated a similar discussion around Assessment for Learning, another initiative that had received little coverage in schools in Northern Ireland at the time, and that presents a point of dissonance between perspectives:

- Maria: How are you going to get some assessment for learning or formative assessment, whatever you want to call it, into this?
- Peter: I suppose question and discussion, erm, beforehand, well before, during and after. And see how it progresses through. So assess how they ... the understanding of the task and how they can relate their understanding of the topic so far into the task. And then ...
- Maria: That's more, sort of, checking ... That's almost summative. It's almost checking up what they know already, rather than stretching them to look beyond that.
- Peter: OK. Well, that's ... supposing ... OK in that sense then, actually during their work, during the task itself, both questioning and differentiated questioning as well. Because of the different levels of ability in the group. So using different types of questions at different levels, for each member of the group. As well as trying to induce open discussion within the group to get them communicating with ...
- Maria: Yes, that's important.
- Peter: ... communicating with each other and not just saying, 'Oh, I think this.' And then, 'OK, what do you think?' And then ... Because I think it's important to them to realise that working as a team and they have to work together, work off each other. But also after the group work has finished to assess the understanding. Well, even at that point whenever they come in ...

Maria: You're still talking about assessment as if it's something that's finished.

Peter: Well ... Well ...

Maria: Rather than something that's ongoing.

(Maria and Peter: planning conversation)

Maria brought the issues of Assessment for Learning and differentiation to the discussion and attempted to help Peter realise their significance in terms of his teaching. However, in making these points, in a school setting where the focus was on planning a lesson, Maria presented these ideas without acknowledging their *provenance*. This is a frequent occurrence. In 63% of the planning and post-lesson discussion units, the source that the participant was drawing on was not clear. And, as can be seen from Table 32 which shows the number of units initiated by each participant linked to source and the percentage of participant-initiated units linked to source, of the units which Maria (tutor) initiated, the source is not apparent in 76% of them.

Table 32: Castle Town – number of participant-initiated units linked to source

	Peter	Maria	Susan	Peter	Maria	Susan
Combination of sources	0	0	0	0%	0%	0%
Personal experiences or theories	14	9	6	21%	13%	20%
OU-based	0	0	0	0%	0%	0%
School-based	16	8	7	24%	11%	23%
Source not apparent	36	53	17	55%	76%	57%

The following extract illustrates the complexity of provenance and source. Maria (tutor) and Peter (student-teacher) were talking about the need to engage pupils fairly immediately in music making, rather than sitting and listening for a lengthy period at the start of the lesson:

Maria: ... Because we were talking ... I think pace is one of things we were talking about this morning. And that that ... If you can get on to your practical ...

Peter: The task. Early.

Maria: ... Much, much earlier. But then you need to refocus them. And bringing them in listening to ...

Peter: I think that will help, I mean. But I think we've ... I would like to include obviously one section of the piece as some listening ... But I also see what you mean about the pace and getting it done quickly, so to speak.

Maria: I would try and get your first section into twenty minutes maximum – including your reminder about binary.

Peter: Sure. Yeah.

Maria: So that after twenty minutes they are in there ... I mean, here in this school you'll be fine going on for longer but they'll be places in England where five minutes would be the most you could do before you needed to get them actively doing something.

(Maria and Peter: planning conversation)

Maria drew on her experience of schools in other parts of the country to underline the dangers of dwelling too long on non-musical activity and, as was seen in the background to this case study, she believed this to be an important part of 'good' teaching. While the point she made has some resonance for experienced music teachers in schools, the theoretical underpinnings of this statement could be described as 'folk theory', a personal perspective without an empirical base and which presents another appearance of bricolage in lesson construction.

The extract below provides another example of the complexity of provenance. This time, Maria's ideas did identify the source as 'one of my ... big things'. The context is a

discussion in which Maria was trying to encourage Peter to allow the pupils to respond to questions without putting their hands up:

- Peter: Because I think some ... I know some pupils, as they see open discussing starting and they see that as a sign for them to start talking about something else. So I do realise it doesn't last very long. But certainly I would know them enough to try it – to have an open discussion without, sort of, hands up ...
- Maria: Yeah. But it's ... I think it's a question of learning in life. This is one of my other big things, about understanding the difference between formal and informal. Understanding when you should dress formally and you needn't dress formally. Understanding when you should speak formally and you can speak informally. And I think within a classroom situation you have to have ... You can have two things going on: you can have, one, the very structured sense of 'you put your hand up when you're asked', but you should perhaps be hoping to build up within them the less structured sense of being able to 'talk like adults do'. Or like they do in any other situation so that it becomes more like ... like, yes, you've got to ... there are times when you'll have to jump in ... yes, there are times when people are off the task and things. But ...
- Peter: I suppose as long as it's made clear to them that it is an open discussion. As long as they're clear that they're not going to be told off for not putting their hand up.

(Peter and Maria: post-lesson conversation)

This last extract also indicates the tensions which exist between the student's beliefs in what might be termed 'old-fashioned' class management and the more relaxed style being promoted by Maria, who commented individually, and later, that the mentor's lessons adopted a similar format. This was not apparent from their conversations when Susan (mentor) commented:

I think when you've achieved the discipline as well, erm, I do think that, you know, that pupils know that you're not going to take any nonsense from them at that stage, they know what you're like. Then you can sort of loosen up then, just a wee bit, and even, you know, even smile at them and be a little friendly but if, you know, things get out of control, you can, you know, they know you can pull it back very quickly.

(Susan: post-lesson conversation)

Two types of tension became apparent: the first was the tension between the student-teacher's emphasis on discipline and the mentor's explicit instruction to him to 'loosen up' now that she believed he had achieved an appropriate level of discipline. The second was the tension

between this more relaxed style and the ‘old fashioned’ style that the tutor had observed more generally in the department, and that the researcher observed and recorded in his field notes around the school during the data-gathering sessions.

Maria (tutor) handled both the seen and unseen tensions by positing a personal theory, of the ‘formal and informal’, a strategy which provided, in this instance, some distance from the perception of inadequacy, of either the student-teacher or the mentor, and which provided the opportunity for further reflection and discussion. However, Maria dealt differently with issues which were less personal and which, although she did not mention the source, formed part of the university curriculum. Previous extracts have shown the way that the issues of differentiation and formative assessment were raised in the discussion, and how these contrasted with Maria’s approach to the more controversial topic of relaxed approachability. On the one hand, she mentioned the term and asked a question about how it would be implemented, and on the other she offered a personal perspective and encouraged the student to take a risk. For example, she adopted the more direct approach when discussing the way that Peter neglected to question the girls in the class during the joint lesson:

Maria: And what did you notice about gender today?

Peter: Erm, some groups only had one girl ...

Susan: That’s because you didn’t have enough girls?

Peter: That’s because there were only six in the group, in the class. Erm, do you mean in terms of problems?

Maria: Well, can you remember the, sort of, with your questioning and things, can you remember ... All right, how can I put this Peter? How can I put this Peter? Still not taking much notice of the girls. You need to, for inclusion, you need to bring out both girls and also quieter boys. You know, you focused very much on the keen, and, the keen boys and ones who wanted to say things, which is good. There are times when that’s the right approach, but today all the groups, when you talked about any of the groups, you talked about a sort of leader and it was always a boy, even if it was the girl who was the sort of instrumentalist. And I don’t think you asked the girls any questions. You tended to ask boys who’d got their hands up or other boys. Did you notice as well?

- Susan: I did notice afterwards, I know what you said, I do. Yeah.
- Maria: There were girls I don't think I heard them say anything.
- Susan: Yeah, some did have their hands up, because I did notice a few that hadn't answered with their hands up all right.

(Maria, Susan and Peter: post-lesson conversation)

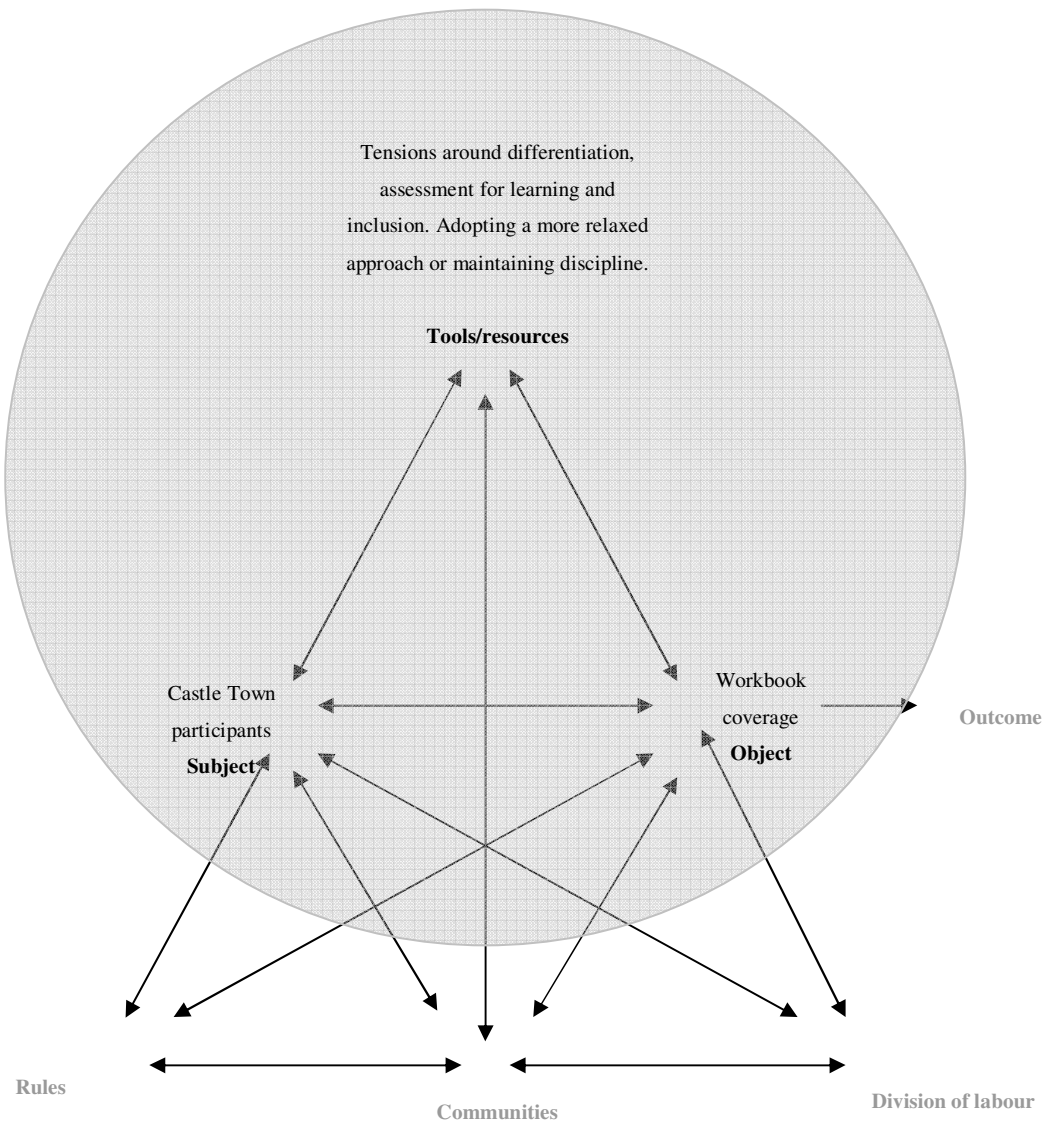
This extract illustrates a high level of agreement between the participants. The highest level of agreement was where the student-teacher (Peter) agreed with the tutor (Maria), in 15% of the planning units. Where Peter and Maria appeared to disagree this was as a result of Maria's exaggeration in order to make a point:

- Maria: Yeah. You're not saying, 'You're not any good, you can just play the tambourine and don't touch anything else.' You know!
- Peter: I wasn't saying that, but yes.
- Maria: I know you wouldn't put it like that but, you know, it's ...

(Maria and Peter: post-lesson conversation)

Overall a picture emerges of a conventionally trained musician learning to teach in a highly regulated and conventional music department. The tutor, having identified before and during the conversation the three issues of differentiation, assessment for learning and gender balance in questioning, adopted different teaching strategies and approaches. In the main, this was through a form of personal appropriation in which university ideas and personal theories were presented from a personal perspective.

Figure 22: The AT focus in the Castle Town case study



Greenfield School: introduction

Background

The mentor in this case study is Andrew, the student-teacher is Samantha and the tutor is Maria. Samantha is a 'Level 2' student who, although approaching her final placement, has only been teaching music to whole classes for a few weeks. Level 2 students on the OU PGCE programme are assessed as having relevant prior experience and are required to spend less time in school. In Samantha's case this was shown through her work as a music instrumental teacher in school. Her school-based mentor is Andrew and her tutor is Maria, the same tutor as for Peter at Castle Town School in Northern Ireland.

Greenfield School is set in the moorlands of Northern England in an ex-mining area. At the time of the data gathering it was in need of repair and refurbishment. It was also suffering from falling rolls. Ofsted noted (in 2005):

Greenfield is a good school and a good Technology College. It provides learners with good chances to succeed in life when they leave the school. Teaching is consistently good and there is a very positive climate for learning in which students make good progress. These are considerable strengths of the school. Achievement and standards have been good over time and the school takes the right actions to maintain and improve them when necessary. Care, guidance and support for learners are equally as good.

(Ofsted, 2005)

The music department is based in two main teaching rooms linked by a store cupboard. One of the rooms, where Samantha was teaching, had keyboards set out on a semi-permanent basis and the windows, which are down one side of the room, overlooked a large metal blue shipping/storage container. Music teachers also have access to two practice rooms, but these are outside the main room. They had been damaged and had holes in the bottom of the doors, and the sound-proofing tiles were in a poor state of repair.

The class Samantha was teaching was a Year 7 group who the mentor described as ‘good middle ability’. They were one of the few classes that Andrew (mentor) thought could ‘handle’ practical work using percussion instruments.

Andrew – the mentor

Andrew said that he was from a ‘musical family’. His father was a Head of Music in a secondary school. He learned the piano and violin but said he had a poor music education at school which primarily focused on hymn singing and writing about composers from the western European tradition. He gained a Certificate in Education and then went on to study a BEd. He said he found the BEd course helpful for later teaching, and enjoyable, but he didn’t find the main creative thrust of the course, which centred on the work of John Paynter, to be appropriate. Paynter’s work, as a music educator, considers children to be composers and performers rather than passive recipients of music through listening or through theoretical study. Andrew responded by positioning himself in opposition to this perspective on music education.

Andrew claimed to be a very busy Head of Department and was unwilling, at this stage of his career, approaching retirement, to spend time visiting other teachers. In an individual interview he comments:

I don’t get round to see other people much. Now that’s probably not a very good thing but I’m getting rather old now and set in my ways. I feel what I do works. Certainly as far as discipline’s concerned, which is the main thing, I think, in music lessons. You must have your discipline first. And I’m happy with what I do.

(Andrew: individual interview 1)

Maria – the tutor

Maria was also the tutor to Peter at Castle Town College in Belfast. Her brief biography can be seen in the previous section in this chapter.

Samantha – the student-teacher

Samantha commented that she had played musical instruments from a very early age and said she was inspired by a music teacher at primary school. She claimed she did not enjoy music at secondary school but continued to participate in musical activity through the county music service. She started a BA in Primary Education but ‘didn’t like the school dimension’ at that stage in her life. Samantha subsequently started and completed a BA in music and then started to teach violin as an instrumental teacher which, at the time of the research, she had been doing for twelve years. Samantha’s aim was to get qualified as a ‘peri’, an instrumental teacher, and to return to this role on a higher pay scale as a qualified classroom teacher.

The case study participants

The participants in this case study presented the most divergent trajectories of identity; the mentor who disliked the creative approach developed by John Paynter contrasted with the tutor who, as a teacher, engaged with the similar ideas of Murray Schafer. Andrew’s focus on discipline as ‘the main thing’ contrasted too with Maria’s focus on musical participation. On the other hand, both of these participants shared a commitment to teaching music in classrooms, which was not the student-teacher’s main area of interest. She wished to maintain her job as an instrumental teacher and through this qualification would move on to a higher pay-scale. The PGCE qualification, for her, was primarily a means to gain more secure employment on better terms and conditions. Whereas the difference between the mentor’s and

tutor's perspectives presented some tension in terms of the *object* of teaching music in the classroom, with contingently different *resources*, ways of *dividing labour*, of conceptualising *communities* and of the *rules* or regulations which apply, the dissonance between the student-teacher and the mentor and tutor can be seen as one of motivation. The student-teacher's priority was to adopt whichever approach was likely to lead to success.

What is unusual about this case study is the mentor's resistance to his own professional development and learning. He was outspoken in terms of his criticism of 'creative' approaches to music education and, in Fuller and Unwin's (2003) terms, this presents a picture of a 'restrictive' learning environment, characterised by isolated working and a lack of opportunities for boundary crossing. With such a strong contradiction between his approach and the approach of the tutor, we might expect to see significant opportunities for an 'expansive' or 'transformative' approach advocated by Engeström (2001). If that was the case, the reaction of a student anxious to impress her tutor and her mentor would be interesting to observe. In Sfard and Prusak's terms (2005, p. 14), the student-teacher's designated identity needs to be flexible and adaptable to meet the potentially contrasting demands of her mentor and tutor, both of whom play an important part in her assessment.

What makes a 'good' music teacher?

Andrew (mentor) described a 'good' music teacher as one who has dynamism and energy and someone who can structure lessons well in order to motivate pupils. As he commented above, he believed that a 'good level of discipline' is an essential requirement for 'good' teaching and he talked of the ability to 'command' a class. Sometimes, he commented, this requires the teacher to 'stand up' to the class: 'You've got to sometimes be quite nasty and

stand back to the class. I know it sounds awful but you have, otherwise they'll start to take advantage of you' (individual interview 1).

Samantha talked of 'good' teachers being inspirational, helping pupils to make and create music. When asked to describe a 'good' lesson that she had taught or observed, she described a lesson where the pupils enjoyed what they were doing 'because they were learning keyboard skills'. Both the mentor and student-teacher saw disciplined activity in the classroom, inspired by dynamic teachers and using resources which the pupils found motivational, as the *object*. Samantha commented that she found it difficult to involve pupils in disciplined activity and identified her need to improve her ability to manage pupil behaviour:

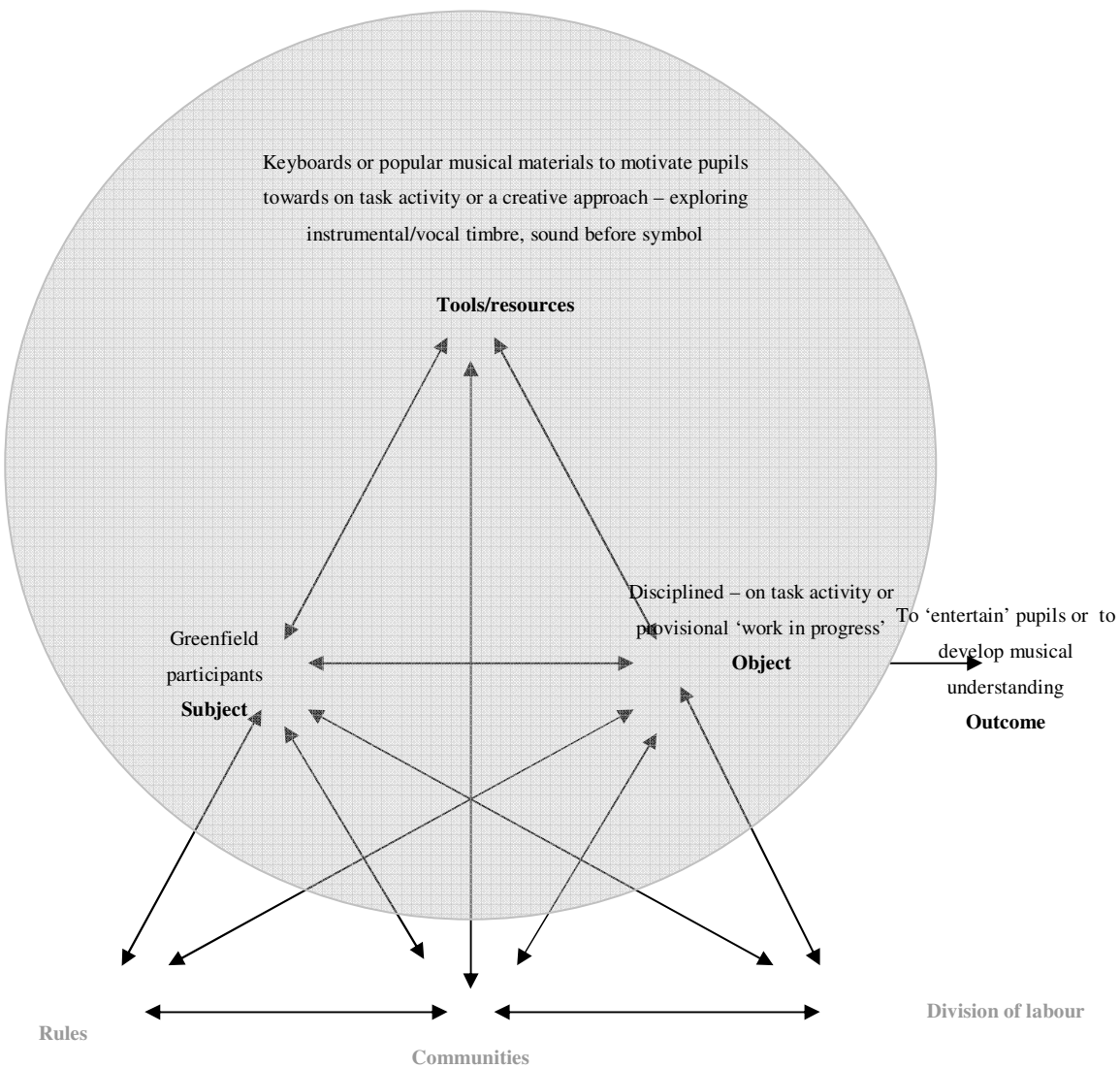
I need to draw on my resources of being stricter as well. Or being more down the line with things. And to use the school discipline procedure as well ... not being afraid of carrying it out. Setting written work if people can't settle down ... Detentions as well.

(Samantha: individual interview 1)

This comment also indicated the extent to which Samantha appeared to align herself with Andrew. His focus on discipline had become her focus, and she was particularly aware of this because this was recognised by Andrew, Maria and herself as being an area of weakness. Her individual interview indicated that she would prefer to adopt a more 'creative' approach with the pupils and perhaps this hints at a form of 'strategic compliance' (Lacey, 1997).

Maria's approach to music education, one in which sounds and composition come before notation and propositional music theoretical development, contrasted with this position. This possible tension between perspectives opened up the potential for dialogue around the nature and purpose of music education in schools. See Figure 23 which focuses, in particular, on the resources to support these contrasting *objects*.

Figure 23: A typical activity system for the Greenfield case study participants showing possible areas for dialogue



What makes a 'good' student music teacher?

Having identified the goal in terms of 'good' teaching, the participants were asked to focus on the student-teacher attributes that would help them to attain this position. Andrew focused his response on the need to be prepared, reflective and organised, and in particular to be 'organised in terms of the university file', in order 'for the rest to follow'. He commented:

‘if you’ve got those things, then the rest may come, not always, but may come in time’ (individual interview 1). Andrew therefore saw teachers as needing a basic set of organisational skills which, like pupil discipline in the classroom, could lead to further development, but without which was a bar to successful teaching or learning. Interestingly, Andrew stressed the importance of the file being organised rather than what the file was trying to achieve.

Becoming a ‘good’ teacher

Andrew believed that the best way to learn to become a ‘good’ teacher was through extensive observation by student-teachers of experienced teachers. He saw the role of the tutor as ‘supplementary’: as he said, ‘to check on what I do and on the odd occasion she is here to check on how Samantha’s doing’. Andrew did not see the PGCE programme in terms of offering alternative perspectives, and characterised the OU PGCE programme as ‘paperwork’. While he acknowledged that he did not know what the courses consisted of, he emphasised the importance of ‘practice’ in learning to teach which, as he saw it, had not changed since his own initial teacher education. He described the transition to school-based mentoring which he experienced with another university:

Where you changed to become mentors. It was basically all the teaching came from the university and we were just helping out. But then we became mentors. And that was a joke as well. But we became mentors and we had to do it all. So I see very little difference.

(Andrew: individual interview 1)

Andrew did not see, and had never seen, the contribution that a university makes to student-teacher learning. He also believed that he had always been the sole provider of ‘input’ in terms of student-teacher learning, mainly through observation of his practice. These brief descriptions and commentary set the scene for a completely different scenario for Maria, who

was the university tutor for Peter at Castle Town College. It has been previously observed how Maria adopted both personalised and direct approaches in a context which was explicitly supportive – strategies to help student-teachers engage school pupils in music making. She now faced a mentor who did not see the value in a PGCE programme and a student-teacher who, by her own admission, was experiencing class management problems with a Head of Department who valued this skill highly and as a pre-requisite for effective music teaching. The student-teacher had also said that she did not intend to stay in the classroom once qualified. Her desire to pass by ‘taking on board’ criticisms and suggestions from all parties was explicit. The contrast between a PGCE activity system, supported by the tutor, and a school-based activity system that was tightly controlled by the mentor and, in many senses, ‘restrictive’ (Fuller & Unwin, 2003) is therefore significant. This kind of learning environment presents a difficult ‘third space’ (Gutierrez et al., 1997) where boundary crossing between university and school perspectives is problematic.

Greenfield School: issues arising from the data integration

We now return to a more detailed consideration of the content analysis data set in its context. The topic area, for a Year 7 class, was Salsa and Samantha had already identified that she wanted them to perform and compose. She set the context for the lesson and focused on *what* the pupils might do and *how* they might do it.

Samantha: We’re starting today a short project on Salsa. Basically, getting them to play percussion rhythms. And what I was hoping by the end that they could maybe work in groups, use some of the rhythms they’ve learned and write one rhythm for one instrument ... Now, whether that’s going to work or not ...

(Samantha: planning conversation)

The *object* of this system was clearly set out as performing Salsa. It was likely to be approved of by the mentor, who hoped to see a disciplined approach to the performance, and by the tutor who might see this as active music engagement with sound. Samantha participated in a significant number of the units: 93% of the planning units and 80% of the post-lesson discussion units. Andrew (mentor) spoke less than the other participants.

Table 33 shows the percentage of planning units initiated by each participant of all of the planning units to which they contributed.

Table 33: Greenfield – participant-initiated content when planning as a percentage of all units initiated

	Samantha (%)	Maria (%)	Andrew (%)
'Being a teacher'	0	0	0
Developing and maintaining relationships	0	0	0
Planning and teaching and pupil assessment strategies	23	47	26
Practice (specific teaching and learning events)	58	32	57
Resources for teaching and learning	4	0	0
Rules, regulations, requirements	8	3	4
School student prior and future learning	0	9	4
Solving 'in the moment' teaching problems	0	0	0
Student-teacher assessment	0	0	0
Student-teacher learning	0	0	0
The research process	0	6	0
Theories (a generalised view of practice)	8	3	9
None of these	0	0	0

From the participant perspective we can see again that, of the units they initiated, Samantha (student-teacher) and Andrew (mentor) primarily initiated units which referred to practice

events (58% and 57% or n=14 and n=12) and Maria (tutor) primarily initiated units about strategies (47% or n=16). Note though, that in terms of the *number* of practice units initiated, Maria was only slightly lower than the other participants (n=10), so although this could be seen to be less important to her as an individual, she mentioned this almost as frequently as the other participants. Table 34 combines both planning and post-lesson discussion data; it presents the number of units linked to content area initiated by each participant and the number of linked units expressed as a percentage of the units they initiated.

Table 34: Greenfield – the number of initiated units linked to content in both planning and post-lesson discussion

	Samantha	Maria	Andrew	Samantha	Maria	Andrew
'Being a teacher'	1	0	0	3%	0%	0%
Developing and maintaining relationships	0	0	1	0%	0%	3%
Planning and teaching and pupil assessment strategies	8	24	11	21%	44%	29%
Practice (specific teaching and learning events)	20	19	23	50%	33%	58%
Resources for teaching and learning	2	0	0	5%	0%	0%
Rules, regulations, requirements	2	1	1	5%	2%	3%
School student prior and future learning	1	4	1	3%	7%	3%
Solving 'in the moment' teaching problems	0	2	0	0%	4%	0%
Student-teacher assessment	0	2	0	0%	4%	0%
Student-teacher learning	0	0	0	0%	0%	0%
The research process	0	2	0	0%	4%	0%
Theories (a generalised view of practice)	2	1	2	5%	2%	5%
None of these	3	0	0	8%	0%	0%

Table 34 illustrates the way that Maria extended the spread of the planning and post-lesson discussion by initiating a greater variety of units. In doing this, Maria introduced new

perspectives, new approaches and different ways of approaching the lesson's *object*. She asked a greater number of questions in the planning session (30% of units as opposed to 15% of units in Castle Town planning) but in the post-lesson discussion she asked questions in relatively fewer units (4% in Greenfield compared to 31% in Castle Town). This may stem from the fact that, as she later described; she 'didn't feel welcome in the department'. Maria found participating in the lesson with Andrew to be quite difficult and commented after the lesson:

I felt today was going to be quite difficult ... because ... I didn't know how Andrew was going to react ... If this had been Peter, for instance, I actually would have said, sort of, five minutes into the lesson, 'Do you think it would be a good idea if we heard the music now?' And I didn't ... I didn't feel I could jump in and say that sort of thing here.

(Maria: individual interview 2)

Maria strongly indicated that the context has a constraining effect on her practice. Andrew's approach, which might be described as typical of a 'restrictive' learning environment (Evans et al., 2006, p. 53), inhibited the way that the tutor approached this conversation: she asked fewer questions and said she found it more difficult to control the flow of the conversation, even though she talked about a wide variety of topic types. Maria's main focus was on helping the student-teacher to articulate a set of learning objectives for the pupils in the classroom in an attempt to expand the performance *object*. This process, of articulating and helping the student-teacher to articulate learning objectives (as a conceptual *tool*), closely mirrors the start of a process of 'expansive transformation' (Engeström, 2001). As this *tool* is introduced, both the object and the motive have the potential for re-examination. During the planning session, all three participants spent a significant amount of time talking about the objectives for the lesson and trying to help Samantha link pupil activity and assessment to the objectives. They also spent a significant amount of time modelling a lesson that had immediate musical

engagement and immediate pupil activity, rather than teacher talk. The following extract is

illustrative:

- Andrew: I would do one of two things: I would either put your CD on when they come in and ask them questions on it, either written down or orally, verbally. Or I would have – you've got time because there's nobody in before you unless I've got a cover – have the instruments out and you go straight into what you finished off today.
- 'Right, this row plays this rhythm; that row plays that rhythm.' It doesn't matter about that your ... It's two plus three or three plus two. It doesn't have to be three plus two, it's either. Erm, and like you say, Salsa ... there's a thousand Salsa pieces that don't have that in.
- Samantha: Yes. Yes.
- Andrew: It's very hard to find. But I mean; you go straight into it: 'Right, pick your instrument! You're playing this part! You're playing that part!' Now we've written down, whatever. Then you've got the 'straight in' rather than faffing on with ... you know, last week you got it started straight away.
- Or, if you're not happy with starting a lesson where there's a potential to be, you know, a bit of indiscipline, you know, messing around with the instruments, 'You've got your sheet on your desk, right? Have a listen to this!' when they come through the door. They're a nice class. You can play it when they come through the door. I'm not always happy with that when they come through the door. CD's on, Salsa's on. Answer these questions. Respond to that? What you ... How many beats in a bar? Where's it from? What do you remember? Did you do your Cuban ...? You could even go to look at the New York, the American aspect, rather instead of the Cuban.
- Sing 'Guantanamera' as they come in. Right Guantanamera, typical Cuban song; let's have a listen to it, as they just sing it. As you say, you need to get them on the task straight away with these classes before you go into your composition.
- Samantha: Yeah.
- Maria: And I wouldn't talk too much.
- Samantha: Yes.
- Andrew: Yeah.
- Maria: That wasn't a dig at you! It was everybody. No. It wasn't digging at you in any way at all. It was simply: they don't want to hear us just wittering away at the front. And at some point, yes, you have to do a recap. But you don't have to do that right at the beginning.

(Samantha, Andrew and Maria: planning conversation)

This extract shows the way that the mentor models teaching as a set of personal choices and is illustrative of a bricolage process (Lévi-Strauss, 1966), where suggestions are made on the basis of personal experience. Starting with a musical example on CD or with directed musical activity or with a question sheet in response to a musical example or by singing, but not talking, were suggested as ways of starting the lesson. Why this was appropriate and why these particular suggestions were made and the basis on which these strategies were suggested is not clear. In the event, Samantha *did* talk for a considerable amount of time at the start of the lesson, and *did not* have music on at the start of the lesson or immediately engage their interest and there was minor disruption from the pupils. This teaching strategy, where the mentor models the way that he believes the lesson should unfold, through a hypothetical lesson script, partly as an example of pace and engagement and partly as instruction, did not have the desired result, from his perspective. Samantha had apparently ignored his advice, and afterwards, in the individual interview, she was unable to articulate why this was the case. Samantha did not disagree with this strategy during the planning session, but perhaps did not see the necessity of implementation in practice. Perhaps this was seen as yet another piece of personal advice that could be accepted or rejected, rather than a strategy for effective class management.

In the individual video-stimulated recall interviews both Maria and Andrew were critical of the lesson, and Samantha began the post-lesson discussion with self-criticism. Neither the mentor's orientation to the *object* (of disciplined engagement) nor the tutor's orientation to the *object* (engagement in musical activity) were satisfied. Nor was Samantha's orientation (to teach well in order to pass the course) fully satisfied. The post-lesson discussion focused on identifying the weaknesses that underpinned the lesson and went back to the planning session, identifying the strategies, approaches and methods, the *resources* and

tools with which Samantha had failed to engage. It is possible to speculate that Samantha’s inability to draw on the suggestions that had been made was due to her different orientation to the task. Previously in this section it was noted that Samantha’s prime objective was to pass the course and to return to her post as an instrumental teacher. In an attempt to please both the mentor and the tutor, and without fully understanding their orientation to the *object*, their suggestions, without acknowledging provenance, may have appeared random, unconnected and lacking personal relevance.

Table 35 shows the number of units each participant at Greenfield initiated and the source from which the unit was drawn as well as the same figures expressed as a percentage of all the units the participants initiated.

Table 35: Greenfield – number of participant-initiated units linked to source

	Samantha	Maria	Andrew	Samantha	Maria	Andrew
Combination of sources	3	0	1	8%	0%	3%
Personal experiences or theories	9	16	22	24%	30%	56%
OU-based	0	4	0	0%	7%	0%
School-based	4	3	3	11%	6%	8%
Source not apparent	22	31	13	58%	57%	33%

The first thing to note about this case is the more frequent reference to ‘personal experiences or theories’ and the less frequent reference to ‘school-based sources’ than in other case studies. The conversation extract below, and quoted in some detail, gives an example of how

Maria used personal experiences to get Samantha to think about the purpose behind pupils

keeping a record of their compositions using notation:

Maria: So what I've done sometimes with my groups is to actually say to them ... I've said, 'Right, we're going to represent it in some way and then we're going to get another group to play what you've represented.'

Samantha: Right.

Maria: And see whether it's possible to do that because that's one of the reasons why things were ever written down in the first place, wasn't it? So, I'm not suggesting you necessarily put this in but that's another reason for letting them know that there's a reason for representing something. Very obvious, isn't it?

(Maria and Samantha: planning conversation)

This suggestion later drew disapproval from the mentor. This too was done at a temporal distance and was directed at the student-teacher. Note his reference to 'other schools' as a way of offering 'distance' as well:

Andrew: You know me; I don't like the written work. Graphic notation I found worked OK but as soon as you ... I like to get straight on with using conventional notation, OK. Other schools will do it different. I like them to have some attempt at really ... Once you've done that, to go back and do a little bit of graphic, I find some of the kids are, 'What are we doing this for? This is a bit of a waste of time.' You're disagreeing with that, aren't you?

Samantha: Yeah. It was ... If they're starting just with normal rhythm, they're quite difficult rhythms to put ... to write down as ...

Maria: Absolutely.

Samantha: ... as normal, as staff notation ...

Maria: Absolutely.

Samantha: ... which is the reason why I headed for graphic notation. I like them to learn staff notation, you know, proper staff and rhythm notation.

Andrew: I just wouldn't bother writing it down at all.

(Andrew, Samantha and Maria: planning conversation)

Maria also used a strategy of drawing on personal experience to make a point that the mentor might find controversial; and in the case of the extract below she did not do this immediately but also puts real-time distance between the comment and her response.

Samantha commented, near the start of the lesson:

Samantha: They're middle band – but are they poorer middle band or just middle band?

Andrew: No, they're good middle band.

(Samantha and Andrew: planning conversation)

Later in the conversation, Andrew commented,

And they're very much of a muchness in there. I think we'd really have to rack our brains to find anybody who's any better than anybody else, to be honest. I think that's actually fortunate, really. Well, whichever way you look at it. But, erm, it's not like you're 8,1-8,1S this afternoon; you could really go great guns with some of them. There are some super kids in there.

(Andrew: planning conversation)

These extracts from planning conversations pose significant tensions with Open University materials. The use of banding done for other subjects is an inappropriate method of grouping pupils for learning in music and other PGCE subjects, and this is clearly addressed in the OU materials. In AT terms this way of framing the attributes of a *community* within the activity system has implications for other areas of the system, not least on the *object*. The ideas surrounding ability and attainment in music education are important issues to discuss, but Maria, even when Andrew characterised the group as 'much of a muchness' did not immediately counter this viewpoint. Given Andrew's dogmatic viewpoint and the fact that Maria did not feel welcome in the department, this is, perhaps, not surprising. Instead, Maria waited and then, addressing the student, said:

Maria: ... you know, you've probably read it in your module stuff and I can't remember if it's in Level 3 about 'gifted and talented' is the top 10% in any school, not the top 10% in the country.

Because I go into schools and people say, 'Well, we don't have any ...' and I say, 'Well, actually you do, it's ...' So, but probably because you're banded here ... But the bands won't be musical banding will they?

(Maria: planning conversation)

This was a very rare and tentative mention of the university materials in the planning and post-lesson discussion (mentioned in seven units out of 552) and provided some authority to this statement. This flowed into personal anecdote and finished with a naïve question. Combined with the temporal distancing, noted above, the tutor had rolled five 'distancing' strategies into one as she made this critical move.

This exchange then followed:

Andrew: No, the bands aren't musical but that class ... that class really is very similar. The kids are very similar in there. There's nobody really ... one or two have instrumental lessons but it's very basic stuff. But there's nobody really struggling, is there anyone in there? I want to say ... I think ... I know it's strange and I'm not trying to get out of any differentiation but that one class, they're a nice class, there's nobody stands out and there's nobody, I wouldn't say, really struggling to be honest.

Samantha: Well, there's one or two ...

Andrew: Calum maybe ...

Samantha: Yeah. Calum ... which one?

Andrew: The one who plays at the back.

Samantha: Yeah. What ... Smith?

Andrew: Calum Smith – possibly him? But he takes drum lessons so ... But he's very slow.

(Andrew and Samantha: planning conversation)

The linkage between instrumental lessons and ability, and the non-problematised approach to differentiation in music for pupils banded for other subjects are contentious issues. Although Maria had raised these, there seemed to be no immediate sign from the other participants that

they recognised that the point had been made. Differentiation, therefore, was an issue for this student, both in terms of understanding the concept herself and in terms of implementing it in practice, and the two are interlinked. In AT terms the student-teacher appeared not to recognise the *contradiction* between the school-based ideas and the ideas in the university materials. Despite the fact that Maria had brought this to her attention, and perhaps because of the strong line taken by the mentor, she appeared unable to perceive tension and experience the learning which this *boundary crossing* might enable.

In the post-lesson discussion, Maria took a less personalised view, presenting herself as an Open University tutor, and giving an insight into the OU as an *activity system*, as she further pushed the student-teacher to consider differentiation that she would need to demonstrate if she were to pass the course.

- Maria: And you need more differentiation than just by outcome.
- Samantha: Right.
- Maria: I needed to – even if you knew which people were better and could be ... that's fine, that's absolutely fine but from the point of view of me as a tutor – I need to see that written down.
- Samantha: Right.
- Maria: So, when you're doing your Level 3, even if you know in your head how it's working, I've got to see it planned, and written there. So that's again what I wanted to see ... So I wanted to see your objectives differentiated.

(Maria and Samantha: post-lesson conversation)

Maria's reference to the Open University materials appeared at points in the conversation when all other strategies appeared to have failed. Samantha failed to respond to the idea, and was not supported by Andrew. With the concept of differentiation difficult to implement in this practice setting and with a student-teacher who appeared to be unable to introduce this into her teaching, referring to the need to demonstrate differentiated teaching in order to pass

the course (which seems to be her primary objective) was a significant attempt by Maria to get Samantha to engage with this idea.

In these conversations, Andrew, as a percentage of the units in which he participated (46% and 42%) (see Table 25 in Chapter 7) and as a percentage of the units he initiated (56% overall) (see Table 35 above), made frequent reference to his own personal theories or experiences. He talked about his experience as a long-standing and experienced Head of Music and said he had reached a position where he no longer actively sought alternative approaches and was happy with what he did. His approach to music teaching, his approach to the *object* of music education, appeared fixed, as did the resources, the way that he characterised the pupils, the way they were regulated and the extent to which they were involved in the process of engaging in the lessons.

Andrew, as well as Maria, re-presented issues from a personal perspective in order to underline his assertions. An example is this comment, which unknowingly supported a perspective taken in the OU materials:

A lot of schools ... I say to kids who've come from another school, 'Where've you come from?' 'How did you mark your work?' 'How did it get marked?' 'Oh they just came round and gave me a C or a B or an A.' I think that's most unfair, particularly if they've done a lot of work. You've got to spend a bit of time thinking about their work.

(Andrew: planning conversation)

The discussion in this section has already drawn attention to the types of tensions that exist in the planning and post-lesson discussion at Greenfield. Student pace, liveliness and pupil engagement as well as Samantha's difficulties in identifying appropriately differentiated objectives have already been mentioned, and all of these are accounted for in the content analysis. Ten percent of units in the planning discussion and 26% of units in the post-lesson discussion show tensions related to Samantha's personal theories and to her practice. The

discussion has also focused on tensions which relate to university ideas: the casual and interchangeable use of terms which relate to ability, attainment, opportunity and behaviour.

Looking closely at the way that the participants agreed and disagreed with one another provides an interesting perspective on the planning and post-lesson discussion process at Greenfield. Samantha (student-teacher) showed a high level of agreement with Maria (mentor), 15% in the planning session, 22% in the post-lesson discussion, the highest level agreement in all the case studies. Conversely she agreed with Andrew less (in 9% and 10% of units) and also disagreed with him twice; this last figure is remarkable because she is the only student-teacher in all of the units who expressly disagreed with the mentor, quoted above in the conversation about using staff notation.

To summarise this case study, we see a student-teacher (Samantha) who had identified problematic issues in her own teaching but sometimes did not carry these out in practice. She was learning to teach in a school with its own challenges, some of which have been alluded to throughout this case study and referred to in the introductory section to this study. The experienced mentor (Andrew) drew heavily on his own experiences and personal theories and sometimes expressed views that are contrary to views expressed in the university materials. He attempted to help the student to address pace and engagement for pupil motivation which might lead to good pupil discipline and behaviour. The tutor perceived she was in a difficult situation; the mentor appeared to be reluctant to change his viewpoint and the student-teacher appeared to be 'picking up' ways of working and thinking that contrasted with her own perspective on music teaching.

Figure 24: Greenfield activity system focus

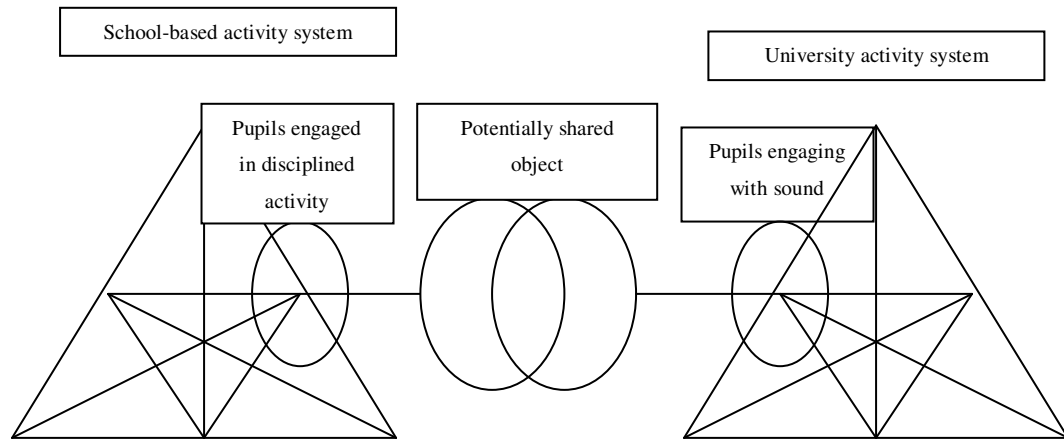


Figure 24 illustrates the different activity system perspectives that are evident in this study: on the one hand a university-led approach which focuses on engagement in sound and identifies differentiation as a key element in musical learning; and on the other hand a discipline-motivated approach to music-making which is promoted in the school. From Engeström's (2001) expansive learning perspective the boundaries between perspectives and approaches are clearly delineated, and there is significant *potential* for systemic learning, to use boundaries as learning assets (Wenger, 2007). The ability to use these differences as learning opportunities is, however, limited by the 'restrictive' learning (Fuller & Unwin, 2003) environment illustrated by the mentor who expressed an inflexible actual and designated identity (Sfard & Prusak, 2005) for himself and in relation to the student-teacher's identity. The student-teacher, as a boundary crosser between perspectives, appeared unable to implement the suggestions that were being made by both the mentor and the tutor, partly, perhaps, because her own over-riding priority was to pass and she was unable to grasp why these particular suggestions had been made, and partly because they did not resonate with her own trajectory of identity (Wenger, 2007).

Middlewich Upper School: introduction

Background

The mentor in this case study is Mary, the student-teacher is Phoebe and the tutor is Patrick. Phoebe is a music student-teacher who is undertaking school experience as part of her PGCE at Middlewich Upper School. She is a Level 1 student-teacher and is required to complete the full PGCE programme. Her school-based mentor is Mary, an experienced Head of Department who has just started her eighteenth year at Middlewich and is approaching retirement. Phoebe's part-time university tutor is Patrick, who has extensive experience as a classroom music teacher and as a teacher educator. Phoebe is at the start of her PGCE programme and had not engaged in a significant amount of Open University modular study at the time of the research. Patrick and Mary are also at the start of their relationship with each other and with Phoebe.

Middlewich Upper School is situated in a rural county in the south of England. Its Ofsted inspection (2005) noted:

Middlewich Upper School and Community College is a voluntary aided comprehensive school. The school was awarded specialist status in sports and training school status in September 2003. The school is oversubscribed and is bigger than the average secondary school. Over 96% of the students are from white British backgrounds with a broad range of other ethnic backgrounds represented in the remaining 4%. The proportion of pupils eligible for free school meals and with special educational needs is lower than the national average. The number of pupils with statements of special educational needs is lower than the national average. The school is located in an attractive and spacious site and includes a school farm.

(Ofsted, 2005)

Ofsted's judgement in 2005 was that this is a 'good' school. Its music department is extensive and well-equipped and Mary leads a group of three staff who teach in good-sized rooms, some of which are interlinked and require access through other teaching areas. It has a suite of computers with a full range of music software, rock and pop equipment, and a complete set of

African drums which have been built up over many years. During the two days when the researcher was collecting data at Middlewich the sound of instrumental lessons, rehearsals, practice and an experiential music curriculum came from all areas of the sprawling department and at all times of the day. Rock bands, drum lessons and the sound of African drumming providing a sound track to the recordings of semi-structured interviews and gave the impression of an energetic and participative department.

The school takes pupils between the ages of 13 and 19, and music is taught in each year group. The school organises a Saturday morning music school and there are many extra-curricular groups. At the time of the observation visits, the music department had just presented an evening concert in which a Mozart piano concerto had been performed. The school has a history of performing 'classical' works in public, and Mary claims that in the past the school has had 'good singers' in the sixth form and a 'very good string ensemble'. Numbers of students taking GCSE music are at around forty each year. There are currently four students taking A level music and between thirteen and sixteen students taking music technology A level. There are 1600 students altogether in this over-subscribed twelve-form entry school. Extra-curricular music making is an important activity.

Mary – the mentor

Mary described herself as coming from a 'musical family'; her father was a trained singer from Trinity College of Music, but he did not take up music professionally. She attended a grammar school and claims she was an academically able student who took a keen interest in science and mathematics. Mary wanted to study music at university, but says she was unable to achieve the appropriate grades because A level teaching at her school was so poor. Eventually she was accepted at the Royal Academy of Music to study singing and piano.

Mary then took a PGCE course. One of her tutors was Arnold Bentley, well known for the development of tests of musical ability. She was also taught to use 'Kodaly method', a system of music education which focuses on singing and musical literacy from an early age, and remembers a course which she says was beneficial because it refined her conducting and arranging skills. She commented: 'that was really good practical training ... I'm sure you would not have done those things had you not done a (PGCE) course'. Mary's experience as a performer and professional singer had enabled her, in her view, to aim and achieve higher standards of performance from her students, including concerts in which Mozart's piano concertos, Monteverdi's *Il Combattimento di Tancredi e Clorinda*, Pergolesi's *Magnificat* and Handel's *Acis and Galatea* had been performed.

Phoebe – the student-teacher

Phoebe attended an independent school in Suffolk as a music scholar. She described the music department at the school as being very traditional, 'very classical'. In her interviews she described the school's 'fabulous' choir singing Evensong each week and a school curriculum where 'Dvořák was positively pop music!' She had a formal music education, playing instruments in chamber orchestras and singing, but found that she no longer wanted to pursue music as a professional musician by the time she went to university. Despite this, she studied a joint music and marketing degree at university where she developed an interest in jazz and pop music. Following her degree, Phoebe tried to get a job which involved music in some way: 'I did things like events management and ended up working for a record company, which was great ... But it just wasn't enough.' Through teaching young children, Phoebe believed she would be able to use the musical skills she had developed to motivate and inspire pupils to enjoy participating in music.

Patrick – the tutor

Patrick also said he comes from a ‘musical family’, and that he was committed to a musical path from a young age, both as a singer and as a flautist. He attended a grammar school and described his early music education, up to the age of sixteen, as lacking in inspiration. Patrick went on to study music at university and further developed his flute playing. He eventually left to become an instrumental teacher, interspersed with a year’s postgraduate flute study at the Royal Academy of Music. His first appointment as an instrumental teacher was in an area of Scotland where there had been no previous instrumental teaching: ‘I had about ten free instruments, literally, from piccolo to tuba, all brand new. And we gave the kids Bentley tests in order to determine who got lessons.’ He then moved on to teach A level music and some drama in a college of further education, where he trained to teach. Following that, he got a job as Head of Performing Arts in London and then Director of Music at an upper school in a county in the south of England. Patrick then moved into the field of initial teacher education on a full-time basis, and works part-time for the Open University as a subject tutor.

The case study participants

Mary, Patrick and Phoebe share a trajectory of identity which has its basis in the performance of western European music, Mary and Phoebe as singers and Patrick as a woodwind player. This common history, with its emphasis on particular *tools, rules, division of labour* and *communities* requires *old timers* in that particular community of practice (Lave & Wenger, 1991) to have demonstrated instrumental or vocal competence to a high level through sustained deliberate practice, through an understanding of the western European musical grammar. Making music through public performance is something which excited

these participants and they wanted to convey this excitement to their pupils by engaging them in music making as performance. The planning for teaching in this case study was particularly interesting and, as we will see later in the chapter, it drew heavily on the sorts of skills that might be seen in planning for concert performance, primarily the selection and ordering of suitable and entertaining resources. Resources were selected on the basis of their appeal; the class engaged (through a *division of labour*) in structured activity with instruments, with *rules* which supported a disciplined approach to small group work, performance and evaluation.

What makes a 'good' teacher?

Mary (mentor) felt that a 'good' teacher should set high expectations: 'When you've done performance, especially to a high standard, you expect finesse ... Your aims are higher' (individual interview 1). Despite these high expectations for those who are more musically experienced and who perform in school concerts, she also believed in an experiential music curriculum, one which involved *all* students and in which the children should be engaged in musical experience. She commented: 'It's a whole class activity so every child is engaged' (individual interview 1), and engaged, she believed, to a 'high standard'. During her first interview and subsequent interviews and comments, Mary commented on the ability of effective music teachers to build and draw on extensive music resources which motivate pupils to participate in lessons. Mary frequently mentioned songs and ideas drawn from other teachers and courses and instruments, particularly the set of African drums, which she had built up over many years teaching. Her commitment to 'high' musical standards in performance using motivational *resources* built up over time, drawing on her own experiential capital, indicated the importance she gave to active musical participation by pupils. For Mary,

the *object* of music education was ‘enjoyment’ by all pupils and participation in a traditional western European repertoire by the ‘more able’.

Patrick, Phoebe’s tutor, reflected on the ability of the ‘good’ teacher to empathise with pupils, to inspire them, to communicate well and to be musical. He focused on what he saw as the music lesson’s ability to contribute to more generic student development. For example, when asked to describe a ‘good’ lesson that he had observed or taught, one that demonstrated the key features of effective music teaching and learning, he focused on a composition lesson that used a worksheet:

The sheet I gave them had a lot of information they didn’t need ... it’s actually good practice for them to have a lot of information that they don’t need in order to pick out the information that they do need.

(Patrick: individual interview 1)

Patrick, talking about the contribution that music education can make to other areas of educational development, did not stress the musical elements within the lesson. In doing this he located the music classroom *activity system* within the broader ‘whole school’ activity system, moving it from consideration as an *object* to a *resource* or *tool* in the wider context. While the Open University modular materials draw attention to the contribution that music education can make to wider intellectual development, Patrick’s focus on this as an example of ‘good’ music education seems surprising and presents a highly individualistic and personal perspective.

Phoebe, like Mary, focused her responses to the question of what makes a ‘good’ teacher on passion, enthusiasm and commitment to developing music education for all pupils. She frequently reiterated the point that ‘good’ teaching is about ‘enthusiasm and enjoying what you’re doing’ (individual interview 1). She, too, believed in an experiential approach to music education in which ‘good’ teachers use a variety of classroom management strategies to

motivate and engage pupils. She saw this orientation to music education as a rejection of her own school music experience and an attempt to capture the enthusiasm she later felt in jazz groups at college.

What makes a 'good' student music teacher?

Mary, who saw Phoebe as a 'good' student music teacher, continued the theme of resource gathering and giving when she referred to Phoebe:

She's going to milk us for everything she can get ... which is good.

(Later)

... because in a way we're passing on our skills to her, aren't we? That's what it's all about. And that includes Patrick as well [who also passes on his skills to Phoebe].

(Mary: individual interview 1)

Passing on skills and resources, providing a catalogue of ideas, suggestions and music for Phoebe as a potential music teacher bricoleur, was, for Mary, an important part of the teacher education process. She felt it was important that student-teachers were able to harvest such resources for later use. Phoebe, in the context of such an extensive repository of teaching resources, argued that she had a 'lack of creativity' and saw this as a key impediment to her future as a successful classroom teacher. She expressed a lack of confidence in her ability to develop new or innovative resources and was looking forward to the opportunity to 'plunder' departmental resources both at this school and after planned visits to the linked middle school.

Earlier sections in this chapter have shown the importance of student-teachers engaging in the 'full' teaching role, adopting a trajectory which explores the full teacher role and taking part in extra-curricular activities. In Mary's eyes, a 'good' student participated in extra curricular activities and learned by engaging and responded positively to challenge: 'I just threw her in at the deep end. She watched me doing an African drumming lesson once

with a class, and I said right, you can have a go next lesson' (individual interview 1). Patrick, the tutor, similarly focused on the need for students to take responsibility and to get on with the job of teaching, but with a different focus: 'They almost need to be encouraged to think of themselves not as student-teachers, I think, in order to develop properly' (individual interview 1). Patrick's focus was on student-teachers acting 'as if' (Edwards et al., 2002) they were teachers, not to neglect their position as learners, but to enhance it. Adopting the *designated identity* of a teacher like them (Sfard & Prusak, 2005), in advance of this becoming an *actual identity*, for both the mentor and tutor, was important to facilitate student-teacher development. Phoebe, on the other hand, focused on the need to be socially aware of her position in relation to her mentor and other colleagues in the department. Knowing when to ask questions, when to help and to listen and when to be 'absent' were key aspects in her developing relationship in the department: 'Knowing ... when you can be there and when you can't' (individual interview 1). She too wanted to get on with the business of teaching but also saw the tensions presented by her role as a learner: 'You're in this halfway house ... you're not a teacher but you're not a pupil' (individual interview 1). These different perspectives of actual and designated identity (Sfard & Prusak, 2005), of being a learner and of being a teacher, could provide the opportunity for an expansive approach as the learner perspective is contrasted with the teacher perspective, but in their conversations, this was not addressed, tensions were not articulated and the learning potential offered by *boundary crossing* was untapped.

Becoming a 'good' teacher

Mary focused her responses to this question on the need to take and evaluate ideas presented in a variety of circumstances: 'You go on a course ... and someone says have you

ever tried it this way, and you try it and it works' (individual interview 1). She believed that mentors should provide daily 'here and now' advice and should offer 'tricks of the trade', providing opportunities to make mistakes and to provide techniques to nurture and develop student-teacher confidence. She saw the PGCE programme, for example, as an important way to provide hands-on sharing of things 'which work' as well as additional practical support and awareness of teaching resources. In offering this perspective, Mary took the view of a *bricoleur*: resources, techniques, ideas, developed in other contexts and for other purposes were drawn on, reassembled and re-presented for pupils and for student-teachers. Patrick focused on the need for students to take responsibility as a teacher, assuming the *designated identity* of a teacher, while the mentor had a key role in encouraging experimentation. He saw his own role as providing an overview of assessment, and of additional advice about resources, as well as offering support for the mentor. For Patrick, the PGCE course was significant in that it helped and encouraged student-teacher 'reflection'. Significantly, Patrick did not refer to the PGCE course's role in offering alternative or contradictory ideas, or think of his own role in terms of challenging aspects of school-based practice. He appeared to conceptualise the university as a distinct *activity system* only in terms of its role with assessment.

Phoebe identified the ability to engage in self-assessment and the ability to take, adapt and amend ideas as key ways in which she would improve as a teacher; 'taking elements of all those [ideas] and making them into my own' (individual interview 1). In responses which were remarkably similar to her mentor, she saw Mary's role as one of nurturing and building her confidence but emphasised the mentor role of 'confidante' and the provider of daily advice as being key dimensions of the role. On the other hand, Phoebe saw the tutor role emphatically as someone who keeps an eye on the university regulations: 'You have to tick all the boxes' (individual interview 1). She also valued his role as someone who could provide an alternative

viewpoint; ‘have you tried this or thought about going here for resources?’ (individual interview 1). She claimed that the PGCE helped in this process by encouraging reflection, providing information about current terms and also helping to confirm thinking developed in the classroom: ‘It’s nice to read it in black and white’ (individual interview 1). Phoebe, too, emphasised, as she saw it, the bricolage nature of teacher learning and teaching, framed by a developing confidence in ‘delivery’. The PGCE course, which takes place over time and which enforces study and the completion of assessment tasks between blocks of school experience, for Phoebe, framed the reflective process and also provided a supportive and confirmatory resource.

What is striking about the perspectives these participants presented is the way they talked warmly of a PGCE course that they had constructed in ways that those who wrote the course would not recognise. The course does not provide extensive hands-on experience or a repository of ideas ‘which work’. And, although it stresses the need for student-teachers to learn from evaluation, it does not predominantly focus on ‘reflective practice’ (Schon, 1987).

Middlewich Upper School: issues arising from the data integration

Phoebe, Mary and Patrick were asked to plan a lesson jointly. Prior to the planning session Phoebe and Mary had identified that they would teach a lesson that followed on from the previous lesson which focused on African drumming. This was to be part of a longer scheme that looked at the influence of African music on American music through the movement of slaves. Mary described the group of pupils they would be working with as potentially ‘difficult’: ‘[Year 9] are not on their best behaviour from the moment they choose their options. This term is renowned for going slightly off the boil’ (planning conversation).

Mary and Phoebe had previously completed a single lesson performing a piece of Burundi drumming, a resource that Mary had gathered at a Local Authority training event. This lesson, as part of a sequence of lessons provided a background to popular music.

Mary: We're doing this unit of work, which I produced the materials for, which is a background of popular music, and how modern we get depends on how many weeks we've got to entertain the little so and sos throughout the summer. We started with a European influence, which was quite interesting, because they had no idea that America was English-speaking, because English people went there. You realise they don't do that in history. I'd played them Red Indian music, just to show them how pop music would not have been the same. So now we're looking at the black African influence and we're starting off by looking at African music. That's why we did the Burundi drumming lesson, and then we've got various listening materials, and there are some songs and various other things to do. There's also some optional things which you haven't seen like those other performing matters, drumming things. They could do something similar, so there are materials there to do this. If that's what you want to do ...

(Mary: planning conversation)

In this case study Mary (the mentor) presented the background to the lesson, an enhanced contribution that is evident throughout the planning session. She was involved in 62% of the planning units, the same percentage as Phoebe and more than Patrick (54%). Her engagement in the planning units compared to an average of 48% for mentors in the other case studies and provided this case with an interesting new dimension, and one that will be considered more fully as the case study unfolds. This opening section illustrated Mary's bricolage approach which underpins her approach to music education outlined in the previous section in this chapter. She had developed an over-arching scheme for this Year 9 group which looked at the music influences of the African diaspora. Essentially this was a story that loosely framed a series of musical experiences for the pupils, but that lacked historical accuracy. Burundi, for example, is not considered to be an area of Africa that suffered from slave trade exportation to the United States. Her perception of the *object* as musical participation for pupils who might have 'gone off the boil', itself a folk theoretical perspective, and her perception of the teaching task as the art of selecting appropriate material in order to motivate

pupils, perhaps, accounted for the extent of her involvement as she introduced Phoebe to her repertoire of teaching materials.

Patrick, on the other hand, contributed to fewer planning units than both Phoebe and Mary, and to fewer planning unit than tutors in the other studies (54% as opposed to 72%).

Part of this could be to do with his approach. Early in the conversation he asked Mary:

I just want to ask you a question, really, which is: would it be good if Phoebe, primarily, planned it and she used us as the walls to bounce ideas off, as we go through it, so that as it were, you chaired the meeting, Phoebe?

(Patrick: planning conversation)

As can be seen from the resultant conversation, this suggestion was ignored.

Patrick contributed to more units in the post-lesson discussion than the other participants and to substantially more units than Phoebe, who contributed the least to any of the eight discussions at 29%. Phoebe's lack of participation and a lack of initiated units (18%) in this conversation seems to result from the more formal approach to feedback that Mary and Patrick used in their post-lesson discussion; this was an approach in which positive and other points were made as statements and in the context of a re-telling of the lesson from their perspective. For example:

Patrick: Yeah, I thought it was an excellent lesson Phoebe. I've written at the bottom of my observation form, in the box, which is for overall comment, that it was an excellent Level 1 lesson, which would be very good at any level.

Mary: I've put it was a well planned lesson which went very well, well done.

Patrick: I thought it was an excellent lesson and you executed it well. I think your approach is really positive and one of the things which I think is really good is that you are very actively musical with them ... They could see from watching your body language that you were actually listening in an active way and that encouraged them to listen actively ...

(Patrick and Mary: post-lesson conversation)

So while Patrick did not contribute to the planning session, which was dominated by the mentor who offered different resources for the student-teacher to select, he did contribute significantly to the post-lesson discussion, which all participants constructed as an opportunity for formal feedback. These opening comments were also illustrative of the way that the OU was presented in this session: comments for feedback were read from a completed observation schedule which started with an assessment judgement. Combined with the perspective of all participants that the tutor’s role is primarily about assessment, this dimension of the teacher education process permeated this conversation. Patrick’s focus on *rules* and the completion of observation schedules and assessment as a learning *resource* presented a different perspective on the teaching task, and the university as a different activity system.

Figure 25: Middlewich activity system focus

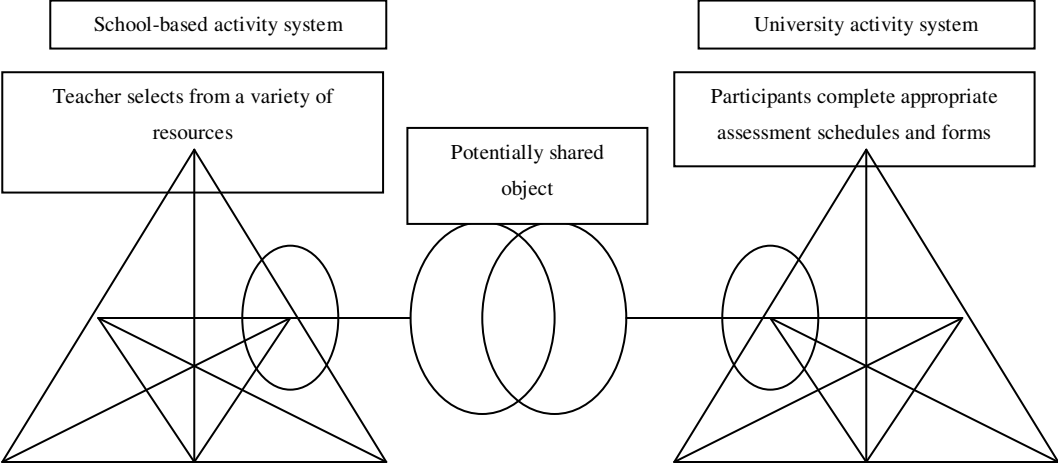


Figure 25 shows the way that the two activity systems might start to cohere around these two different sets of resources: the school-based system with the intention to motivate pupils who are ‘off the boil’ and the university system which is presented as a bureaucratic framework to

meet course requirements and to achieve qualification. In doing this, and by stressing the confirmatory role of the university, the school-based process is further legitimised from the student-teacher's perspective, and the *boundary crossing* learning opportunities are focused on lesson observation schedules.

Despite the relative lack of engagement by Patrick (tutor) in the planning units, he still initiated 43% (planning) and 47% (post-lesson discussion) of the units. Table 36 shows the percentage of units initiated by each participant in each of the content areas. Of the units initiated by Phoebe (student-teacher), 53% were around practice events and Patrick (tutor) focused his initiated units on teaching strategies, so far following a pattern seen in other case studies. Mary (mentor) on the other hand initiated more units on resources than the other participants and more than any other mentor in this study.

Table 36: Castle Town – participant-initiated content when planning as a percentage of all units initiated

	Phoebe (%)	Patrick (%)	Mary (%)
'Being a teacher'	0	0	5
Developing and maintaining relationships	0	0	0
Planning and teaching and pupil assessment strategies	12	44	16
Practice (specific teaching and learning events)	53	15	26
Resources for teaching and learning	24	7	32
Rules, regulations, requirements	6	19	0
School student prior and future learning	6	4	5
Solving 'in the moment' teaching problems	0	0	0
Student-teacher assessment	0	4	16
Student-teacher learning	0	0	0
The research process	0	0	0
Theories (a generalised view of practice)	0	4	0
None of these	0	4	0

The following extracts, taken from the opening of the planning session at Middlewich, illustrate the broad pattern of the conversation. Phoebe's initial thought was to start the lesson with a set of questions and answers which probed their understanding of the previous week's work: 'I was just thinking of putting that map up... and getting somebody to point out where they thought Burundi was. [And then] see if they can remember what rhythm they played' (planning conversation). Phoebe's idea was that the class should move on to singing for this lesson, given its place in popular music (the topic theme) and that this in itself would provide an adequate contrast to the previous week's performance activity.

Mary attempted to identify an appropriate resource from a pile of music:

I quite like this one here, I tell you why, because you've got the backing vocals. People who don't want to sing can do it on the xylophones and the more advanced people can do it on the piano. I don't know if we've got any musicians in this class (looks at class list)?

(Mary: planning conversation)

Patrick focused on the need to link the teaching through musical means by including 'drumming, ostinato patterns, and some polyrhythms' in a way that would integrate with a song. He drew attention to the need to think about the lesson's primary aims and objectives.

Mary: ...That's the song, which... You don't have to have that. You could just have the tune and try and fit it with the drum rhythms. You've got to make a decision about whether you teach the drum part first or you teach the song first.

Patrick: [to Phoebe] so, you need to think about what your primary aims and objectives are for the lesson.

Mary: this has got call and response, because it's [sings]. That's another group, you see. You've got a bit of call and response in there.

Patrick: what do you want the students to...

Phoebe: I want them to be singing stuff; I want them to have sung an African song to have taken part in a class performance of an African song. I want to play them some examples of say, Ladysmith's Black Mambazo . Do all that.

[Later]

Patrick: ... Are you thinking about the timing of the different bits of the lesson, how you put it all together. I'm assuming that you're going to use the lesson plan pro forma at some point?

(Mary, Patrick and Phoebe: planning conversation)

These brief extracts summarise the early planning conversation: Phoebe's (student-teacher) focus on non-musical pupil activity, Mary's (mentor) focus on resource and Patrick's (tutor) focus on trying to help the student to identify appropriate objectives and record her planning on an OU lesson planning pro forma are typical of the exchanges, the early part of which was very confusing for the student-teacher (Phoebe).

Patrick: Can I just ask, Phoebe, how you're feeling at this particular point?

Phoebe: I'm feeling a bit battered actually.

Patrick: Well, that's not very good. We've done that wrong.

Mary: No, I don't think you should feel battered. In a way it's a very realistic situation, because, unlike when I was first at your stage. There weren't that many resources around, you made your own resources. Now there are a lot of resources which are really helpful, and really useful, and I just added to it. You have to pick and choose.

Phoebe: Yeah. It's picking the right thing for this class.

(Patrick and Phoebe: planning conversation)

What becomes clear from this last extract was the student-teacher and mentor's over-riding concern to find materials and activities which would 'entertain' this group of 'difficult Year 9' pupils at the end of the school year. The mentor provided a resource bank from which the student-teacher could pick and choose, and as Mary commented in the background to this case study, 'she's going to milk us for everything she can get'. Using established resources is something to which Phoebe was attracted; she had some doubts about her own creativity. She later said of herself:

I'm not a really brilliant ideas person. If you said to me I'd got to plan a lesson on the blues. I'd be like ... I'd probably, not copy somebody, but get their ideas ... I like to try ideas that have already been tested.

(Phoebe: individual interview 2)

While it is important for music student-teachers to develop sets of resources, this sort of uncritical gathering, copying and implementing for entertainment, without first considering pupil learning, is, at best, contentious, especially when the resources are implemented as imitation of the mentor. Mary indicated that this might possibly be the case in the post-lesson discussion: 'You clicked on the off-beats, whereas I clap on the off-beats, but that didn't matter ... It made ... [the group] conscious of where the beats came. It made them realise what Africans do; it's music to move to' (post-lesson conversation).

Table 37 shows the number of participant-initiated units, linked to content, in both the planning and post-lesson discussions. Table 38 shows these figures as a percentage of participant-initiated units. These data mirror those for the planning-initiated unit.

Table 37: Middlewich – the number of initiated units linked to content in both planning and post-lesson discussion and their percentage

	Phoebe	Patrick	Mary	Phoebe	Patrick	Mary
'Being a teacher'	0	0	3	0%	0%	7%
Developing and maintaining relationships	0	0	0	0%	0%	0%
Planning and teaching and pupil assessment strategies	8	24	14	28%	41%	33%
Practice (specific teaching and learning events)	15	18	13	52%	31%	30%
Resources for teaching and learning	4	2	6	14%	3%	14%
Rules, regulations, requirements	1	7	2	3%	12%	5%
School student prior and future learning	1	3	1	3%	5%	2%
Solving 'in the moment' teaching problems	0	0	0	0%	0%	0%
Student-teacher assessment	0	3	4	0%	5%	9%
Student-teacher learning	0	0	0	0%	0%	0%
The research process	0	0	0	0%	0%	0%
Theories (a generalised view of practice)	0	1	0	0%	2%	0%
None of these	0	1	0	0%	2%	0%

Phoebe, Patrick and Mary drew on a range of sources. Table 38 shows the number and type of sources that each unit drew on, expressed again as a percentage of the total number of units initiated by each participant.

Table 38: Greenfield – number of participant-initiated units linked to source

	Phoebe	Patrick	Mary	Phoebe	Patrick	Mary
Combination of sources	0	1	0	0%	2%	0%
Personal experiences or theories	6	10	8	21%	17%	19%
OU-based	0	3	0	0%	5%	0%
School-based	13	8	26	45%	14%	60%
Source not apparent	10	37	9	34%	63%	21%

Mary initiated a significant number of units which referred to school-based sources. The following extract is typical:

Mary: [Looking at the class list] I think that's flute, She is an awkward character despite the fact that she's a Grade 4 flautist. You've got a couple of basic keyboard players, but not anything terribly spectacular. You've got somebody who's given up the violin, somebody who's given up the clarinet, but they've all done two terms of practical music.

(Mary: planning conversation)

Mary underlined her 'local', school-based, credentials by providing information about the pupil *community*, but in doing this she also linked behaviour with instrumental tuition, and earlier in the conversation she referred to those who have instrumental lessons as 'musicians'. Just as her notion of Year 9 pupils 'going off the boil' can be seen as 'folk theory', this was another example of an untested perspective that was offered as yet another legitimate source of information.

Patrick's reference to Open University sources provided three of the seven mentions throughout all eight case study conversations. But, whereas Maria at Greenfield referred to module content, Patrick used Open University pro formas to ensure that the student and

mentor planned and provide feedback according to Open University guidelines. In this case, Mary had not yet started to use the ‘official’ observation form:

- Patrick: Put it on an observation form by all means. They’re not tablets of stone, but the more of them we get ...
- Mary: Does this mean I’ve got to go on the Internet and get these forms off?
- Patrick: Well, I can get one for you now, which you can go away and photocopy.
- Phoebe: That’s fine, I’ve got one here you can photocopy.
- Patrick: Don’t be intimidated by the form. Just do use them.

(Patrick and Mary: planning conversation)

Patrick used the OU pro forma to provide feedback as a way of modelling its correct use for a mentor who was at the start of the mentoring process with this student.

Personal perspectives were also offered by the participants, including the tutor, Patrick:

You can really get hung up on gender differences and maybe make too much of it. But on the other hand there are gender differences in the way kids approach music and the way they interact. What was very interesting about one group was that the Master Drummer [the girl who had placed herself in control] didn’t really know what she was doing. And there was another girl in the group, who was a slightly quieter personality, who was playing the djembe who was actually controlling the group and explaining what they had to do ... There might be some advantages at some stages to organise them deliberately according to ability levels; according to their musical ability level. You could put some high achievers with some; you could mix them up or send envoys.

(Patrick: post-lesson discussion.)

In this extract Patrick alluded to interesting issues surrounding gender but did not make its provenance clear. In fact, Open University modular materials do address the issue of gender but the point he was making, of girls dominating practical music making, runs counter to arguments in the course materials. Drawing attention to these tensions might well have provided the opportunity for a wider discussion about gender and practical classroom music making which might have provided the participants with a more complete understanding of this issue. By doing this, however, Patrick would have drawn attention to a university *activity*

system which was focused on ideas and not assessment, and where there was potentially a difference of opinion between his views and the university materials and possibly the ideas presented in school.

The quoted extracts in this case have already illustrated tensions between perspectives and sources: some musical, some historical/cultural and some to do with approaches to student-teacher learning. What is significant about this case study is the emphatic way that the mentor and tutor agreed with each other. Both Mary and Patrick gave the impression of a united front, despite the fact that they have not had an opportunity to compare thoughts previously. Mary, for example, handed the conversation over to Patrick: ‘Do you want to take over at that point?’ They also agreed with each other before moving the feedback forwards:

Mary: I would have done what Patrick suggested ...
Can I say, I agree with everything Patrick has said so far ...?

Or

Patrick: I think [that what Mary has just said] is right.

(Mary and Patrick: post-lesson discussion)

Disagreement between the participants was very rare and was at the level of offering different perspectives. For example, in this extract Phoebe disagrees with one of Patrick’s suggestions:

Patrick: ...You can organise them by ability ...

Phoebe: I didn’t want to do that, you know, altogether ... it’s a bit hard on those who have got their buddy and they’re quiet, and get on with it.

Patrick: There might be advantages at some stages in a different year group for example to organise them deliberately according to ability levels, according to their musical ability level. You could put some high achievers with some others; you could mix them up or send envoys to different groups, or whatever.

(Patrick and Phoebe: post-lesson discussion)

Phoebe, Mary and Patrick present another and different case study perspective. Focused on resource and the ‘passing on’ and ‘trying out’ of resources, skills, ideas and personal theories, Mary and Phoebe failed to mention pupil learning as they discussed which resource delivered in what way would present the fewest discipline problems. Patrick used Open University pro formas to attempt to get the student-teacher to plan and the mentor to give feedback according to OU guidelines, but did not refer to OU modules or ideas. When he did make a comment about gender, he did not contrast this with the view of the teaching materials. Figure 25 draws attention to the way that the activity systems of these two different perspectives might cohere around these types of resources. It sets out implications for how *communities* are perceived and how *labour is divided* and so on. These different perspectives could possibly have provided opportunities for *expansive learning* but with such a high level of agreement between the participants, and with the role of the university mainly seen as being one of assessment, the university’s perspective is largely confirmatory of a school-based resource-building and selection process. The *actual identity* of the mentor and the designated identity of the *student-teacher* are remarkably similar and the tutor is drawn into the process of highlighting ‘tricks of the trade’ and ‘folk theories’, tried and trusted techniques and personal theories which form the basis of a teacher’s palette.

Now that the content analysis results have been reflected on in context, the next section in this chapter, answers each of the sub-questions for this phase of the research in turn.

8.4 Answering the research questions for this phase of the study

The research questions for this phase of the study are set out again in Figure 26.

Figure 26: Phase 2 research questions

Phase 2 research questions
<p><i>Main phase 2 research question</i></p> <p>What learning opportunities are offered to students in schools when they discuss practice with their mentor and tutor?</p>
<p><i>Phase 2 sub-questions</i></p> <p>In the context of cases which frame the analysis by identifying the orientations of the participants to music initial teacher education and to music teaching in general, this phase asks:</p> <p>a) In teaching conversations between participants, how, when, by whom and in what circumstances are different sources drawn on?</p> <p>b) How are tensions, contradictions, disagreement or agreement handled during these conversations?</p> <p>In order to answer these questions this phase focuses on two three-way conversations about teaching between a mentor, student-teacher and tutor, and asks:</p> <ul style="list-style-type: none">– Who is talking?– What are they talking about?– What sources do they draw on in these conversations?– What tensions are apparent in these conversations?– What agreement or disagreement can be observed in these discussions?

The sub-questions for this phase of the study were addressed through the content analysis process and discussed in Chapter 7. This analysis, which looked at the data for each case study discussion, and which presented summary data for all of the data analysed, came to some important conclusions about the learning conversations that took place in four case studies

between mentors, student-teachers and university tutors. It was found that the conversations that took place focused on practice and teaching strategies, on ‘what works’, ‘what has worked’ and ‘what will work’, and that these conversations were largely led by university tutors. This de-contextualised analysis, however, could not lead to a full exploration of the issues at hand, and in this chapter the findings from the content analysis process are re-presented and viewed from the perspective of the participants in their settings. However, the data reported so far have remained confined within their cases.

This section of the chapter continues the process of combining together the data from each of the case studies and presents answers to the sub-questions from the perspective of the cases as a whole, moving the analysis from a consideration of the atomised data in Chapter 7 to present a holistic response to the principal research question for this phase of the study and for the thesis as a whole.

Who is talking?

In Chapter 7, following a report on the analysis of the content analysis results, it was noted that the student-teachers in the case studies participated in most units, followed by university tutors and then by mentors. With some variation, tutors initiated most units and asked most questions, and in the main they asked ‘closed’ questions. This chapter, where these data are looked at in context, reveals different patterns of engagement, initiation and questioning linked to participant concerns, participant relationships and participant orientation to initial teacher education and to the joint planning, teaching and discussion process. Student-teachers demonstrated their primary concern with identifying suitable pupil activity and resources. Mentors and tutors were ready to support them with offers of advice and alternative suggestions and to promote this line of discussion through questioning and rehearsal of the

lesson that was being planned. At the core of these conversations was what the student-teacher was going to do, how they were going to do it and, afterwards, what they did and how they did it. Where the amount of participation deviated substantially, for example, in the Middlewich planning session, the university tutor suggested that the student-teacher should plan as she would 'normally' and that the mentor and tutor should act as 'sounding boards'. This contrasted with, for example, the planning at Brookside, where the university tutor adopted a more collaborative and 'hands on' role to the lesson, with frequent comments which drew on his own, current teaching practice. The increased mentor engagement at Middlewich was also a function of Mary's (mentor) belief that teaching is a matter of identifying the correct resource, and much of her involvement centred on running through, discussing and combining different resources, on one occasion noting that the result was inauthentic. Relationships between the participants also seemed to affect the extent to which they participated. Sarah (mentor) at Brookside, for example, deferred to Richard (the tutor) who framed the planning and post-lesson discussion with frequent questions and modelling for the student-teacher, providing mainly contextual information. The student-teachers frequently agreed with their tutors and mentors, with whom there was a power imbalance, and always appeared keen to take on board and respond to the advice they were being offered, even though this was not always evident in practice.

What are they talking about?

Above everything else, the participants talked about practice, and practice in fine detail, hypothetically scripting and modelling the teaching that would or might occur. The case-by-case analysis, from the participants' perspectives, and detailed in this chapter, illustrates, however, some underlying complexity here. Of the units that tutors initiated, most

were concerned with teaching strategies, and only Richard at Brookside initiated more units about practice than strategies. But, with the student-teacher preoccupation with pupil activity and resource, and the mentor and tutor desire to address their concerns, most units addressed classroom practice.

Elements of the discussions revolved around what could or could not be done with pupils of this age or attainment or what could or could not be done at that point in the year, what resources were likely to motivate the pupils and what forms of grouping might be appropriate. Participants focused on how teaching should be structured, on how resources or topics should be introduced and what type of activities flowed into each other, and talked about the need to motivate 'difficult' pupils. It is, perhaps, important to note that all of the classes involved in the study, except at the selective grammar school, Castle Town, were described by their mentors as being 'difficult' in some way. This was perhaps a strategy to deflect any potential embarrassment, in the event of pupil misbehaviour, away from the mentor and student-teacher, given the researcher's other role as Director of the PGCE programme, but the frequent reappearance of pupil motivation and appropriate resource choice and teacher delivery strategies seems to indicate otherwise. What is noticeable from the analysis is that student-teacher learning was not frequently an overt focus for planning or post-lesson discussion units. Possible questions, or topics of discussion, which explored student-teacher development and thinking were neglected as explicit topics. Instead, the tutor and mentor focused on modelling the 'ideal' lesson to come and, afterwards, comparing the lesson that had been taught with this 'ideal' version.

What sources do they draw on when talking?

The participants in this study mainly drew on personal experiences or theories or school-based sources in these conversations. When the sources are looked at from the perspective of the units initiated by each participant, personal experience or theories are more frequently sourced than school-based sources at Brookside and Greenfield, less frequently at Middlewich and about the same at Castle Town. The lack of overt references to Open University materials is significant, and mirrors the lack of reference to student-teacher learning identified in the previous dimension in the content analysis schedule. Maria (tutor), for example, though, showed the way in which themes or ideas in Open University materials connect and resonate with the personal perspectives which she offered. This happened in other case studies, but we observe, too, the way that other tutors present personal perspectives which do not connect or resonate with university materials. From the student-teacher's perspective, personally expressed ideas that were complementary to the university materials were indistinguishable from ideas that were contrary to them. Taken together with units where it is not possible to identify a source, the conversations lacked the clear identification of provenance.

With the lack of focus on student-teacher learning and the lack of overt referencing to Open University materials, it might be considered that the PGCE programme was not highly thought of by the participants. Except for the one mentor (Andrew at Greenfield), this was not seen to be the case. Notwithstanding the researcher's potential impact on responses to questions about the PGCE course, all of the other participants valued the PGCE programme highly, mentioning its ability to frame the learning process and to help student-teacher 'reflection'. The mentors at Castle Town, Brookside and Middlewich were complimentary about the course too, although they admitted to knowing little about its detail; this was

highlighted in the case of the mentor at Middlewich who talked of PGCE course content which was totally different from the OU PGCE.

A picture begins to emerge, then, of the university tutor leading through initiating and questioning discussions about practice, drawing frequently on personal, or personalised, experiences or theories. With a student and mentor who are focused on the pupils they will teach and the resources they will use, the tutor is drawn (to various degrees) into the process of modelling the actual lesson or possible strategies to the lesson, with the outcome that there is little or no difference between the role of tutor and mentor. The tutor's role is highly complex; working within contexts which are on a restrictive/expansive continuum, the topic of conversations, especially those which might be critical of a school's approach, are constrained. The focus for tutors in these cases appears to be on maintaining a professional rapport with the mentor as a way of drawing them into the teacher education process and valuing their contribution but also as a way of 'softening' potential criticism.

What tensions emerged as they talk?

With little or no difference in approach, recognised tensions between perspectives were few and far between. Possible tensions with Open University materials or ideas, or with other materials and ideas, were not seen or were largely ignored. Where tensions with elements beyond student practice were identified, the tutor used sophisticated techniques to re-present them from a personal perspective later in the conversation to avoid directly criticising the mentor. One mentor (at Greenfield) was adamant that he would not change his approach to teaching or his approach to mentoring, but others appeared to be willing to explore tension and contradiction although this did not occur in the discussions. What is evident is that contextualised understandings of the classroom teaching process are prioritised over more de-

contextualised perspectives. Tutors, apparently keen to show their ‘hands-on’ ability in the classroom, with an apparent desire to develop and maintain a professional rapport with the mentor, focused on the context and strategies within that context and not on other perspectives.

What agreement or disagreement emerges in the conversations?

Given the lack of overt attention to tension in the cases it is, perhaps, unsurprising that there was a considerable amount of explicit consensus among the participants, with disagreement identified in only 4% of the units, and then only at an overtly superficial level. We can observe frequent expressions of support and agreement between mentors and tutors and vice versa, as well as high levels of agreement between the student-teacher and tutor. Given the results of the previous questions, this last set of findings is not surprising: with the participants focused on the same issue, and with alternative perspectives effectively silenced, all that remains is to embellish whatever is proposed and to model possible and actual ‘delivery’.

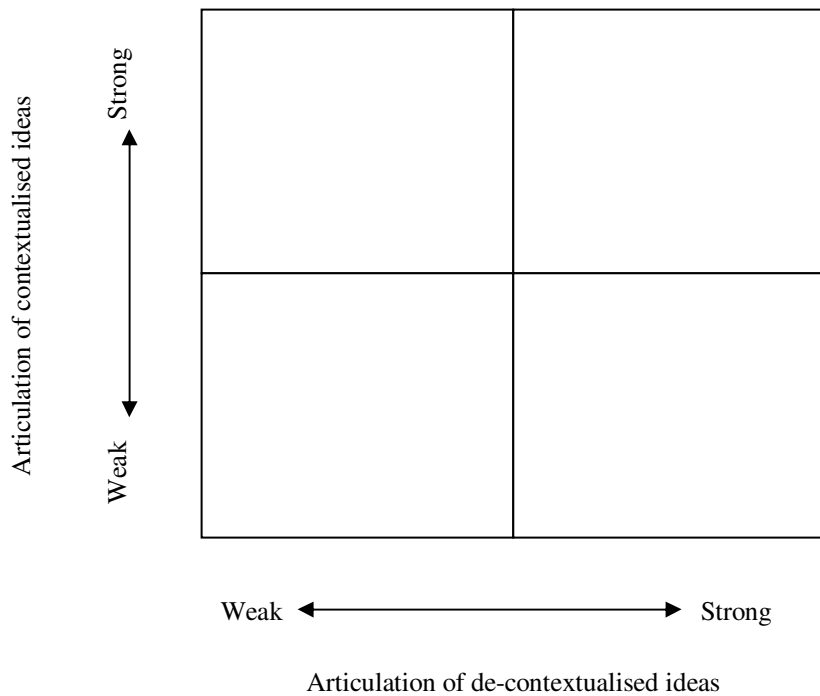
The participants presented multiple, if muted, orientations to initial teacher education, masked by a universal commitment to an experiential music curriculum. The conversations presented tutors who, in engaging in a discussion of classroom practice, presented a significant number of ideas from personal perspectives and who do not clearly identify the provenance of ideas. Alternative perspectives, alternative positions and the boundaries between these perspectives are not apparent.

Main research question for this phase of the research

The following section in this thesis looks at the main research question for this Phase of the study: what learning opportunities are presented to students in school when they discuss practice with their mentor and tutor? Previous discussion (see Chapter 3) has focused on the learning opportunities that might be presented by an exploration of systemic contradiction in activity systems. These expansive and systemic learning opportunities were seen as a way of bringing university and school-based study together in meaningful ways in order to bring about change to the individuals and to the system more generally. Although this was not an articulated focus of the OU PGCE programme, the position taken in this thesis is that it is only through systemic learning that student-teacher learning can be enhanced. The theoretical perspectives detailed in Chapter 3 saw boundaries between systems and communities as learning assets, and tension between them as a productive necessity. They also highlighted the potential benefits of the ‘third space’, an area for mutual exploration and development, and it was thought that this might begin to address some of the extant problematic issues in initial teacher education.

Figure 27 represents, in very broad terms, how this theoretical perspective might be represented.

Figure 27: A schematic representation of the ‘third zone’



Strong articulation of contextualised knowledge / strong articulation of de-contextualised knowledge

An expansive, transformative and systemic approach to student-teacher learning would explore the tensions between activity systems which would be seen as learning assets. Both de-contextualised university-based and contextualised school-based ideas would be strongly represented, and student-mentor-tutor discussion would primarily be located in the top right-hand corner of this figure. The potential for expansive learning exists when both de-contextualised and contextualised perspectives are made clear and where contradictions between these positions form a ‘collective journey through the zone of proximal development’ (Engeström, 2001, p. 137).

Strong articulation of de-contextualised knowledge and weak articulation of contextualised knowledge

A university-led approach which might look like a ‘theory into practice’ model of initial teacher education, where there is strong articulation of de-contextualised perspectives and little or no articulation of school-based, contextualised perspectives and where tensions were not offered would focus conversations on the bottom right-hand corner.

Weak articulation of both contextualised and de-contextualised knowledge

An approach to ITE in which student-teachers were ‘thrown in at the deep end’ and left to teach without support would find any teaching and learning conversations focusing on the bottom left-hand corner.

Strong articulation of contextualised knowledge and weak articulation of de-contextualised knowledge

The data from the case studies show significant conversational activity in the top left-hand corner of this model. Conversations centre on practice, on specific resources, and show little or no tension or contradiction; other perspectives are rarely present or are made invisible through personal appropriation. On the other hand, contextualised ideas are strongly presented, through a discussion of ‘what works’, either in that school or in other schools, either imagined or real. In other words, with the lack of dissonant perspectives, opportunities for expansive learning opportunities, when mentors, tutors and student-teachers discuss teaching, are lost. What emerges from these cases is the richness of the contextualised planning and discussion process. Resources, ideas, concepts, myths, knowledge and practice from a variety of different contexts are brought together in what one of the participants calls ‘a mish-mash’ of ideas,

describing a bricolage process, one where elements are creatively brought together to form a new entity with new meaning but which the original provenance becomes lost with re-use and re-versioning.

Participants may locate their conversations in this quadrant for an apparent variety of reasons. These might include, for example:

- 1) the extent to which the department provides ‘expansive’ (Fuller & Unwin, 2004) learning opportunities
- 2) a lack of awareness of university materials
- 3) the need to demonstrate skills as a teacher – showing credibility, perhaps in order to ‘broker’ the relationship between the university and the school setting
- 4) different views of what the programme in ITE was and was for and the extent to which it is valued
- 5) the inherent bricolage tension between mix and re-mix and the scientific orientation – which is more related to the de-contextualised theoretical, university-based models
- 6) a recognition that teachers act here and now with these pupils (Furlong, 1996, p. 160) and a desire to model this activity for student-teachers
- 7) the lack of time to engage in extended discussion about university ideas in relation to school practice
- 8) the tutor’s apparent need to maintain and develop a professional rapport with the mentor
- 9) the politeness associated with discussion with mentors in their ‘home’ environment.

It is also conceivable that the research process, which focused on preparing to participate in a lesson and discussing it afterwards, did not lend itself to a more comprehensive discussion about ideas in teaching in learning.

8.5 Summary

In this chapter I have contextualised the data from the content analysis process in each of the four case studies by drawing together data from the individual interviews, documentary evidence and my own field notes. I have addressed the research sub-questions for the phase on a case-by-case basis and then considered the questions in a section which compares each of the studies that had previously been discussed in an isolated manner. The chapter concludes with a discussion of the principal research question for this phase of the study and focuses on the learning opportunities that are offered to student-teachers as they engage in this process. The next chapter looks at the over-arching research question for this study. Drawing together the data from both phases of the study, it asks what these tell us about student-teacher learning. It refers back to the literature and conceptual framework discussed in Chapters 2 and 3 and offers a platform for further research.

CONCLUSIONS

9.0 Introduction

Having looked at the four case studies in detail, this chapter, in four sections, draws together the main conclusions which emerge from the study. In the first section I summarise the main research findings in response to the research questions posed in earlier chapters and look in detail at what these mean in terms of developing an understanding of student-teacher learning. The second section looks again at the literature and conceptual framework discussed in Chapters 2 and 3 and re-examines the main threads of the study in the light of the empirical investigation. The third section of the chapter draws on the findings of this study, and through a process of theoretical speculation proposes a set of principles which might underpin a new model of initial teacher education. The final section of the chapter draws on this study to outline a platform for further research.

9.1 The major findings of this research

The underpinning rationale of this study was that a detailed look at three-way student-teacher, mentor and tutor conversations about teaching and learning would elucidate a greater understanding about student-teacher learning. In looking at learning in this way it would draw attention to the processes which support student-teacher learning and which might support systemic learning. Identifying what was being talked about, who was talking, what sources they drew on, what contradictions or tensions emerged and the level of agreement or disagreement in these conversations, it was argued, would uncover the extent to which

expansive learning opportunities were apparent and were being exploited. This study would also, through a close examination of this systemic engagement, enable the development of a set of principles to inform course development in initial teacher education and provide a platform for further research.

Addressing the over-arching research question

This study's over-arching research question asks how music student-teacher learning can be understood in the light of the learning opportunities offered to them in school when they discuss practice with their mentor and tutor and when the complexity of contradictory orientations to initial teacher education are considered. Previously in this thesis I have described and analysed the data arising from discussion and have focused on the learning opportunities these present. In this chapter I look in detail at what this means in terms of our *understanding about student-teacher learning*.

All of the case studies presented in this thesis illustrate weak articulation of de-contextualised ideas: other perspectives are rarely present or are made invisible through personal or personalised articulation. In Wenger's (2007) terms the university perspective has limited *expressibility* in the school context. Conversely, contextualised ideas are strongly presented, through a discussion of 'what works', either in that school or in other schools, either imagined or real. With a lack of dissonant perspectives, opportunities for expansive learning opportunities, when mentors, tutors and students discuss teaching, are lost. What emerges from the study is the richness of the contextualised planning and discussion process when resources, ideas, concepts, myths, knowledge and practice from a variety of different contexts are brought together in what one of the participants calls 'a mish-mash' of ideas; a process of bricolage, where elements are creatively brought together to form a new entity with

new meaning but one in which the original provenance becomes lost with re-use and re-versioning.

The following key findings emerge from the study.

- 1) Planning for joint teaching draws in a wide variety of ideas drawn from a variety of sources. Some of these could be characterised as ‘folk’ theories: ideas which are highly personalised or contextualised, which have developed over time. Other ideas which could be described as research-based or policy-based are presented from a personal perspective, although policy-based ideas are less ‘personalised’.
- 2) When these ideas are articulated the participants rarely acknowledge their *provenance*.
- 3) Ideas are *appropriated* and re-presented from a personal perspective. Frequently they are presented as personal opinion. As a result, it becomes difficult to differentiate between ideas and to draw on the different ‘claims to competence’ (Wenger, 2007) which are presented by the different perspectives.
- 4) Planning to teach in these discussions is largely a process of bricolage: of re-assembling ideas, activities and ways of thinking into a new version of the whole. The participants make creative and highly resourceful use of the materials to hand, or which they remember, and engage in a rich process of construction and reconstruction.
- 5) The bricolage product becomes the *object* of the activity system. The participants’ conversations focus on pupil activity, structure, classroom logistics and the timing of lesson sections.
- 6) Different perceptions of what the *object* might be, and the contradictions which might emerge internally or externally, appear to be suspended as this new *object* is developed and as participants focus on *what* pupils will do and *how* they will do it rather than on *why* they should do it.

- 7) The process of bricolage, as reconstruction based on personal perspective, represents the constituent ideas as epistemologically flat, as another non-hierarchical and non-subsumed practice, accommodating multiple perspectives and multiple orientations.
- 8) In conversations where dissonance is suspended, the potential for expansive/transformational systemic learning is limited.

Hatton (1988), taking a *modernist* perspective, drew attention to the limitations of a bricolage approach to teachers' work and argued, in 1988, that there was a causal relationship between this process and many of the problems being reported in the teacher education literature at that time. The process of bricolage, Hatton (p. 340) argued, leads to *teacher conservatism*: 'a tendency to accommodate rather than transcend'. She also argued (p.340) that the process leads to *limited creativity*: 'a limited bag of tricks and reliance on concrete rather than abstract theory'. *Repertoire enlargement* typically happens in a 'non-principled' way, with teachers' beliefs and practices left unquestioned while issues of usefulness in practice are explored. She also argued (p. 341) that *teachers' use of theory* is dominated by sensory rather than abstract appeal leading, as she puts it, to 'a ragbag of commonsense or taken-for-granted beliefs and folk psychology'. Finally, she noted that bricolage leads to *devious means*: presenting the familiar in new surroundings creating a surprising result and *ad hocism*. This last dimension is seen by Hatton (p. 432) as 'one of the most distinctive features of teachers' work'. Developing coping, survival, dilemma management strategies which do not fundamentally address issues, but which improvise temporary solutions around existing orientations, attitudes and beliefs, is a key attribute of the *bricoleur*.

Although Hatton was writing twenty years ago, the problems in terms of teacher education which she believes are caused by a bricolage are still evident in this study, with the

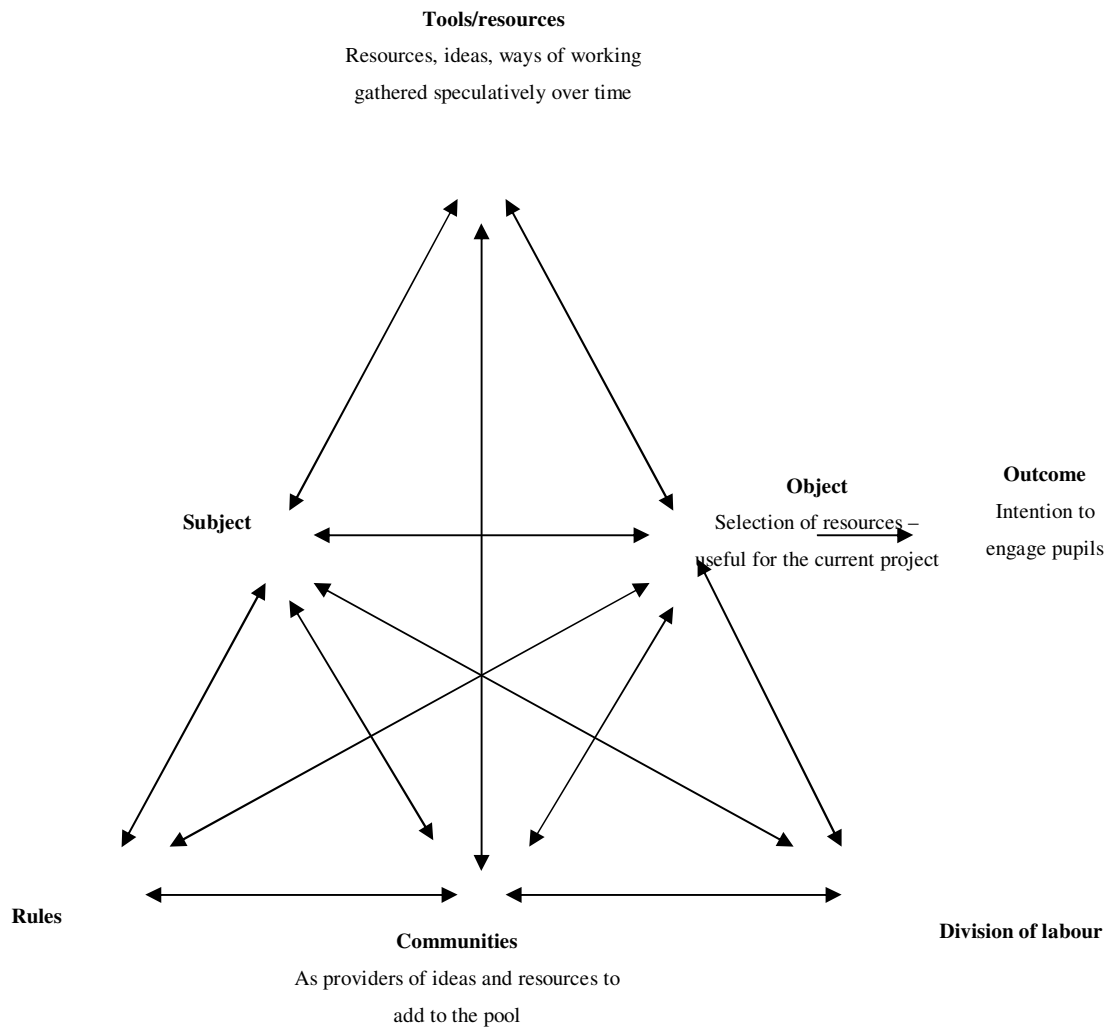
abstract scientific orientation to the work of teaching making little impact on the way that teachers and student-teachers in this study view their task. Similarly, an acknowledgement of teaching as a bricolage process has failed to make a significant impact on programmes in initial teacher education or on the work of teachers more generally. The data gathered through this study empirically support Hatton's theoretical proposition: teachers, mentors and tutors in conversations about teaching act as *bricoleurs*, using abstract theory as concrete theory in ways that could be seen as conservative, limited in creativity, non-principled and *ad hoc*. Hatton's challenge (p. 344) for teacher educators is to make courses focus less on the application of unreflective technique, to challenge pre-dispositions and to offer real help with recurring dilemmas by addressing, for example, the ethical and practical questions inherent in specific practices. Essentially, Hatton argues that courses in teacher education recognise the problematic transfer of knowledge from one setting to another; but, by taking an essentially *modernist* perspective she appears to privilege the university over the school. The literature discussed in Chapter 2 illustrates the complexities and difficulties presented by multiple orientations to initial teacher education and the constraints placed on initial teacher educators in England through nationally prescribed standards (DfES, 2002) and inspection (Ofsted, 2005). Challenging pre-dispositions towards teaching, which are seen as an issue of identity (Wenger, 2007) and as a facet of multi-membership of different communities, is difficult if not impossible, and applying non-situated theoretical understanding in practice settings is equally problematic. Perhaps this is why significant in-roads into addressing the problems are yet to be made?

Hatton's account also does not take into account the richness and creative potential offered by the process of bricolage. Boisvert (2003) draws attention to the creative possibilities afforded by a postmodern perspective on 'mix' and 'remix' popular culture; the

drawing together of ideas developed in different settings in ways that are richly creative, adaptive and improvisational. In an artistic sense, this process is deeply creative as the competence of different communities (Wenger, 2007) is brought together in new ways. This kind of improvisational capacity is essential if, as Furlong suggests, teachers are to act now with a specific group of pupils in relation to a specific set of learning objectives at a specific time (Furlong, 1996, p. 160). Significantly, in the mix and remix culture, it is the participants' knowledge of the 'sample' or extract in its original form which, when brought together with other 'samples' or extracts, provides a collective creative experience: an understanding of provenance is an important creative dimension to this process.

The data from the case studies show ideas from different sources juxtaposed and re-mixed in an improvisational way for these pupils at this time. In terms of student-teacher learning, these conversations show an intense process of socialisation as a *bricoleur*, gathering, adapting and re-mixing resources with a desire to inspire pupil engagement. While the process of mix and remix, of adaptation and re-adaptation, has creative potential, it is also limited. By placing great emphasis on the *usefulness* of an idea or a resource and by considering all ideas and resources equally, except for the main criterion of usefulness, *bricoleurs* minimise provenance and down-play the different claims to competence of the communities which generated these ideas. In AT terms, the *object* of the activity system (as in Figure 28) *is* the process of mixing and remixing. With a focus on *usefulness* and not on *provenance*, boundaries between the different claims to competence disappear, and tensions and contradictions dissolve. Student-teachers in this model are encouraged to acquire resources and to learn through experience but not to learn for themselves.

Figure 28: Bricolage from an activity theoretical perspective



This interpretation provides one explanation for the perceived lack of tension or contradiction between perspectives: if each conversation is approached as bricolage, with fresh re-construction that can accommodate multiple perspectives which focus on use rather than provenance, then conceptual boundaries cease to exist. Such a process is likely to feel comfortable for the participants but, as was discussed in Chapter 3, it is at the boundary where learning has the most impact and it is through identifying and wrestling with contradiction that

systemic expansive transformation takes place. The findings of this study go some way to recasting the debates about simplicity and complexity which dominate the political landscape and which were discussed in the opening chapters to this thesis: learning to teach is both complex *and*, because the teaching process is constructed un-problematically by student-teachers, mentors and tutors, is also perceived as ‘un-problematic’ to and by the participants.

It is also possible to speculate that a continual process of bricolage, where provenance remains unacknowledged, and where re-formed ideas are themselves re-formed and re-contextualised, is a potentially weak position. Identifying the provenance behind ideas and concepts, drawing attention to the practices from which they came, and to the competence to which these practices make claims, is more likely to lead to more appropriate re-versioning. It was argued, in Chapter 3, that it is only through some form of expansive transformation, which takes a non-hierarchical view of practice seriously, that initial teacher education can be improved at the systemic level. The data emerging from this study have indicated that this kind of expansive transformation is neither easy nor obvious. The consequences of an undifferentiated and un-provenanced bricolage approach to initial teacher education have significant implications for our understanding of curriculum design in response to this perspective on student-teacher learning. Different orientations to initial teacher education and to the teacher’s task and the complexity of different approaches could form the basis of an expansive/transformativ/systemic approach to initial teacher education, but as the data and subsequent analysis in this thesis show, this is not a level of complexity that is felt by the participants in this study.

The next section of this chapter looks at the implications for those aspects in initial teacher education that were explored in Chapter 2 and the theoretical perspectives considered in Chapter 3.

Implications of the study for partnerships in ITE

The size of this study and the fact that all data were gathered from student-teachers, tutors and mentors on a distance learning course in initial teacher education highlights the need to be cautious and tentative in making general claims. But, if the tendency to act as a *bricoleur* is a phenomenon which is observed in other settings and on other courses and by experienced teachers more generally, this could influence the way that universities and schools relate to each other as ‘partners’. The first implication is that regardless of the model of initial teacher education that is intended by design, student-teachers, as *bricoleurs*, are likely to assess all ideas, resources and concepts in terms of their immediate usefulness to their current teaching project. The ‘collaborative’ model (Furlong et al., 2000) of ‘partnership’ between university and school, where student-teachers are exposed to different forms of knowledge and which therefore highlights the issue of provenance, looks most likely to lead to expansive learning opportunities. Even here though, the model as implemented in the Oxford internship scheme (Benton, 1990) is not explicitly systematic in its approach or systemic in its scope, and research carried out on history student-teachers on the scheme (Burn, 2006) illustrates the difficulties each partner has in articulating knowledge drawn from their own unique claim to competence. If a bricolage approach to the task of teaching is found to be deep-rooted in the work of teachers, a framework which helps all participants to extend their thinking beyond the immediacy of the classroom, and the complexities of classroom teaching and teachers’ professional craft knowledge is important (Hagger & McIntyre, 2006).

An expansive/transformational model, in taking a systemic perspective, includes all of the participants as learners and implies a model of practice-to-practice engagement, in which the student-teacher, mentor and tutor are all perceived as learners, and not just the student-

teacher. This ‘community of learners’ (Shulman & Shulman, 2004) approach sets out a learning process that would be at the heart of the relationship between HEI and schools and which forges intellectual, emotional and pedagogic ‘connectedness’ (Hug & Moller, 2005, p. 131). While it would be possible to collaborate on complementary curricula, the aim through this process would be to uncover dissonance between perspectives, rather than to achieve consonance or curriculum coverage, and as such it adds a new perspective to forms of collaboration between partners.

Implications of the study for the school as a site for work-based learning

The school as a site for work-based learning was seen in Chapter 2 as one possible orientation to partnership, where ‘experts’ engage in practice with their clients in demanding and real-world contexts. One of the principal observations of this study is that experienced teachers draw from a wide variety of different sources when thinking about teaching their subject to pupils in classrooms, and view teaching as a process of bricolage. This can, from a *modernist* perspective, be viewed as conservative, lacking creativity, using theory which appeals to the senses, based on non-principled repertoire enlargement and *ad hoc* (Hatton, 1988), or it can be viewed as a creative act of *postmodern* improvisation (Boisvert, 2003) in which the richness of re-creation and complex juxtaposition are perceived positively.

Schools and classrooms as work settings are complex and busy places which both afford and constrain teacher learning (Billett, 2004b; Fuller and Unwin, 2004), and where beginning teachers are expected to cope with multiple types of new professional learning (Calderhead & Shorrock, 1997). A bricolage approach is one which assesses each resource or idea in relation to its usefulness to the current teaching project: in AT terms redefining the *object* as mixing and remixing. This process, which neglects provenance, avoids the need to

understand the claims to competence of the community which developed that understanding and enables the teacher to cope with the inherently complex and sometimes intractable demands which are made on them. In terms of student-teacher learning, it could be argued that this improvisational workplace skill is important, and this is especially so if further study shows that this approach is one which is deep-rooted. However, the deficiency of an approach to bricolage which neglects provenance lies in its limited creativity drawn from a limited repertoire assembled in a non-principled manner. This study underlines the peripheral and ‘inexpressible’ (Wenger, 2007) role that a university course plays in such an environment. With the dominant perspective of ‘what works’ or what is of use, and in environments which are not always expansive (Fuller & Unwin, 2004), it becomes difficult to present de-contextualised ideas in ways which are meaningful to the participants and, as was identified in the last chapter, this can result in conversations which focus almost entirely on highly contextual matters.

Learning in the work setting, as I have previously identified, is a complex endeavour and it is particularly difficult to have extensive learning conversations in practice settings. Perceiving the teacher’s task as bricolage, perhaps, provides an explanation as to why this might be the case. Based on an appeal which relates to ‘concrete theory’ (Lévi-Strauss, 1966), the usefulness of a teaching resource is primarily seen in terms of its impact: how pupils might react; how they are likely to behave; how the teacher might feel. For busy teachers as *bricoleurs*, working in a busy environment, finding ideas that have worked in the past and might work in the future and offering these ideas to beginning teachers might be seen as the primary focus of their task. They might see their role as school-based teacher-educators as socialising beginning teachers into this role. This focus is unlikely to lead to extensive conversations about student-teachers as learners, and attempting to deviate away from this

focus may be perceived as being ‘impolite’ (Haggarty, 1995a) at best or overtly critical at worst.

Implications of the study for mentors and for HEI tutors

The research literature indicates that mentors find it difficult to articulate their professional craft knowledge, and HEI tutors find it difficult to move beyond their previous role as mentors and to deal with the dilemmas they face in their new roles. As noted earlier in this chapter, this study supports these findings: tutors rarely offering a non-practice-related alternative to mentor suggestions rarely positioning themselves as brokers between two contrasting practices. Fuller and Unwin (2004) point out the learning affordances presented by ‘expansive’ environments, and this study endorses the perspective that this brings. However, this study also emphasises the impact of expansive/restrictive contexts on student-teacher learning and on the opportunities available for HEI tutors to help student-teacher learning. Politeness, school culture, teacher preconceptions (Burn, 2006; Haggarty, 1995a), along with the learning affordance of the school setting, are all contributory factors to the problems of articulating practice and brokering between practices. This study empirically supports Hatton’s (1988) theoretical position that bricolage could be seen as a causal factor of the problems noted in the teacher education literature, and suggests that the symptoms identified above result from schools and universities taking different perspectives on the teacher’s task. A bricolage approach, as a sub-set of a practical orientation to initial teacher education (Feiman-Nemser, 1990; Zeichner, 1983), implies a different relationship to ideas that are not seen as immediately helpful to the teacher’s need to decide how to act (Burn, 2006). Re-conceptualising the teacher’s task as bricolage draws attention to the gap between de-

contextualised ideas that focus on abstract theory and the concrete, sensory theoretical approach taken by the *bricoleur*.

This study highlights the way that participants present ideas which they have appropriated as personal perspectives, and in the context of a mix and remix as *object* approach to the teacher's task, ideas developed in different communities, with different claims to competence are presented similarly, as ideas to be chosen or not chosen. A postmodern perspective on bricolage (Boisvert, 2003) highlights the creative potential of innovation through the improvisational use of the old to create the new. It also highlights the way that the stories of the old – their provenance – when combined, can create new and potentially powerful stories. This study has highlighted the problematic nature of provenance and the issues around articulation of different practices, and the focus this gives to consonance in conversations. The consequence of this level of consonance is that expansive learning opportunities (Engeström, 2001) which could focus on systemic learning are highly problematic.

An expansive/transformative approach which focuses on the identification of provenance and difference, and on the contribution these differences make on action to be taken now, this study suggests, would be an interesting way to recast the mentor, tutor and student relationship. Although the examination of a lack of consensus between participants was a declared aim of the Oxford internship scheme (Benton, 1990), this remained a feature of a 'collaborative' approach to initial teacher education (Furlong et al., 2000). In an 'HEI-led' expansive approach participants would look at each others' practice non-judgementally and, viewing different practices non-hierarchically, would identify difference rather than attempting to articulate the whole of a practice. Importantly for an open and distance model of initial teacher education, the fact that the course materials are objectified means that it is

possible to bring university ideas into this exploration in a real and meaningful sense. The role of HEI tutor, in particular, would change, with a warrant to explore dissonance. Creating boundaries and exploring difference, while at the same time helping student-teachers to prepare to work with mentors whose expertise is contextually constructed, is not an unproblematic endeavour. This study has shown that tutors currently minimise differences between perspectives as a way of accommodating different points of view, occasionally offering pieces of bricolage which might have a research-based provenance but which are expressed as personal opinion. Moving to a situation in which boundaries are perceived as assets for learning, and which makes student transition a more problematic process, will require extensive brokering skills and an understanding of student-teacher development as horizontal expertise.

Implications for dealing with prescribed curricula, standards and inspection

Prescribed curricula for school teaching, the standards for qualified teacher status and their inspection by Ofsted present one view of teaching and learning in the classroom and one perspective on the nature of initial teacher preparation. We are usefully reminded that this is just one of many perspectives by looking at different developments in other nation-states in the United Kingdom (Menter, Brisard, & Smith, 2006; QAA, 2000). Given the emphasis placed on compliance through inspection and the emphasis these dimensions are given on the Open University's PGCE programme, it might be expected that they would form a significant part of the conversations about teaching. In fact, they were not mentioned at all. While many of the standards and prescriptions for teaching could be inferred from the comments made by the participants, these too are possibly seen as either immediately helpful or not helpful, and viewed non-hierarchically as yet another component in the bricolage object. The implication

of this study, although small in nature and specific in discipline, is that the demonstration of standards and prescribed curricula will always be subject to the needs of the moment. While it is possible for universities to force compliance with these specific aspects through assessment, and for the government to force university/school compliance through inspection, through an unequal topology of power, actual changes in long-term practice are likely to be made through an understanding of the provenance of these requirements and an active exploration of the boundaries and challenges they create. This kind of expansive learning recognises the fact that teachers' professional expertise is more than can be expressed in standards or competences (Calderhead & Shorrock, 1997; Knight, 2007). It also recognises the importance of context which shapes the interpretation and expression of these competences. Adherence to prescribed curricula and to identified national standards for beginning teachers thus becomes part of the wider process of expansive learning.

Implications of the study for models of identity and student-teacher development

The research literature in initial teacher education stresses the extent to which personal agendas and pre-dispositions shape what and how student-teachers will learn on courses in initial teacher education (Haggarty, 1995b, 1996; McIntyre & Hagger, 1992), formed through lengthy observation of the teaching process through their own schooling (Lortie, 1975). This study confirms the view that student-teacher 'actual identity' (Sfard & Prusak, 2005, p. 14) is a learned process (Hodkinson, 2007), the student-teachers in this study appearing to adopt a 'designated identity' (Sfard & Prusak, 2005) of a teacher as they engage in the bricolage process discussing 'what works'. With bricolage as the object of the activity, with boundaries as learning assets diminished, new horizontal perspectives on expertise, requiring connections between different activity systems or communities are, in one sense, lessened (Engeström et

al., 1995; Wenger, 2005). With a diminished sense of provenance, the boundaries between communities become less significant as learning opportunities.

What the study suggests is that it is this process of becoming a teacher, of becoming a bricoleur with its emphasis on bringing an appropriate repertoire into the mix and remix process, which acts as a barrier to the power of de-contextualised learning. If the *bricoleur* teacher's focus is on the usefulness of a speculatively gathered resource on the current teaching project, ideas which are de-contextualised and less immediately relevant are deemed to be less *useful*. However, drawing attention to the provenance of ideas and concepts and to the boundaries they create has the potential to build on the prior learning/identities which students, tutors and mentors bring to the initial teacher education process. A model which explores and celebrates different perspectives obviates the need for student-teachers to take accommodating action to hide or change their thinking about teaching to please their assessors (Lacey, 1997), except, perhaps, when their thinking impacts on more broadly agreed professional values. An expansive process could also open up different notions of expertise. If student-teacher learning is seen as a function of systemic learning, which has at its heart the dynamic inter-play of participants, communities, rules, division of labour and tools, this implies a different and systemic view of expertise, one in which connections through the identification of dissonance are made between different perspectives: between the school and university, between policy imperatives and school, between and within practitioners in schools and beyond. Expert practitioners in this model, in the horizontal sense, are those who are able to see these connections with expert school- or university-based teacher educators who are able to broker these connections on behalf of newcomers.

The changes which result from this reconceptualisation, and the difficulties in getting participants to engage with this different approach, cannot be underestimated. Issues of

politeness and identity combined with the difficulties faced by mentors, tutors and student-teachers finding time to talk about student-teacher learning remain. This thesis has argued, however, that a different focus, and one which takes a systemic perspective and gives the participants a warrant to explore differences, is likely to lead to improvements in student-teacher learning. Such an approach, though, requires further research. In action research terms the problem is now clearly defined and a series of actions to address these issues have been suggested in this chapter.

Implications for the theoretical perspectives used in this study

In Chapter 3 I introduced the theoretical perspectives of activity theory and communities of practice which were later used to frame an analysis of the case studies. I made the claim that these theoretical perspectives were largely complementary but that researchers had mainly considered these perspectives separately. This research has shown the benefit of considering both of these two perspectives simultaneously, showing the richness of the *object* (in AT terms) when multiple perspectives on identity are taken from communities of practice. Unique trajectories of identity formed by different encounters with the landscape of professional practice (Wenger, 2007) provide different perspectives on the task of teaching and learning and illuminate the multi-voiced nature of activity systems. Similarly, an activity theoretical perspective lends a systemic approach to a ‘communities of practice’ model, providing a holistic framework for analysis and for systemic learning.

The study underlines the dynamic nature of productive activity which is individually and socially constructed and the consequences of different orientations to the ‘object’, in AT terms, on other parts of the system. So, an Assessment Portfolio which can be seen, simultaneously, as a *tool* to demonstrate teaching competence, a *rule* which requires adherence

or an *object*, can be viewed in similar or different terms by other participants in the system. I argue that it is precisely these different perspectives, when brought together, which has the potential to lead to systemic learning in ITE.

One of the most significant outcomes of this study is to underline the highly problematic nature of boundary crossing, seen as learning opportunities in both models. While there still appears to be a strong argument that this provides the *potential* for expansive learning, the cases in this study show that boundaries, contradictions and dissonance are rarely present. In other words, boundary crossing is neither easy nor obvious and it should not be assumed that just because physical or conceptual boundaries exist that these will be used as an asset for learning.

9.2 The limitations of the study

Throughout this thesis attention has been drawn to its limitations at each stage: of the sample size; of the data-gathering instruments; of the ethical and procedural implications of the researcher as Director of the programme; and of the measures that were taken in order to prevent adverse impact on student-teacher progress and assessment. The preceding chapters have also drawn attention to the strengths of an overall methodology which looks in depth at a few cases and which uses a variety of complementary data-gathering tools.

The resource limitations of a part-time individual researcher are inevitable and cannot be ignored. While a detailed study of four cases is sufficient to answer the research questions and to highlight the complexity of tutor, mentor and student-teacher engagement as they talk about teaching and pupil learning, the small number of cases indicates that a degree of caution should be taken when developing conclusions and thinking about implications of this research. The aim of the study has not been to uncover universal truths or to develop a universally

applicable theory but to think about music student-teacher learning in the context of a three-way discussion in the school setting and to help the researcher and others to see the issue of music student-teacher learning with greater clarity and in more depth.

A greater number of cases would have enabled different perspectives on the cases to be presented. More cross-case comparison and, with greater resources, an enhanced longitudinal perspective might have revisited these conversations over time. Further resources might also have enabled the research to investigate and analyse other sources of data. Student assignments, tutor and mentor reports, FirstClass contributions and discussions might all have been considered as part of the ongoing conversation between mentors, tutors and student-teachers. Comparisons might have been made between these more formal communications and the planning and pupil learning conversations, and patterns might have emerged over time.

Asking the participants jointly to plan, participate in and discuss a lesson provided the students, tutors and mentors with a warrant to discuss learning and teaching in a way that is desired by the university, but that is often omitted because of other university requirements which limit the time available to tutors, student-teachers and mentors for this kind of activity. And, as I have previously discussed, this required additional resource and may have increased the tendency for procedural reactivity. There was no evidence to suggest that tutors, student-teachers or mentors would have taken a different approach if they had been asked to talk about teaching and learning in a more abstract way, without focusing on a lesson in which they all participated, but this should be noted as a limitation in this study and should be explored in more depth as this research is taken forward.

9.3 Recommendations of the study

In this thesis I have argued that an expansive/transformational approach to initial teacher education, one which exploits differences between perspectives and the boundaries they form, can lead to systemic learning and from this improvements in student-teacher learning. The empirical phase of the study did not show the active exploration of dissonance and it remains to be seen whether or not systemic learning to improve student-teacher learning is too ambitious an aim. The study highlighted the problematic nature of student-teacher learning in the school setting and reinforces the research literature which draws attention to the difficulties students, mentors and HEI tutors face when talking about student-teacher learning and in bringing different perspectives to conversations about teaching and learning. I argue that, in these case studies, the work of teachers may be interpreted as a process of bricolage, with student-teachers socialised into this role through conversation and modelling. When bricolage is presented in activity theoretical terms as the *object* and with the primary criterion of ‘usefulness’ applied to each aspect of the whole, boundaries between communities or activity systems are diminished as ideas from multiple perspectives are added to a single repertoire of resources and ideas. I argue that this is, perhaps, one way in which teachers are able to cope with the highly complex and sometimes mutually incompatible demands that are made of them. However, when teacher education fails to draw attention to boundaries and difference and does not exploit them as learning assets, it misses the opportunity to engage in systemic learning opportunities. Without such engagement, bricolage succumbs to a *modernist* interpretation as potentially conservative, limited in creativity, concerned with non-principled repertoire enlargement, as appealing to sensory or concrete theory, as ‘devious’ and *ad hoc* (Hatton, 1988).

This thesis discusses another alternative, and although this was not observed during the empirical phase, presents another, *postmodern*, perspective on bricolage. This is one which views the process of bricolage as a highly creative opportunity, enhanced through mutual understanding of provenance, which exploits the stories behind ideas and draws attention to the claims to competence of the communities from which they originate. In the thesis I argue that paying attention to difference, or dissonance, between perspectives as they are brought together as bricolage has the potential to lead to expansive learning opportunities as complexity in the workplace is revealed and worked through systematically. And it is by doing this that student-teacher learning can be enhanced.

This study, therefore, suggests some of the potential for student-teacher learning as part of systemic development but draws attention to some of the problems that might prevent it. It provides a better understanding of the problems facing student-teacher learning with a rationale for actions that might be taken to address these issues. The principal recommendation of this study is that actions are taken on the PGCE programme that focus on the process of teaching as bricolage and on the difficulties that tutors, mentors and student-teachers face in articulating provenance and exploiting dissonance as a learning opportunity. Specifically, the PGCE programme should consider:

- redefining the mentor, student-teacher, tutor relationship as a learning partnership
- rearticulating the mentor and tutor role in the Programme Handbook and other materials to reflect the complexity of the task and the difficulties they face in school
- refocusing the mentor, student-teacher, tutor partnership on student-teacher learning, rather than on activity
- articulating a learning role for the student-teacher as part of the partnership

- exploring the potential learning opportunities suggested by the identification of provenance and dissonance
- further encouraging tutors to articulate university-based perspectives in the school setting and suggesting, through staff development, strategies which might be used to do this
- further investment in a tutor development programme which draws attention to the highly developed and sophisticated approaches to professional conversations shown by the tutors in this study, and which codifies and enriches these approaches.

9.4 The potential of a postmodern perspective on bricolage for initial teacher education

This penultimate section of this thesis moves to consider, briefly, the potential that a postmodern perspective on bricolage might have for courses in initial teacher education. In this thesis I have argued that universities (as practice) and schools (as practice) are in an epistemologically flat relationship; although each has different claims to competence, neither practice is in a hierarchically superior position. I have also argued that school teachers have to adopt an approach to teaching which enables them to act immediately and that adopting a bricolage approach is one way to achieve this aim. This approach can be seen as potentially conservative, lacking in creativity, based on non-principled repertoire enlargement and as *ad hoc*. I argue that taking a postmodern perspective on bricolage, on the other hand; drawing on the notion of ‘mix and remix’ (Boisvert, 2003) and on the re-use of known sound ‘samples’, could provide a way forward when thinking about student-teacher learning in a systemic way. The exploration of dissonant perspectives supported by an active consideration of provenance could facilitate a better understanding of the creative possibilities of the process of teaching as bricolage. As ideas, concepts, tools, methods, knowledge are brought together, the added

meaning created by new juxtapositions should enable better and richer reconstruction as ideas are broken up, reassembled and subsequently used by teacher bricoleurs.

Adopting an expansive, transformative and systemic approach to initial teacher education to its full extent would require a considerable reappraisal of approaches to initial teacher education, a rethinking of the roles of those engaged in the teacher education process including the role of the student-teacher and of the nature of the partnership between universities and schools. It would entail a different and non-judgemental way of thinking about different types of practice and a willingness to open up practice for the identification of dissonance. In order to do this, school and university practices would need to be recognised by each of the learning partners as legitimate expressions with claims to different competence. This is a process that could, potentially, create a number of difficult issues. Most importantly, it implies equality in the relationship between the mentor, tutor and student-teacher as dissonant practice is brought into focus. In fact, however, mentors, students and tutors have different and more or less powerful roles in relation to each other and the extent to which participants will feel able to expose their thinking to dissonant enquiry in this context remains to be seen. Will the participants be able to establish what Cassidy *et al.* (2008, p. 224) see as a requirement for joint educational enquiry; 'a deepened sense of trust which facilitates critical debate', or will the current relationship imbalance prove to be an intractable problem.

The research detailed in this study indicates that there would be much work to do in relation to developing a non-hierarchical view of practice and non-judgemental ways of thinking about practice. It is also true that all of the case study participants in this study, except perhaps for one person, expressed considerable interest in developing a model of three-way learning; they were interested in hearing each others' perspectives and found the collaborative process enjoyable and beneficial. While it might take some time to develop the

skills necessary to approach this process with sensitivity and with a genuine sense of co-learning, all of the participants were enthusiastic about sharing their knowledge, understanding and experience. Perhaps the application of a new model based on these principles, taken gradually and collaboratively over time, is possible. What seems clear from the literature is that this process is essential if student-teachers are to fully engage with the complexities of the school as a site for learning.

9.5 Summary

This chapter has returned to the study's main research question: what does this study tell us about student-teacher learning? Having identified complexity as endemic in the literature, expansive learning was seen as a potentially useful way of exploiting multiple perspectives. Phase 1 of the research process revealed through questionnaires that this was seen by students to be un-problematic; and in Phase 2 it was empirically observed that this was the case. I argue that this is because the teacher's task in these case studies can be viewed as a process of bricolage which becomes the *object* of a single activity system. When this happens tensions and differences between the university and school diminish as the primary criterion of usefulness is applied. Student-teacher learning is therefore seen as socialisation into this process. In this chapter I have revisited the main themes identified in the literature survey in the light of what was found in the empirical phase of the study, and suggest how a focus on provenance and dissonance might lead to expansive learning opportunities.

The notion of expansive learning, within the context of teaching as bricolage, is a different way of thinking about initial teacher education, and although the learning potential of a postmodern perspective on this process was not observed in the empirical phase of this

study, it is one that could have significant impact on how curriculum, teaching and learning on courses in initial teacher education are developed.

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APPENDIX A: SPECIFICATION FOR FLEXIBLE INITIAL TEACHER TRAINING

Flexible ITT has been designed to meet a set of common requirements. These requirements, which build on existing good practice, ensure that all provision offers the necessary flexibility, rigour and quality for trainees while at the same time leaving room for providers to create innovative programmes appropriate to their own situations and to their staffing and organisational structures. Providers should ensure that any flexible provision incorporates:

- i. an initial assessment of a candidate's training needs in relation to the QTS standards and relevant ITT curricula. This should take full account of trainees' prior learning and achievement and might take the form of a short, assessed school-based module;
- ii. following the initial assessment, access to clear and well-informed advice about the range of provision available to meet the identified training needs;
- iii. the establishment, with an identified tutor, of an individual training plan for each trainee, taking account of the outcomes of the initial assessment in relation to the QTS standards and the trainee's personal circumstances and preferred mode and timing of training. Training plans should include clear targets for trainees to reach at significant points in their programme;
- iv. self-standing modules with clearly defined outcomes in relation to the QTS standards, normally with associated assessment. This would allow trainees to take credit against the QTS standards with them if they change provider. Some modules, such as those concerned with subject knowledge, might be taken without contact with a school, including through distance learning. Other modules would be highly school-focused and would require a school placement. To guard against a burdensome assessment regime, some training plans might allow for joint assessment across modules, and/or for assessment-only modules, if appropriate to a trainee's prior achievement and future needs;
- v. flexibility for trainees' training plans to combine modules in different orders and in different modes to lead to QTS (e.g. in a block of time, over a longer period, taught or through distance learning);
- vi. flexible and frequent start, finish and assessment points, allowing opportunities for trainees to start and finish when they are ready and be assessed at multiple points;
- vii. training as closely related to classroom practice as possible, ensuring the trainee has sufficient length and variety of school experience according to needs identified in the training plan;
- viii. flexibility for trainees to switch from full-time to part-time training and vice versa;
- ix. guidance, monitoring and tutorial support provided to trainees throughout their programme in relation to their training plan and the QTS standards, including feedback on progress against targets, to prevent trainees becoming isolated;
- x. a final, synoptic assessment module in which trainees who are ready are assessed against the QTS standards as a whole during a consolidated period of teaching;
- xi. opportunities for suitably experienced candidates, e.g. experienced, unqualified teachers from the independent or FE sectors or those trained overseas, to present themselves for assessment without any training - in this case the initial and final assessment could be the same.

APPENDIX B: OPEN UNIVERSITY PGCE ROLE DESCRIPTIONS

How student teachers are supported

Roles and responsibilities

The mentor and school co-ordinator (both school-based) take a lead in training, guiding, supporting and assessing the student teacher through the school-based dimensions of the course.

The tutor (from The Open University) takes a lead in training, supporting and assessing the student teacher through the open-learning dimensions of the course, and is responsible for monitoring individual student teacher progress across the course.

The subject leader (centrally based at The Open University) is responsible for all subject aspects of the course, including student teacher progress issues, subject training and assessment issues, and quality assurance.

The staff tutor (regionally based at The Open University) is responsible for issues of partnership.

Their responsibilities are set out in detail below.

The mentor

The mentor has the key school-based role to play in the development of the student teacher on the PGCE course. The mentor:

- shares his or her practice by being observed, by discussing and explaining practice, and by working collaboratively with the student teacher;
- supports and trains the student teacher in developing the skills, knowledge and understanding necessary to become a newly qualified teacher;
- carries out observations of the student teacher teaching, offers regular feedback, and sets targets that help the student teacher to identify strengths and set priorities for development;
- holds weekly mentoring sessions to review progress against targets;
- formatively and summatively assesses the student teacher against the professional standards;
- provides a school experience report at each level of the course;
- supports the student teacher in carrying out course requirements – for example, by discussing school policies, arranging sessions with other key members of staff, arranging a breadth of teaching experience, and so on;
- provides personal support for the student teacher on professional matters;
- liaises with the school co-ordinator about the school-based dimensions of the course;
- liaises with the tutor to ensure consistency in training and assessment.

The school co-ordinator

The school co-ordinator is the primary point of contact for the Open University regional staff tutor, who has responsibility for developing regional partnerships.

The school co-ordinator has the lead role in ensuring the quality of the school-based training and assessment on behalf of the partnership.

In addition, the school co-ordinator supports the student teacher's development within the context of the whole-school aspects of the course and in the wider professional role.

The school co-ordinator:

- takes an overview of student teacher progress for quality assurance purposes;
- liaises with the mentor about the student teacher's programme at each level of the course – for example, facilitating access to other teachers and for observation and teaching activity;
- carries out observations of student teacher teaching, providing feedback to the student teacher and mentor;
- liaises with other schools, organising placements for cross-phase experience, and breadth of teaching experience;
- jointly assesses the student teacher against the professional standards, validates the school's assessment judgements, and contributes to reports;

- co-ordinates whole-school aspects of the course, and those issues relating to the wider professional role;
- ensures the day-to-day quality of the school-based experience;
- offers support to the mentor and student teacher throughout the school experience;
- liaises with the Open University regional staff tutor about partnership and quality issues.

The Open University tutor

The tutors are qualified teachers in their specialist subject areas. They are responsible for guiding the student teacher through the open-learning dimensions of the course. The tutor has responsibility for issues of individual student teacher progress across the course. They visit the student teacher during each school experience placement to ensure coherence and continuity in training and assessment. They contribute to mentor training and support.

The tutor:

- provides academic support, and training and assessment advice to the student teacher throughout the course, via:
 - ◆ marking and commenting on written assignments, identifying strengths and priorities for student teacher development;
 - ◆ face-to-face tuition on school visits and at Saturday day schools;
 - ◆ the online forums and telephone communication;
- liaises with the mentor and school co-ordinator, as appropriate;
- monitors student teacher progress against the individual training plan;
- visits the student teacher in school;
- conducts the student teacher's end-of-level assessment.

The Open University subject leader

The subject leaders are centrally based academics at The Open University. They are qualified teachers in their respective subject specialisms, and each is responsible for the development and management of their subject within the course, including student teacher progress and quality assurance issues. For each secondary subject, they:

- develop subject-specific materials, including student teacher, tutor and mentor materials;
- provide quality assurance for the subject, and take a lead on all aspects of subject-specific assessment;
- monitor and moderate the subject-specific forums;
- provide subject-specific training for tutors and mentors;
- have an overview of student teacher progress issues for their subject, for assessment and quality assurance purposes.

The Open University regional staff tutor

The staff tutors are regionally based academics and qualified teachers. They are responsible for developing the partnership dimension at the regional level.

The staff tutor:

- is the link person for all aspects of the Partner Schools Network;
- liaises with partner schools to include advice and support on partnership aspects of the PGCE (issues of student teacher progress should be referred to the tutor, and onwards to the subject leader if necessary);
- is responsible for all quality assurance issues linked to partnership.

APPENDIX C: PHASE 1 STUDENT QUESTIONNAIRE



The Open University

Institute of Educational Technology

Making sense of initial teacher education

Instructions:

Please use a ball point pen to complete the questionnaire. Do not use fountain or felt pens as the ink may be visible on the other side of the page. The questionnaire will be read with the help of a scanner so please fill it in as described. Please put a 'number' in each of the boxes keeping within the boundary of the box.

Please:

- Add any other significant or important issues that you can think of
- Put them in order of priority where 1 = highest priority: and
- (If you can) provide some details if your priority has caused tension with the priorities, as you see them, of your mentor, tutor or on the course materials.

See example below:

EXAMPLE:

Why do you want to become a teacher?

- Wanted to convey my passion for my subject.....
- Wanted to have a job that fitted in with my home life.....
- Wanted to make rapid career progress.....
- Wanted to help children overcome their difficulties in my subject.....

Details of any tensions between you and your mentor/tutor/ideas in course materials caused by these responses and priorities:

In relation to priority no. 1 = My mentor's main concern is to make sure that exam results are high and this has caused some tension.

In relation to priority no. 2 = My tutor holds the view that this should be my priority and this has caused some tension.

Q1 What do you think the PGCE will enable you to do or achieve?
(Enter the order in the boxes from 1 = Most important through to 4 = Least important)

- To earn more money
- To become a good teacher
- To improve the learning of the students I teach
- Other (please specify below)

Details of any tensions between you and your mentor/tutor/ideas in course materials caused by these responses and priorities:

Comments and additional thoughts about what you hope the course will enable you to do/achieve:

Q2 **What is your main focus/priority while you are on the course?**
(Enter the order in the boxes from 1 = Most important through to 6 = Least important)

- Achieving the QTS standards N e
- Understanding module study N e
- Classroom survival N e
- Pupil learning N e
- My own teaching..... N e
- Other *(please specify below)*..... N e

Details of any tensions between you and your mentor/tutor/ideas in course materials caused by these responses and priorities:

Comments and additional thoughts about your main focus while you are on the course:

Q3	<p>While you are on the course there are a significant number of rules, guidelines, requirements and policies that influence how you work. Which of these are the most significant?</p> <p><i>(Enter the order in the boxes from 1 = Most significant through to 9 = Least significant)</i></p>

- Standards for QTS
- School policies.....
- Departmental schemes of work
- National policies
- National Curriculum requirements
- OU requirements
- Subject association requirements
- Targets set by others
- Other *(please specify below)*.....

Details of any tensions between you and your mentor/tutor/ideas in course materials caused by these responses and priorities:

Comments and additional thoughts about the rules, requirements and guidelines that govern your development as a student-teacher:

Q4	As well as the rules, requirements and guidelines, other groups of people will shape your development. Which of these <i>groups</i> of people are most significant? <i>(Enter the order in the boxes from 1 = Most significant through to 8 = Least significant)</i>

- Your department
- Your school
- Your subject community.....
- The OU
- Your LEA
- The students you teach
- Your family and friends
- Other *(please specify below)*

Details of any tensions between you and your mentor/tutor/ideas in course materials caused by these responses and priorities:

Comments and additional thoughts about the significant influence of those groups of people who can shape your development as a teacher:

Q5 The physical resources that you use to teach and to inform and guide your teaching while you are on the course are significant. Which of these are most important to you as a student-teacher on the course?
(Enter the order in the boxes from 1 = Most important through to 7 = Least important)

- Departmental resources
- Lesson planning pro formas
- Subject knowledge development
- Modules
- Schemes of work
- Textbooks
- Other *(please specify below)*.....

Details of any tensions between you and your mentor/tutor/ideas in course materials caused by these responses and priorities:

Comments and additional thoughts about the things that you use to inform and guide your teaching while you are on the course:

Q6	<p>During the course you will have been helped by a variety of individuals: many people (either in an official capacity or in an unofficial capacity) will have been involved in your 'training'. Which of these individuals has been most significant?</p> <p><i>(Enter the order in the boxes from 1 = Most important through to 6 = Least important)</i></p>

- Other individual PGCE students
- Your mentor
- Other individual school colleagues
- Your school co-ordinator
- Your tutor
- A friend or member of your family
- Other *(please specify below)*

Details of any tensions between you and your mentor/tutor/ideas in course materials caused by these responses and priorities:

Comments and additional thoughts about individuals that have helped you on the course:



Thank you very much for your help. Please return the questionnaire as soon as possible using the reply-paid envelope (To: The Survey Office, Institute of Educational Technology, The Open University, Freepost ANG 5175, Milton Keynes MK7 6YR)

APPENDIX D: PARTICIPANT INTERVIEW GUIDE

Interview guide

The Phase 1 research process identified multiple and sometime contradictory orientations as student-teachers learned to become teachers on the OU PGCE course. The most significant dimension of these activity systems was the different and sometimes competing notion of 'object': the purpose of the PGCE course.

The second phase of the research design focuses on the 'third space' created when students, tutors and mentors jointly plan, participate in and discuss a lesson. It attempts to address the following over-arching research questions:

- **What can conversations about practice between students, their mentor and their tutor tell us about student-teacher learning?**
- **How do these participants deal with issues of complexity and contradiction?**
- **In teaching conversations between participants, how, when, by whom and in what circumstances are different sources drawn on?**

A set of sub-questions are asked to inform this over-arching question:

- 1) What do student-teachers, their tutors and mentors view as 'good' music teaching?
- 2) What do the informants consider to be the attributes of a 'good' student music teacher?
- 3) How do these participants conceptualise the process of becoming a 'good' music teacher?
- 4) What aspects of the PGCE are considered to be helpful in pursuit of this objective?
- 5) What aspects of the PGCE are considered to impede the achievement of this objective?
- 6) What are the boundary-crossing issues raised as student-teachers learn to teach music in the context of possibly contradictory purposes and strategies?
- 7) What is the perceived impact of the 'third space' activity on student-teacher learning?

(Questions 1, 2 and 3)

Separately identifying the participants' concepts of 'good' music teaching, 'good' student music teachers and the process by which students become 'good' music teachers is a centrally important in this study. A notion of competence as a music teacher is likely to be drawn in relation to areas of particular activity systems: the use of specific tools, rules, communities and so on to address certain needs.

It is also important to detail each participant's understanding of their role in relation to each other as they perceive it. The way that they understand their roles and perceive the links between the participants will be reflected in the way that they see their role and the role of others.

Each of the participants is likely to see these systems differently as they perceive the object differently. Understanding what their position might be before the intervention is critically important.

(Questions 4 and 5)

It is also important to probe the extent to which the participants link effective student-teacher development through the PGCE course materials/structure as a particular tool as one feature held in common by all participants.

(Questions 6 and 7)

An exploration of the boundary zone is a means of drawing attention to the boundary territory that student-teachers traverse as they learn to become teachers.

	Student	Tutor	Mentor
	I wonder if you could give me a bit of background about yourself. What have you done in the past and how do you find yourself as a student-teacher in this school?	I wonder if you could give me a bit of background about yourself. What have you done in the past and how do you find yourself as a tutor on the programme?	I wonder if you could give me a bit of background about yourself. What have you done in the past and how do you find yourself as a mentor to this student-teacher in this school?
1) What do student-teachers, their tutors and mentors view as 'good' music teaching?	What do you think are the main characteristics of a 'good' music teacher?	What do you think are the main characteristics of a 'good' music teacher?	What do you think are the main characteristics of a 'good' music teacher?
	Describe what you think a 'good' music teacher would be like. Have you seen any examples of 'good' music teaching or been taught well yourself? Can you describe what happened and why it was good? What have been the key influences on you as a teacher?	Describe what you think a 'good' music teacher would be like. Have you seen any examples of 'good' music teaching or been taught well yourself? Can you describe what happened and why it was good? What have been the key influences on you as a teacher?	Describe what you think a 'good' music teacher would be like. Have you seen any examples of 'good' music teaching or been taught well yourself? Can you describe what happened and why it was good? What have been the key influences on you as a teacher?
	Do you think your tutor/mentor share your views/influences?	Do you think your student/mentor share your views/influences?	Do you think your student/tutor share your views/influences?
	How might they view this differently? How do you know?	How might they view this differently? How do you know?	How might they view this differently? How do you know?
2) What do the informants consider to be the attributes of a 'good' student music teacher?	Looking at your own learning as a student music teacher – what's gone well and what hasn't gone so well?	Looking at the student's learning as a student music teacher – what's gone well and what hasn't gone so well?	Looking at the student's learning as a student music teacher – what's gone well and what hasn't gone so well?
	What are the key characteristics of a 'good' student music teacher? Are they different from being a 'good' teacher? If so, how?	What are the key characteristics of a 'good' student music teacher? Are they different from being a 'good' teacher? If so, how?	What are the key characteristics of a 'good' student music teacher? Are they different from being a 'good' teacher? If so, how?
3) How do these participants conceptualise the process of becoming a 'good' music teacher?	How do you/people learn to become a 'good' music teacher? What are the processes that will enable you to develop these attributes?	How do people learn to become 'good' music teachers? What are the processes that will enable them to develop these attributes?	How do people learn to become 'good' music teachers? What are the processes that will enable them to develop these attributes?
	How would you describe the role of mentor/tutor on the programme?	How would you describe the role of mentor/tutor on the programme?	How would you describe the role of mentor/tutor on the programme?
	What do you think are the similarities/differences between the roles?	What do you think are the similarities/differences between the roles?	What do you think are the similarities/differences between the roles?
	How would you describe the relationship so far between the mentor and tutor?	How would you describe the relationship so far between the mentor and tutor?	How would you describe the relationship so far between the mentor and tutor?
4) What aspects of a PGCE programme are considered to be helpful in pursuit of this objective? 5) What aspects of a PGCE programme are considered to impede the achievement of this objective?	Do you think the PGCE programme helps or hinders this process?	Do you think the PGCE programme helps or hinders this process?	Do you think the PGCE programme helps or hinders this process?
	Probe examples of each.	Probe examples of each.	Probe examples of each.
	I have asked you, your tutor and mentor jointly to plan and teach a lesson but have been deliberately vague about its purpose. What do you think the benefits/drawbacks of a joint exercise like this might be?	I have asked you, your student and mentor jointly to plan and teach a lesson but have been deliberately vague about its purpose. What do you think the benefits/drawbacks of a joint exercise like this might be?	I have asked you, your tutor and student jointly to plan and teach a lesson but have been deliberately vague about its purpose. What do you think the benefits/drawbacks of a joint exercise like this might be?
	Do you anticipate any difficulties with this process?	Do you anticipate any difficulties with this process?	Do you anticipate any difficulties with this process?
	What might they be?	What might they be?	What might they be?

Interview 2 – with 5 minutes in each 15 minutes filmed for stimulated recall followed by an individual interview.

	Student	Tutor	Mentor
6) What are the boundary-crossing issues raised as student-teachers learn to teach music in the context of possibly contradictory purposes and strategies?	<p>Describe what is happening on the film. I'm interested in identifying points where you felt things were going well at the time and points that you think in retrospect went well: why is this happening? How do you think you developed the skills and understanding needed?</p> <p>I'm also interested in identifying where you feel that you didn't do so well at the time and in retrospect. Why did this happen? What steps could you take to improve this particular issue in future?</p> <p>I'll ask questions from time to time (probe reasons behind certain actions or deviations from intentions).</p> <p>Please feel free to stop the tape at any point.</p>	<p>Describe what is happening on the film. I'm interested in identifying points where you felt things were going well for the student at the time and points that you think in retrospect went well: why is this happening? How do you think you developed the skills and understanding needed?</p> <p>I'm also interested in identifying where you feel that you didn't do so well for the student at the time and in retrospect. Why did this happen? What steps could you take to improve this particular issue in future?</p> <p>I'll ask questions from time to time (probe reasons behind certain actions or deviations from intentions).</p> <p>Please feel free to stop the tape at any point.</p>	<p>Describe what is happening on the film. I'm interested in identifying points where you felt things were going well for the student at the time and points that you think in retrospect went well: why is this happening? How do you think you developed the skills and understanding needed?</p> <p>I'm also interested in identifying where you feel that you didn't do so well for the student at the time and in retrospect. Why did this happen? What steps could you take to improve this particular issue in future?</p> <p>I'll ask questions from time-to-time (probe reasons behind certain actions or deviations from intentions).</p> <p>Please feel free to stop the tape at any point.</p>
	<p>During this session – probe:</p> <p>Perceptions of 'good' music teaching; Perceptions of being a 'good' student music teacher; Tensions between participants' perspectives and the 'origin' of ideas and strategies.</p>	<p>During this session – probe:</p> <p>Perceptions of 'good' music teaching; Perceptions of being a 'good' student music teacher; Tensions between participants' perspectives and the 'origin' of ideas and strategies.</p>	<p>During this session – probe:</p> <p>Perceptions of 'good' music teaching; Perceptions of being a 'good' student music teacher; Tensions between participants' perspectives and the 'origin' of ideas and strategies.</p>
7) What is the perceived impact of the 'third zone' activity on student-teacher learning?	<p>You have just completed a joint planning and teaching exercise. What were the benefits of such an exercise?</p>	<p>You have just completed a joint planning and teaching exercise. What were the benefits of such an exercise?</p>	<p>You have just completed a joint planning and teaching exercise. What were the benefits of such an exercise?</p>
	<p>What were the drawbacks?</p>	<p>What were the drawbacks?</p>	<p>What were the drawbacks?</p>
	<p>Has this exercise changed your view of the role of mentor/tutor?</p>	<p>Has this exercise changed your view of the role of mentor/tutor?</p>	<p>Has this exercise changed your view of the role of mentor/tutor?</p>
	<p>In particular what impact has this had on your learning? Why do think that this is the case?</p>	<p>In particular what impact has this had on student-teacher learning? Why do think that this is the case?</p>	<p>In particular what impact has this had on student-teacher learning? Why do think that this is the case?</p>

APPENDIX E: CONTENT ANALYSIS SUMMARY CODING SCHEDULE

Summary coding schedule

1. What is the unit length?
2. Who speaks within the unit?
 - a. The mentor only
 - b. The student-teacher only
 - c. The tutor only
 - d. The mentor and student-teacher
 - e. The tutor and student-teacher
 - f. The mentor and tutor
 - g. All participants
3. Who initiates the unit?
 - a. The mentor
 - b. The student-teacher
 - c. The tutor
4. Who asks questions, and what kind?
 - a. Asking 'open' questions
 - i. Mentor asks question
 - ii. Student-teacher asks question
 - iii. Tutor asks question
 - b. Asking 'closed' questions
 - i. Mentor asks question
 - ii. Student-teacher asks question
 - iii. Tutor asks question
 - c. No one asks a question
5. What is being spoken about in the unit?
 - a. 'Being' a teacher
 - b. Developing and maintaining relationships
 - c. Planning, teaching and assessment strategies
 - d. Specific practice events (i.e. specific lessons taught or to be taught)
 - e. Resources for teaching and learning
 - f. Rules, regulations and requirements
 - g. School student prior, current and future learning
 - h. Solving 'in the moment' problems teaching
 - i. Student-teacher assessment
 - j. Student-teacher learning
 - k. The research process
 - l. Theoretical perspectives
6. What sources of knowledge are being drawn on?
 - a. A combination of sources
 - b. Personal experience or theories
 - c. Open University ideas and resources
 - d. School-based ideas and resources
 - e. Source not identifiable

7. Are there any tensions or contradictions between sources or understandings?

- a. Recognised tensions**
 - i. With personal theories**
 - 1. of the mentor
 - 2. of the tutor
 - 3. of the student
 - ii. With practice**
 - 1. of the mentor
 - 2. of the tutor
 - 3. of the student
 - iii. With university ideas**
- b. Unrecognised tensions**
 - i. With personal theories**
 - 1. of the mentor
 - 2. of the tutor
 - 3. of the student
 - ii. With practice**
 - 4. of the mentor
 - 5. of the tutor
 - 6. of the student
 - iii. With university ideas**
- c. No tensions apparent**

8. Do the participants show agreement/support or disagreement/contradictory comments?

- a. Agreement/support**
 - i. Who agrees with whom?**
 - 1. Mentor agrees with student
 - 2. Mentor agrees with tutor
 - 3. Mentor agrees with others
 - 4. Student agrees with mentor
 - 5. Student agrees with tutor
 - 6. Student agrees with others
 - 7. Tutor agrees with mentor
 - 8. Tutor agrees with others
 - 9. Tutor agrees with student
 - b. Disagreement or contradictory comment**
 - ii. Who disagrees with whom?**
 - 1. Mentor disagrees with student
 - 2. Mentor disagrees with tutor
 - 3. Mentor disagrees with others
 - 4. Student disagrees with mentor
 - 5. Student disagrees with tutor
 - 6. Student disagrees with others
 - 7. Tutor disagrees with mentor
 - 8. Tutor disagrees with others
 - 9. Tutor disagrees with student
 - c. No disagreement or agreement in evidence**

APPENDIX F: UNIT CONTENT ANALYSIS RESULTS – BY COUNT

Table 39: Summary results of the unit content analysis – by count⁹

			Brookside planning total count	Brookside post-lesson total count	Castle Town planning total count	Castle Town post-lesson total count	Greenfield planning total count	Greenfield post-lesson total count	Middlewich planning total count	Middlewich post-lesson total count	Total count
Involvement		Mentor	36	18	53	20	40	24	39	36	266
		Student	66	29	102	45	74	40	40	20	416
		Tutor	56	26	79	52	58	34	34	39	378
Initiator		The mentor	23	13	22	8	22	16	19	24	147
		The student-teacher	14	11	45	21	25	13	17	12	158
		The tutor	42	22	41	29	33	21	27	32	247
Asking questions	Open	Mentor asks 'open' question	1	0	3	5	3	0	0	0	12
		Student-teacher asks 'open' question	0	0	4	1	5	1	0	1	12
		Tutor asks 'open' question	0	1	6	6	7	0	4	0	24
	Closed	Mentor asks 'closed' question	10	1	8	1	5	1	3	3	32
		Student-teacher asks 'closed' question	2	2	7	2	11	3	4	1	32
		Tutor asks 'closed' question	29	2	10	12	18	2	11	5	89
		No question asked	36	40	69	31	47	43	41	58	365

⁹ Note: this table continues over four pages

		Brookside planning total count	Brookside post-lesson total count	Castle Town planning total count	Castle Town post-lesson total count	Greenfield planning total count	Greenfield post-lesson total count	Middlewich planning total count	Middlewich post-lesson total count	Total count
What is being spoken about in the unit	'Being a teacher'	0	9	1	3	0	1	1	2	17
	Developing and maintaining relationships	0	3	2	6	0	1	0	0	12
	Planning and teaching and pupil assessment strategies	29	10	47	14	28	15	17	29	189
	Practice (specific teaching and learning events)	40	12	44	16	39	23	18	28	220
	Resources for teaching and learning	7	2	3	1	1	1	12	0	27
	Rules, regulations, requirements	1	1	0	3	4	0	6	4	19
	School student prior and future learning	2	6	1	1	4	2	3	2	21
	Solving 'in the moment' teaching problems	0	0	1	0	0	2	0	0	3
	Student-teacher assessment	0	0	0	0	0	2	4	3	9
	Student-teacher learning	0	2	4	10	0	0	0	0	16
	The research process	0	0	1	0	2	0	0	0	3
	Theories (a generalised view of practice)	0	0	3	2	5	0	1	0	11
	None of these	0	1	2	2	0	3	1	0	9
Sources	Combination of sources	2	0	0	0	3	1	0	1	7
	Personal experiences or theories	18	22	19	10	30	17	8	16	134
	OU-based	0	0	0	0	2	2	2	1	7
	School-based	19	10	18	13	7	3	20	27	117
	Source not apparent	40	14	72	35	39	27	33	23	283

		Brookside planning total count	Brookside post-lesson total count	Castle Town planning total count	Castle Town post-lesson total count	Greenfield planning total count	Greenfield post-lesson total count	Middlewich planning total count	Middlewich post-lesson total count	Total count	
Tensions	Recognised	1) with personal theories									
		a) of the mentor	0	0	0	0	3	0	0	0	3
		b) of the student	0	0	4	0	3	0	0	0	7
		c) of the tutor	1	1	0	0	4	0	0	0	6
		2) with practice									
		a) of the mentor	0	0	0	0	2	0	1	0	3
		b) of the student	0	5	13	5	5	13	1	12	54
		c) of the tutor	1	1	0	0	1	0	0	0	3
		3) with university ideas	1	2	2	3	4	1	0	0	13
	Unrecognised	1) with personal theories									
		a) of the mentor	0	0	0	0	1	0	0	0	1
		b) of the student	0	0	4	0	0	0	0	0	4
		c) of the tutor	0	1	0	1	0	0	0	0	2
		2) with practice									
		a) of the mentor	1	0	0	0	0	0	0	0	1
b) of the student		0	0	0	0	0	0	0	0	0	
c) of the tutor		0	0	0	0	0	0	0	0	0	
3) with university ideas		5	3	7	6	9	7	7	4	48	
c) No tensions apparent	70	33	77	42	48	29	54	52	405		

		Brookside planning total count	Brookside post-lesson total count	Castle Town planning total count	Castle Town post-lesson total count	Greenfield planning total count	Greenfield post-lesson total count	Middlewich planning total count	Middlewich post-lesson total count	Total count	
Agreement or disagreement	Agreement or support	Mentor agrees with others	0	0	0	0	0	1	0	1	
		Mentor agrees with student	2	2	3	2	0	1	1	2	13
		Mentor agrees with tutor	3	0	4	3	6	2	1	5	24
		Student agrees with mentor	4	4	5	0	7	5	2	2	29
		Student agrees with others	1	0	1	2	0	0	0	0	4
		Student agrees with tutor	14	6	16	3	12	11	5	4	71
		Tutor agrees with mentor	1	1	5	2	3	4	2	6	24
		Tutor agrees with others	0	1	0	0	0	0	0	0	1
		Tutor agrees with student	4	1	9	7	3	2	1	1	28
	Disagreement or contradiction	Mentor disagrees with others	0	0	0	0	1	0	0	0	1
		Mentor disagrees with student	0	1	1	0	3	0	0	0	5
		Mentor disagrees with tutor	1	0	0	0	1	0	1	0	3
		Student disagrees with mentor	0	0	0	0	2	0	0	0	2
		Student disagrees with others	0	0	0	0	0	0	0	0	0
		Student disagrees with tutor	0	1	2	0	1	0	1	1	6
		Tutor disagrees with mentor	0	0	0	0	0	0	0	0	0
		Tutor disagrees with others	0	0	0	0	0	0	0	0	0
		Tutor disagrees with student	0	0	2	0	3	0	0	0	5
	No agreement or disagreement being made		49	29	62	39	47	25	48	48	347

