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Innovations and Developments in Initial Teacher Education

A selection of conference papers presented at
St.Martin's College, Lancaster campus, 18 May 2007

(St. Martin's College became the University of Cumbria on 1.8.07)

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Edited by Alison Jackson, University of Cumbria

The Higher Education Academy
Subject Centre for Education ESCalate

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Introduction

The 2007 ESCalate ITE conference was held at St.Martin's College in May. This was the last time for St.Martin's which amalgamated with the Cumbrian Institute of the Arts and the Cumbrian campuses of the University of Central Lancashire to form the University of Cumbria on August 1st 2007. The conference was very well attended and delegates were certainly not disappointed as there was a wide range of excellent symposia and workshops to attend. This booklet draws together papers from some of the symposia and workshops and will be of interest to all staff in schools and Higher Education Institutions concerned with Initial Teacher Education. Reflection is certainly high on the agenda at the moment. One could arguably have hoped that reflective practice and teachers have always gone hand in hand, but if this has slipped somewhat in recent years because of competence-based practice, at least six papers here explore from every angle its re-instatement as a fundamental to the teaching profession. Masters level is never far from people's thoughts and you will find many references to it. Other topics include research into the differing experiences of PGCE ITE students in college and school, employment-based routes, school leadership, teaching practice observation and wikis.

William Stow from Canterbury Christ Church University begins the examination of reflection by exploring a case study of the use of video diary, instead of written reflections on professional development. He suggests to us that the use of different media has the potential to open up alternative ways of reflecting on teaching and the process of becoming a teacher.

Chris Carpenter and Simon Hoult from Canterbury Christ Church report on an enquiry into the nature and use of learning journals to enhance student teachers as reflective practitioners. The paper considers the impact of learning journals on student teachers as learners and professionals. Chris Carpenter continues in a second paper to present a study which sought to establish how reflection is represented in post lesson discussions between student teachers and their subject mentors.

From the University of Strathclyde, Magnus Ross and Mary Welsh report on an action research project involving a structured, formative assessment feedback process, within a personal learning environment. The series of Core Tasks presented to students placed progressively increasing demands upon them, helping them develop more sophisticated learning skills. Magnus and Mary conclude that the use of blended learning to support the development of reflective, self-regulated classroom practitioners, skilled in formative assessment strategies, is well worth further research and development.

Derby University is strongly committed to a view of education which acknowledges the problematic and complex reality of the classroom. Des Hewitt investigates the standards for Qualified Teacher status, both old and new, and considers professional reflection on teacher placements and how the 'academic' and 'professional' dimensions can be reconciled.

Three colleagues from Sheffield Hallam University, Cathy Burnett, Mark O'Hara and Tricia Young, report on students' experience of 'learning groups' which are specifically designed to promote collaborative learning and peer support. They explore the diverse ways in which students on a primary Masters level PGCE course engage with such groups and highlight considerations for others tempted to use a similar approach.

Martin Watts and Martyn Lawson from the University of Cumbria present the intriguing notion of 'a tolerance of ambiguity'. Their study explored the student perception of the difference between theory and practice in teaching as experienced by students during school placements. Are

theory and practice perceived as a divide? They point out the importance of this question as institutions embark on Masters level PGCE courses.

Three papers in the booklet look at different routes into teaching. Mary Dunne from the University of Wolverhampton presents a paper which identifies some of the perceived training needs of school-based tutors responsible for the training of beginning teachers on the Graduate Teacher Programme, particularly in relation to training to teach their subject.
Kerry Jordan-Daus, Carol Tingey and Heather Howe reflect on their own journey at Canterbury Christ Church with respect to employment-based routes into teaching. They consider how they began to engage with some of the complexities of leading and managing this innovation in Initial Teacher Training.
Dan Davies ran a PGCE leadership module with Masters level accreditation as a pilot project at Bath Spa University. Even though it was decided eventually that a focus on leadership was perhaps somewhat premature, the study enabled exploration of some of the issues facing PGCE trainees when asked to undertake Masters level study and thus provided valuable information.
Rachel Lofthouse and David Wright from Nottingham University, with colleagues from school, Amber Riches from Lord Lawson of Beamish School and Elizabeth Sellers from Cottingham School, discuss a new model of observing students teach within their Masters level PGCE. They report that a piece of action research heightened their understanding of the nature and scope of observation within ITE, providing a genuine reason and framework for professional dialogue, creating opportunities for enquiry and problem solving, and promoting students' engagement in their own professional learning processes.

We discover all about 'wicked wikis' from Kathy Wright from the University of East London and how they can be used to good effect to help transmit information to potential students and to inspire would-be students to apply for courses.
Duncan Reavey and Jayne May from the University of Chichester consider differentiation, noting that, although this is often used for children in school, it is a teaching technique that is rarely applied to student teachers as learners in their training. They consider tutors' and trainees' views on novel approaches to differentiating lead lectures in university science courses for trainee primary teachers.

ESCalate ITE at the University of Cumbria is a support service for the teacher educator community and aims to give opportunities to colleagues to present and share their research and practice with the wider community. We work to identify and disseminate good practice through publications and conference, seminar and workshop events and liaise with other organisations involved in teacher education. Present priorities include creativity, Masters level PGCE, assessment, supporting new teacher educators, multi-agency working, 4 year degrees and the 14-19 agenda, but, as our conference likes to suggest, there is no area of teacher education which falls outside our interest. We are particularly interested to hear and report on initiatives across the 4 countries of the UK and beyond. You can contact us by e-mail using this address: escalate@cumbria.ac.uk.

All of ESCalate's work can be accessed through the website www.escalate.ac.uk which gives links to Cumbria on the home page.

1. Reflection and Reflexivity in Teacher Education – does the medium affect the message?

William Stow
Canterbury Christ Church University

Summary
This paper explores the use of an alternative medium for student teacher reflection, that of video diary, as a substitute for the traditional written reflections on professional development, that are undertaken during professional placement. It takes a more detailed look at a case study of a particular PGCE programme, but situates the case study within the wider context of thinking and writing about reflection in Initial Teacher Education. The hypothesis is that use of different media for reflection may have profound effects on the nature of the reflection that is undertaken by student teachers.

Keywords
Reflection / reflexivity / video diary / critical / discourse

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Reflective Activity
In exploring definitions of reflective practice, Warwick's (2007) ESCALATE guide provides a good overview of some key thinking in this area, highlighting in particular the work of Schön and Dewey, and critiques of their work. He draws attention to Dewey's concept of reflective as opposed to routine action, reporting Dewey's view that reflection 'enables us to direct our actions with foresight…It enables us to know what we are about when we act' (1933:17). Warwick (2007) feels that later Deweyians have identified moral dimensions to reflection, in that it is aimed at producing 'better teaching' and therefore better learners, albeit often first through a focus on skills and competence in classroom teaching. When discussing Schön's work, he highlights the way in which the notion of a continuum from 'knowing-in-action' to 'reflection-in-action' and 'reflection-on-action' gives greater credit to all teachers, removing the implication of unthinking teaching that the word 'routine' could bring.

A further argument is that any reflective activity must embrace wider values and purposes of education and society, and of the individual. There is a danger, highlighted by Moore (2004) among others, that too strong a focus on individual competence can lead to a culture of blame and failure – the assumption that 'what happens in my classroom must be down to me' – and to a cycle of focus on short-term problems, rather than longer term development and change at an individual or collective level.

Moore and Ash (2002) have produced a useful breakdown of the ways in which reflective activity occurs. They distinguish between types of reflective activity:

- Ritualistic reflection – linked to discourses of competence, meeting the 'requirement to reflect';
- Pseudo reflection – well-intentioned but not leading to change;
- Authentic reflection – actively seeking to problematise situations;
- Reflexivity – they define this as an activity 'whereby reflection is rendered potentially more productive through its situatedness in contexts beyond the immediate classroom situation'. I also take it to encompass strong elements of metacognitive reflection.

But they consider that reflective activity, along with Zeichner and Tabachnik (2001), must lead to change, be critical and lead to the exploration of alternative perspectives.

Two other notions are useful for this paper. Moore and Ash (2002) break down reflective activity in to forms and sites. Sites of reflection are the different physical and social spaces within which reflection occurs, whereas forms of reflection are particular ways of reflecting that can take place in different locations, such as:
'in your head'; 'on your feet in practice'; evaluations; discussion with professionals; discussion with friends and family outside education.

Reflexive Thinking
Moore (2004) in particular is critical of the neglect of the reflexive. He regards it as central to the development of successful practitioners; that they are or become self-aware, adaptable and willing to challenge their own assumptions. In his studies, many of the 'failing' students were finding it difficult to get beyond a cycle of reflection on short-term action and outcomes. He noted that the successful students also moved from a concern with immediate lessons and issues on placement, to a broader outlook and a greater focus on the nature of reflection and which kinds of reflective activity they found useful.

For Convery (2001:138) a distinction can be made between reflective thinking (focusing on what works, and why and how it works) and reflexive thinking (why am I trying to make this work, and am I frustrating or realising my core values in doing this).

The PGCE Programme and locus of reflection
The case study for this presentation is based on a Professional Studies course within a particular PGCE programme. It is a flexible PGCE for primary and secondary students, in which the majority of learning takes place in school or via independent learning, with some taught input, via a mixture of workshops/seminars and tutorials. The annual intake is 60 but the programme can be taken over three years, and so there are currently 135 students on roll.

As the author of the Professional Studies course and then programme director, I took a lead in the revalidation of the programme, introducing a stronger element of reflexive thinking to the courses. On the PGCE, students are asked to reflect through the following 'forms' (Moore and Ash, 2002):

- Course tasks in the Professional Studies course, including learning biographies, responses to particular questions about themselves as teachers, online discussions about professionalism;
- Course assessments, in curriculum and professional studies;
- Seminar discussions during teaching days;
- Lesson evaluations during placement;
- Journal entries, both reflecting in bullet point form on progress against the standards, and in a weekly prose entry focusing on a particular issue of professional concern – initially prompted through guidance but later chosen by the student teacher.

All of the above are predominantly written and somewhat static. In terms of Moore and Ash's (2002) sites of reflection, they can be undertaken in school, at home or in the University. Some are designed to be actively 'problematising and solution-seeking' and therefore authentic, the majority could be considered ritualistic or pseudo-reflective activity.

Video diary as a medium for reflection
Part of the design of the programme was to allow the student teacher to make a number of choices of modes of reflection and presentation. This was provided for course work tasks and assessments as choices between visual/aural and written forms. For

example, the placement journal reflections can be completed in written, video or audio diary format. It was also hypothesised that it might encourage a more reflexive and deeper, personal style of reflection. A major concern was that the traditional forms of reflection did not take account of the powerful affective dimensions of learning to teach.

The students were invited to substitute the weekly reflections on a particular professional focus with diary entries. These were still to follow the initial guidance provided to all students on content. In the event, with the individual case study reported here, greater flexibility was introduced as it was felt that the prescription of categories for reflection was limiting the students to what Moore and Ash (2002) would definitely describe as ritualistic or pseudo reflection. Thus in the second and third placements for this student, guidance was given for her to reflect on what she chose and to do this when she felt that she had something particular to say, rather than automatically doing it every week. Students were invited to share the diaries or selected extracts from them, as focus for discussion with mentors and tutors.

Case Study
The case study student gave initial informed consent to participate in the study, and subsequently specific consent for her case to be used to illustrate this paper. This student is one of two pilot case studies, for an MPhil study. She is following the Key Stage 1/2 pathway on the PGCE, and has come to the course from a period of time in employment in catering, having graduated from university a few years ago. The other student has not been using video diary as a medium for reflection.

The data for the study comes from the video diaries or other journal reflections that students produce, and the course work tasks in Professional Studies. In a sense though this is contextual and secondary data, as it is all used to provide a focus and stimulus for the three interviews that take place at various points during the student's time on the programme. These interviews take place at a venue of the students choosing, last approximately 90 minutes and are semi-structured but quite conversational in style, with a view to enabling the participant to reflect on their developing professional identity through discussion, and through reviewing their earlier and most recent thoughts and accounts of this. In this paper, it is not possible to include the extracts from the actual diaries. The data and analysis focus more on the subsequent interviews, in which the student explored the process of keeping a video diary.

Reflexivity – evidence from the interviews
It was particularly interesting to be able to interview this student at length as part of the MPhil pilot study. A clear design in the interview schedule was to invite the student to reflect on the process of reflection. As this student had been using the diary, this was a stimulus to specific reflection.

The extract below shows a good deal of metacognitive comment, as she reflects on the process of producing a diary entry. It is interesting to note her making a link between action in the classroom and a kind of anticipation at that moment of how she may reflect on it later when compiling a diary entry. There are multiple layers here. To borrow Schön's (1983) terms, it is an example of reflecting on 'reflecting-on-action' whilst 'reflecting-in-action':

> Student: *…because I was just so sick of reflecting on everything, because it's very difficult to sit there and think 'I've done this, WHY did I do this, how does it make me feel' and in trying to vocalise that and then (obviously because I was writing it as well but then that was my choice obviously but)… I did find it helpful but it was very painful like it…for the last one*

particularly because I'd already done all the others. But even the first one, I'd never had to do it but I still dreaded it, because it is quite, it's quite emotional and I feel like it was quite personal because I invested a lot of myself into doing it and obviously I was making mistakes, and then I'd have to relive them and think about why I made the mistakes and it was me had started making mistakes and all that stuff, I think it helped but it was a painful process, and I'm glad I did it, don't get me wrong, I am really glad I did it, I think it made me a better teacher because I did that, and I was able to modify things that were wrong with my teaching earlier on than I may have otherwise done.

Interviewer: *But it was painful because you were verbalising it or because you knew someone else was going to watch it later?*

Student: *It was more because I was verbalising it, less because someone else was going to watch it, cos I could pretend it's just the camera and I knew it was only going to be you but it was it was more because before I verbalised it I had to think about it, and while I was doing things I was thinking 'I'm going to have to verbalise this later…I'm gonna have to think about why I did this, I'm gonna have to…*

Interviewer: *Oh that's … so literally as things are happening in the classroom, you're more aware of it …you're saying … or you're really aware of it because you know you have to talk about it later.*

Student: *Well also because you've obviously got the reflection focus, so I'd be thinking about it anyway, but obviously because I knew I would actually have to be talking about it …with writing you can flower it up and.. I don't know it's just you can leave things out when you're talking things just come out and it's…that's why it was so worrying cos it wasn't like I couldn't edit it and all that stuff, its just coming out*

There are several comments in the extract about the emotional dimension of reflecting with the video diary – *'a painful process'... 'it's quite emotional'.* There is something public about it as a medium, even though in this case the student was not overly concerned that her tutor would be viewing her entry. She clearly found it difficult to go through the process of analysing what she calls her mistakes. This interview was conducted after the first placement. It will be interesting to see if her perception of using the camera has changed over time when she is next interviewed. As a researcher looking for insight into teachers' discourse, I am pleased that the comment in the diary has the potential, she believes, to be more spontaneous and less edited or 'flowered up' as she calls it. But she as a student is concerned that it gives her less control over the image of herself as a practitioner that she will be able to present. Interestingly, the student also finds it very painful to review diary extracts once she has filmed them.

Analysis and discussion

There is evidence from this analysis, that this student, using this medium (video diary) in the context of this particular PGCE programme is engaging in reflexive thinking (as defined by Convery, 2001:138 – 'Does what I am trying to do frustrate or realise my espoused values?') and what Moore and Ash (2004) would call authentic reflection. In her reflections on the process there is evidence of sophisticated self-awareness. She would be described by Oosterheert and Vermunt (2001) as the 'meaning-oriented' student, rather than the 'reproduction-oriented' or 'immediate-action-oriented'. She also discusses the emotional dimensions of the process, but interestingly has not discussed emotional issues in the diaries themselves. In discussion with her the other day, she commented that she was not going to

'switch it on after a really crap day', or 'when I am elated'. This is interesting and requires further exploration. Does she still view the diary as an exercise that is ritualistic? Does she not consider it important to record the full range of her thoughts? I still believe that these moments and emotions need to be given greater credence as part of reflection. But, even given the clear guidance that this was 'acceptable', this particular student has chosen to avoid that kind of reflection.

To what extent does the chosen medium affect the type of reflective activity? That is very difficult to answer from this one case. The main focus here has been on an interview, in which the student is invited to deconstruct the use of the diary as a medium for reflection. Even so, clearly the student is very able in terms of 'reflection' as a way of thinking. In the earlier extracts, there is a chatty, story-telling approach that is clearly different in tone from a written piece, but the later reflection seems to be very crafted in some ways, although still conversational in other ways. In each, I think this is still recognisably a discourse of teacher education, in that her comments and reflections are clearly informed by insider knowledge and vocabulary, even as a 'novice'. She does not talk about her experiences in the way that she might do in a social situation with a peer group or friends and family outside 'education' as a space for professional learning. The content of her reflections could be transferred into a written format. In fact in the early stages she was writing notes to prepare for her spoken reflection. To have a clearer answer to this in the context of video diary, a larger study with a range of participants would be required.

The creation of a video diary reflection is a solitary activity for most, although there is no particular reason why it should be – with a different set of guiding principles, it could include videoed interviews, or conversations with a significant other. However, a concern expressed by Convery (2001) is that what he calls 'individualistic' approaches to reflection can be a hindrance to improvement in teaching. He feels that reflection should take place in a social setting or 'site' and talks of the need to confront the self or to be confronted to avoid cyclical introspection. This student's comment is often about her as an individual, but I do not feel that because she is reflecting on her own that the quality and nature of her reflection is compromised. I think that the guidance given on the way to reflect within this medium (the journal and the video diary in particular) is more significant that than the medium itself in this context.

Is the reflective activity leading to 'better teaching'? The student in this study has indicated that she believes it does, as demonstrated in the extract above. Zeichner and Tabachnik (2001) believe that there is a tendency in the literature to imply that reflective activity necessarily leads to better teaching. There is no doubt that this is a very self-aware student teacher, but is her awareness too strongly directed on herself? How would we measure 'better teaching' as being linked or not to the habit of reflection?

Two final issues for consideration arise from this study: manageability for tutors; and that of engaging school-based mentors and other tutors involved in teacher education. The pilot of the use of video diaries within the programme has rested on two tutors, one of whom is the researcher. The other tutor has expressed concern about the manageability of having to view the diaries as part of a monitoring of school placement. It has been suggested that the tutor need only view extracts, which can be selected and sent or presented to the tutor. But issues of access and system/software compatibility can occur here.

One of the students reported that she had been put off using the diary because of the lack of interest of her tutor in the idea. Another said that her mentor had not

expressed an interest in viewing them. There are obviously issues of preference of medium here, along with cultural differences between the student who works confidently with a range of ICTs and the busy mentor who has little reliable physical access, or time for accessing the video files. The films can be viewed on the cameras, so students have been recommended to keep the cameras with them when mentors and tutors are visiting their classrooms. But it is unlikely that the idea will be sustainable in the longer term without the interest and support of tutors and mentors. It may well be that the advent of easier ways of sharing electronic and visual information via shared e-spaces such as blogs and electronic portfolios, will facilitate access for all.

This pilot into the use of video diary has been conducted on a small scale, with only 7 out of a possible 50 students taking up the option. As such it has been manageable in scope, where the offer of video diary to all in a large cohort of students on a fixed programme would have considerable human and financial resource implications. But I do believe that with enhanced guidance and training, it has the potential to offer a real and meaningful alternative to some forms of reflection that dominate our ITE programmes, and to open up alternative ways of reflecting on teaching and the process of becoming a teacher that are 'authentic' and which can provide real insight into teacher development for the student and tutor alike. The project continues…

Biography

William Stow is Director of Primary Postgraduate Initial Teacher Education at Canterbury Christ Church University. He has been working in teacher education for fourteen years, following six years as a primary teacher. His research interests centre on the development of student teacher professional identity, and he is currently in the second year of an MPhil which focuses on this area.

References

Convery, A. (2001) A teacher's response to 'reflection-in-action' in J. Soler, A. Craft and H. Burgess (eds) Teacher Development – exploring our own practice (London, PCP).

Dewey, J. (1933) How we think: a re-statement of the relation of reflective thinking in the education process (Chicago, Henry Regnery).

Moore, A (2004) The Good Teacher (London, Routledge).

Moore, A. and Ash, A. (2002) Reflective practice in beginning teachers: helps, hindrances and the role of the critical other. http://www.leeds.ac.uk/educol/00002531.htm (accessed 26/04/2007).

Oosterheert, I. E., & Vermunt, J. D. (2001) Individual differences in learning to teach, Learning and Instruction, 11(2):133–156.

Schön, D (1983) The Reflective Practitioner (New York, Basic Books).

Warwick, P (2007) Reflective Practice: some notes on the development of the notion of professional reflection. Lancaster: ESCALATE (accessed from www.escalate.ac.uk/3571 - 26/04/2007)

Zeichner, K.M. and Tabachnik, R.B. (2001) Reflections on reflective teaching in J. Soler, A. Craft and H. Burgess (eds) Teacher Development – exploring our own practice (London, PCP).

2. An enquiry into the efficacy of learning journals as means to promote reflection in PGCE student teachers

Simon Hoult and Chris Carpenter
Canterbury Christ Church University

Summary
This paper reports on an enquiry into the nature and use of learning journals to enhance student teachers as reflective practitioners on a one year Post Graduate Certificate in Education (PGCE). The nature of, and engagement with, the learning journal is related to theories of experiential learning and literature on reflective practice. Data were collected from a sample of learning journals of six Geography and six Physical Education students. The paper considers the impact of learning journals on student teachers as learners and professionals through the development of their professional identities, personal theories and creating conditions for effective reflection.

Keywords
Learning Journal / Learning / Reflection / Reflective Practitioner / Experiential Learning / Personal theories / Identity

1. Introduction

The notion of reflective practice is a well-established theme in the education and practice of professionals emanating from Donald Schön's work in the 1980s (Schön, 1983), however notions of reflection in professional learning have been debated much earlier than this (e.g. Dewey, 1933 and Habermas, 1971). The notion of reflective practice has become something of a contested terrain. Morrison (1996) suggests that the term has come to have a range of meanings as it may be seen to include action research, professional development, personal development and teacher empowerment.

The Post Graduate Certificate of Education (PGCE) for students training to be secondary school teachers at Canterbury Christ Church University has developed and utilised a learning journal (LJ) that has become a central document to promote and record students' reflections and their professional and academic progress. The LJ invites students to write open, student chosen reflections through enquiry into the nature of their practice and their progress as teachers.

This paper considers the theoretical approaches to reflection and how this links to experiential learning models and how students have engaged with their LJs in order to develop their practice. The extent to which students' engage with their LJs is established through analysis of a sample of students' LJs in the Geography and Physical Education cohorts of the PGCE.

The stimuli for this work are three-fold. As the LJ has become central to students' learning on the PGCE, the tutors and mentors are seeking ways to support students' reflection. We recognise the need to enable students to have agency over their own learning without stifling autonomy. Secondly, the positioning of the LJ as a record of evidence as well as being a reflective account of professional but ultimately personal progress towards QTS (Qualified Teacher Status) has been recognised as a potential difficulty. Thirdly, there is a potential constriction of the students' reflections, due to the mentor and tutor audience and the potentially conflicting demands of summative and formative assessment of the journal.

What is in our LJ?
An LJ is a means for students to engage on a regular basis in order to reflect on their learning. It is intended that the structure of the LJ will be instrumental in supporting the students in developing their capacity to reflect on their experiences and the nature of education. This reflection is open for student teachers to identify their own focus and thus it is anticipated that through this they will develop autonomy for their thinking but supported by a series of guiding generic questions illustrated in figure 1.1. This open structure for reflection is intended to encourage autonomy and is congruent with theoretical models of experiential learning (Boud, Cohen and Walker, 1993) and the development of reflective practice.

At various points in the programme students are asked to write a personal statement of development, reconsider some of their earlier reflections and to reflect on their engagement with the LJ (see figure 1.2).

The LJ also serves as a record of students' progress towards meeting the QTS Standards[1]. The intention is that they devise a weekly set of targets in conjunction with their mentor that focus upon their progress in learning to teach, which we invite students to map onto the Standards and to review these targets the following week. The evidence in this study suggests this is completed well by most students but we acknowledge an inherent tension in the LJ between the more technicist, outcome-based nature of the Standards, and the higher levels of reflection associated with reflexive practice (Moore, 2004).

2. Reflection and links to Experiential Learning- an overview

2.1 The place of Reflection in Learning

'Throughout the 1990s the overwhelming majority of those leading teacher education programmes…claimed that their courses were explicitly informed by a notion of reflection' (Furlong, 2003:22). The 'panoramic view from the high ground of education' (Schön, 1987:3) is uncomplicated by detail and, although it is possible to solve more simple problems through research-based theory and technique, it is only when the practitioner is in the 'swampy lowland [that] messy, confusing problems defy technical solution' (ibid, 1987:3). This concurs with the complexity of practice faced by student teachers with the multiplicity of variables at play in their classrooms and which is the area that they are asked to reflect upon in their LJs.

Figure 1.1 Guiding questions to support students' reflections

Reflection

Please use the space below to reflect on issues that particularly concern or interest you at the moment. You might use one of the headings below to guide you.

- What have been the most significant events this week? Why?
- What have you learned? How did this learning take place? How has this helped your development?
- What further questions has this prompted you to ask?

What theoretical concepts have influenced your learning this week? How have these been illustrated in school? What are the strengths and weaknesses?

[1] Available at http://www.tda.gov.uk/upload/resources/pdf/s/standards_framework.pdf Accessed 30.10.

Reflection, then, in the 'swampy classroom' and developed through engagement with a LJ is not, as Dewey suggested, a 'chain of linked ideas that aim at a conclusion' (Dewey, 1933 cited in Moon, 1999a:12) but is more a case of considering an issue without trying to come to fixed conclusions about it (Claxton, 1999).

The lack of conclusive outcomes within reflection is, at times, hard for student teachers to contemplate. It is, however, through the questioning of practice, policy and theory and the problematising of issues, that reflection enables some sense to be made of the complexity of these links and where and how practice can be developed by the student.

Reflection is a commonly used term and has an ambiguity of specific meaning. With relation to educational reflection, three elements of reflection are suggested by Moon (1999a). Firstly reflection is associated with the learning process and the representation of that learning. Secondly, in relation to study, reflection needs to have an implied purpose to be significant and, thirdly, reflection about learning is about complexity and it involves complex cognitive processes that consider complex issues for which there is no obvious conclusion (ibid:4).

The 'design level' (Schön, 1987) associated with reflection in action occurs with intuitive decision making inherent in the planning of practice. Overt reflection is conducted

Figure 1.2 Guidance given for medium-term reflections and meta-reflections

Initial Statement

This is an opportunity for you to reflect on the reasons you are embarking on a PGCE and to make explicit some of the issues that excite and concern you at this stage. The headings below are intended only to guide you and should not be viewed as a template.

- ☐ Why are you on this course?
- ☐ What are your aspirations? Why?
- ☐ What are the aspects of the course that concern you most at this stage? Why?

Statement of development 1 and 2

This is an opportunity for you to reflect on the course to date. As part of your statement you might consider addressing some or all of the following.

- ☐ Review your initial statement.
- ☐ What have you been most pleased with so far? Why?
- ☐ At this point in the course what aspects do you find most interesting? Why?
- ☐ Use your thoughts on the above plus the discussion/points from your interim profile to complete your self assessment as part of your preparation of your record of development.

Concluding statement

In completing the concluding statement you might reread your initial statement and the statements of development and then use some or all of the heading below to guide your concluding statement.

- ☐ What are the achievements that you are most pleased with?
- ☐ What has been the most significant learning that you have done this year?
- ☐ In what ways do your perspectives about teaching differ from the start of the course?
- ☐ What are your ambitions for the future?

Reflection

In the light of your development and reflections on this through journal entries, statements of development, reviewing a journal entry and going through the process of the interim assessment and RoD1 assessment, what are the main issues for you to develop in the coming term and why?

Thinking about using this journal.

- ☐ In what ways has completing this journal helped you learn?
- ☐ What would make it better for you?
- ☐ Do you find it useful to reconsidering reflective comments you have made in the past?
- ☐ What further guidance would you like from the partnership?

because of the need to re-consider an element of practice (a problem-solving or problematising approach) but there is a danger that for some students this reflection remains a description of the event without overt analysis. We recognise these forms of reflection relate to the majority of our students' thinking in their LJs and concur with the lower level of McIntyre's 'reflections at a technical level' (McIntyre, 1993:45-46)

Deeper reflection occurs due to the complexity or the nature of the issue (Schön's reflection on reflection level). This may involve a deeper critique of practice, policy or theory and relates to McIntyre's second level where reflections express and justify aspects of teaching using wider theory about the particular subject and learning. This is developed to a higher level with reflections that also include the wider institutional and societal influences.

It is suggested that practitioners draw on context specific theories in use rather than espoused theories (Schön 1987). McIntyre classifies knowledge into practical and theoretical. Practical knowledge is that which we use 'to guide practice and to make sense of the particular' whereas theoretical knowledge 'has some kind of generalised validity' (McIntyre, 1993:48). It is the practical (or context specific to use Schön's term) which we would most like to see explicitly referred to in LJs than the wider, validated body of theoretical knowledge.

We see the role of the LJ as a means by which students' personal theories can be made visible and reconstructed. The process of reforming personal theories is viewed by Claxton (1984) as representing learning. We believe no practical activity is approached without some underpinning theory (Carr and Kemmis, 1986). Usher and Bryant (1987) view the relationship between theory and practice as dialectical rather then merely applicative, which we see as a potential weakness of Schön's work. This is not to suggest that the knowledge developed through reflection replaces bodies of theoretical knowledge for the students, but is used as a guide to develop deeper insights into personal situated theories to support their practice.

2.2. Experiential Learning and Reflection

Reflection is integral to experiential learning theories (e.g. Kolb, 1984 and Boud and Walker, 1993) and contextualised through its position at the heart of the design of professional learning programmes (Schön, 1987).

Kolb's (1984) model of learning and cognitive development proposes that the learner has a 'concrete experience' that they then reflect upon. This is potentially problematic as we would argue, in line with constructivist thinking, that all experiences are interpreted by the person who experiences them. To that end we see that it is essential that students' entries in their LJ are viewed by the professionals who work with the students as a 'window' to their construing and resist temptations to 'measure' them in any way but to use them as an agenda for open ended discussions which invite the students to develop their understandings. It is crucial that students and their tutors/mentors are aware of the inherent differences between the reflective and the recording functions of the LJ.

To some, experiential learning has become the new 'orthodoxy' Jarvis et al. (2003) and their view is that we need to be careful of saying that all learning is experiential as then the term 'experiential' becomes redundant. Like Jarvis et al. we feel that learning from secondary sources is viable indeed an indispensable condition of learning to teach and would expect such experiences to inform students' reflections.

Consideration of the affective is not an aspect of experiential learning acknowledged by all models, however, we recognise that the impact of students' affect can be

profound and encourage students to reflect on the emotional impact of learning in their LJ reflections. Thus we see reflection as a 'generic term for the intellectual and affective activities in which individuals engage, to explore their experiences in order to lead to new understanding' (Boud, Keogh and Walker, 1989:19). The ability of students to recognise and attend to their emotions is an important factor in the development of their reflection, restricting, diverting or promoting their learning.

2.3 How LJs promote reflection

Among the arguments proposed in support of using LJs to develop reflection are that: writing forces time to be taken for reflection; the pace of writing slows the pace of thinking and can thereby increase its effectiveness; they cause learners to focus their attention; they help learners to appreciate whether or not they understand something (Moon, 1999a:31). We see reflection not merely as a recording of thoughts but also a means to create new knowledge as Cooper notes, 'we literally write our own stories simultaneously incorporating our own future as we reconstruct our past' (Cooper, 1991 cited in Moon, 1999b). We recognise the power of attending to the way that students interpret events through writing about their experiences and the nature of the professionals' engagement with it. We recognise the potential for the students' reflection in the LJ to be instrumental in bringing about change fixing their affective orientation and as a means to bring order to turbulent environments (Ghaye and Lillyman, 1997).

We tend to the view that the reflective process operating here is essentially a double-hermeneutic, whereby the students are simultaneously learning to interpret learning in the classroom and also to nurture their reflective voice through their engagement with the LJ. This is endorsed by Langer (2002) who notes that LJs provide students with an opportunity to learn how to reflect.

Some inherent difficulties in the use of LJs to develop reflection have been identified in the stimuli for this research. The challenge of reflection is that we need 'to make explicit what is largely implicit' Carpenter (2004:2). Without access to the associated professional and theoretical vocabularies, students cannot articulate and begin to build the capacity to analyse the transactions that occur in classrooms.

Students may not have confidence in the value of reflection in their learning, and therefore, tend to dismiss the possibilities provided by the LJ possibly because of their lack of understanding of the concept of reflection (Langer, 2002). In other words they feel trapped by their implicit theories of how they will learn to teach (Tomlinson, 1995) and therefore dismiss the liberating potential of the LJ (Morrison, 1996).

We note there is often a qualitative change in the nature of students' written reflections from typically an early reluctance to engage, giving way to more open, insightful writing as the value of reflection in learning is more accepted (Morrison, 1996). Crème (2005) cautiously notes that the constructed nature of writing might be used as a mask or outer coat to hide true perceptions possibly enhanced by the tension between writing for oneself and writing for others (Alterio, 2004).

The manner in which the professionals involved in the students' learning engage with the LJ is critical. We feel that there is a danger that the complexity alluded to earlier, will be reduced in the rush towards quick conclusions in order that the students are perceived to be making progress towards end goals. We see learning as essentially 'rhizomic' and the outcomes of meeting the QTS standards, whilst giving focus, does not support Claxton's call to avoid conclusions and there is a danger that a reflective journal becomes a means for all students to be directed towards a dominant discourse (Goudie, 1999 in Moore, 2000).

3. Methods

The main method chosen to investigate the students' learning in the LJ was by documentary analysis. This enabled an evaluation of the students' engagement with the LJ and how they composed their thinking in the various sections of the LJ.

Six Physical Education and six Geography students' journals were sampled. The students were chosen as a representative sample of the overall cohort in terms of gender and age. The sample represents approximately 30% of the overall cohort. Agreement of the students involved was sought in order to analyse sections of their LJs and to quote any pertinent elements.

The chosen elements of the journal were chosen in order to review the students' engagement over the course of the PGCE programme plus reflections over the short –term (weekly) and medium term (full school term). The students' ability to reflect on previous learning was included to assess how students' perceived their progress in reflecting and in their overall professional development. Sections requiring the students to review the LJ were also analysed.

In particular the following pages were analysed:

- a sample of weekly reflection pages through the year;
- four statements of development undertaken at the start, end of term 1, transition from school 1 to 2 and end of the programme;
- two meta-reflections on self-chosen previous reflections;
- self-analysis of the use and purpose of the journal.

4. Findings

4.1 Personal statements and weekly reflections

The personal statements and a sample of weekly reflections revealed a range of emerging themes, namely; students' values; learning as process and as an outcome; learning by reflection; building of theory (personal theories) including professional identity and finally learning as empowerment. Table 4.1 develops these themes and illustrates them with examples of the students' engagement with their LJs.

In all these reflections we need to be cautious about students' appropriation of language from their engagement with school/university cultures and wider policy and theory. Clearly our interpretation of their writing may or may not concur with their intended meaning.

The structure of our LJ has a strong bearing on the nature of the students' interaction with it. Students initially often found its open nature difficult to find a reflective focus and it took time to develop their reflective voice as Langer (2002) suggests.

The consideration of learning as a process as opposed to its outcomes (often expressed as 'covering the Standards') is evident. Some students' utilitarian engagement with the LJ remained an often descriptive record of evidence whilst others developed their thinking about a wide range of personal theories and saw the beneficial impact of this on their practice. We concur with Elton (1996) who suggests that learners will only tend to engage in deeper learning when they are confident they will pass their course. The (potentially) dominant discourse of the Standards and how mentors and tutors construe their influence on the LJ is critical in the development of students' reflection and their engagement with the LJ.

Table 4.1 Analysis of Weekly Reflections and Statements of Development

Theme	Our findings	Examples from Students' LJs
Values	Our findings Values regarding the learner and learning	'Everyone is good at something'; Teaching is making a difference to the lives of the children' 'Every child is unique'
Learning as Process	• Developing over the timescale of the PGCE • As a target to focus upon • Expanded range of skills rather than understanding learning more deeply	'By end of the course I will be focusing more on learning'; 'My perspectives have changed- teaching is not just about creating geographers'; 'I need to focus on process rather than the outcome of the lesson' and 'From lesson observation I can build on evaluating skills and discussion' 'Subject studies has expanded my repertoire'
Learning as Outcome	Often outcome driven related to meeting the QTS Standards and sees own learning expressed in terms of hard evidence	'I need to cover the Standards' and 'The LJ has helped me understand the Standards' but alternatively 'Being comfortable…in my teaching is more important to me than targets'
Learning as Reflection	• As a means to developing as a good teacher • Illustrated by growing understanding of the purpose of the LJ • Question asking for future reflective learning • Interaction (by mentor) supports reflection in few cases but their interaction is mostly outcome and target focussed with little mention of reflection	'Reflection helps me to understand what is an effective teacher' and 'The LJ shows my progress more than I thought it would' but also 'I see reflection as like a sponge' 'Reflecting made me want to ask more from the pupils themselves- it can only help their development and mine' 'I am now conscious of the need to ask more and therefore reflect more on process and outcome' 'I needed support with my reflections' but also "mentor involvement with LJ helps my reflection'
Building of theory-Personal theories	• Development of Professional identity (see section below) • Importance of relationships • Teacher vs. Pupil orientation • Behaviour management seen separately from pedagogic approaches • Ideas of assessment linked to learning • Theory and practice relationships	'I know I will learn through experience' ' Learning is a continuous process' 'Professional relationships- not personal are important' and 'My perspectives on teaching have changed due to knowing the students and caring about their development' 'I have realised that a lot of teaching is less to do with what is taught and more to do with what the pupils are learning' ' I am increasing ways of keeping children interested'; ' I need to plan for behaviour and use different teaching styles' and 'Positive rewards are part of behaviour management- this is where problems can be nipped in the bud' 'Formative assessment helps improve work' and 'I now see how important self and peer assessment is in improving students' work' I need to relate ideas to practice to understand. Theory doesn't always fit'
Learning as Empowerment	• Confidence through knowledge but often little sense of growing autonomy. • Professionalisation vs. Professionalism • Future aspirations	'My confidence is continually building' and 'Completing my PGCE made me a stronger, more confident and assertive person and it's reflected in my teaching practice' 'It can be better not to do things the same as everyone else' but also "I need to know what my mentor wants' 'I want to change the face of PE'; I need to be more proactive in my professional development'
Development of Identity	• Subject specialist (PE particularly) with strong content knowledge • Subject knowledge and/or pedagogic focus • As a manager of behaviour • As a technician lacking reflective focus • As overworked teacher- a harassed professional	My subject knowledge has increased though my teaching of Rugby'; 'Need to do justice to my subject' 'I have developed as a teacher and as a Geographer' 'Am I a Geographer who learns to teach or a teacher who happens to teach Geography?': 'I have learnt how to change from a subject specialist to an effective teacher' 'Churning out of lesson plans can be interesting' 'I need to plan- I don't want to let the girls or me down'

Although many students indicated a growing confidence over the PGCE course, there were few who indicated any growing autonomy and occasionally there were implicit references to adapting practice in order to please their mentors.

Unsurprisingly, behaviour management (as opposed to behaviour for learning) was a commonly discussed issue but all too often lacked reference to learning. This dislocation suggests some students are locked into implicit personal theories as Tomlinson (1995) suggests, however, this was not seen in writing about assessment where it was often linked to learning.

Mostly the Geography and PE students' reflections were similar, however, subject knowledge was often identified by PE students as areas of development, whereas, the Geography students tended to indicate a move from being a subject specialist to developing pedagogic knowledge which possibly links to the positions of these subjects in the curriculum.
Finally, students expressed concerns over their demanding workload and its impact on their reflections and practice, developing into a 'harassed professional' well before the end of the PGCE.

4.2 Considering the Meta-analyses
The students' responses were heterogeneous (see table 4.1). Some students clearly found the process of recording reflections a useful one and we interpret this as an indication that they saw the process of writing in the LJ to be one where they were 'knowledge building' and that they enjoyed having the space to write about their experiences and feelings.

The participant who said '…there is no point as I evaluate my lessons anyway' seemed not to understand that lesson evaluations are intended to focus on children's' learning whereas the LJ is about the student teacher's learning. However we recognise that both spheres of learning are inextricably linked. We also recognise that

Table 4.2 Table to show summary of analysis of meta-analysis.

Reflections		Discussion with mentors	QTS standards	Target setting	Theory
Positive	**Negative**				
Students reported that they enjoyed the space afforded to them by the LJ to reflect. That it served to show their development. That it was a place to record important moments. G2 also reported that it was a place where they felt they could acknowledge their feelings.	Students reporting that it was a chore. Too structured. Extra work. 'that there was no point as they evaluate their lessons anyway.'	Acted as a prompt for discussion with mentors. Directs learning.	Helps understanding of them.	Helps keep student focussed. Identify development needs. Highlights areas for development. Spur to address problems. Identify strengths and weaknesses.	A place where theory can be developed.

this perception might be representative of a wider body of students and might be a theme that informs teaching on the course in the future. We also recognise that this may well be related to their perceptions about their capacities to reflect and their notions of the efficacy of reflection in learning.

4.3 Reflections on reflections
In the sections where the students were asked to look back at a reflection and then reconsider the issues there were again mixed responses (table 4.3).

Some students reported that reconsidering reflections was useful, even essential and that it helped them see their progress and to see themes approaching. Equally some students clearly did not relish any aspect of the writing process. We feel, perhaps intuitively, that revisiting reflections in some form is essential as it gives the learner the sense that their reflections are valuable. 'To reread my journal is to see oneself seeing' (Grumet, 1990).

5. Conclusions and Recommendations
The small-scale sample framing our analysis only permits firm conclusions regarding the specific student cohort that was sampled and anything more general to this must be tentative in its nature, however, a number of points can be made from our research.

There is a need to make the rationale clear and explicit for the LJ and to share this with our students as well as review this with mentors and tutors. We feel that for the LJ to be empowering it needs to be perceived by all to be at the heart of the learning process- not merely a recording device and its role in summative assessment must reflect this.

Interactions with the LJ need to be supportive in developing the students' reflective learning and not fixed on producing written outcomes that match the evidence required to meet the QTS Standards. This process-led intervention needs to support wider, deeper problematising of theory and practice rather than rushing students to simple conclusions. An open and more

4.3 Table to show summary of responses to 'reflections on reflections.'

Reflections	
Positive	**Negative**
● Useful process ● Essential. Boosts confidence ● See themes developing ● Good to revisit reflections ● Useful looking back ● Useful	● So Does it help my teaching? ● Not useful. ● Hate reading my own writing

complex interaction by mentors/tutors through dialogue with the students should encourage the emancipatory potential of reflective learning for students. We feel that the LJ provides opportunities for professionals involved in ITE to model themselves as 'teachers who are learning through teaching' by revealing their own 'unfinished' development in discussions with their students.

The assessment function of the LJ should focus on reflective learning as opposed to a tendency to technical commentary on the organisational nature of evidence and a summative report on the quality of reflection. Formative feedback should be a means of gaining insights into the learners and their learning rather than a measurement of their performance.

Finally, the nature of audience will always have an influence on the author. We feel that with these important changes to the interaction and assessment of the LJ this can be a positive influence and thus that the potential for deeper reflective learning for more students can be realised through the LJ.

Biographies

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References

Alterio, M. (2004) Collaborative journalling as a professional development tool, Journal of Higher Education. 28 (3), 321-332.

Boud, D., Keogh, R. and Walker, D. (1989) Promoting reflection in learning: a model in reflection: turning experience into learning', Boud, Keogh and Walker (eds.) (London, Kogan Page).

Boud, D. and Walker, D. (1993) Barriers to reflection on experience, chapter 5 in Boud, D. Cohen, R. and Walker, D. (1993) Using experience for learning (Buckingham, Open University Press).

Carr, W. and Kemmis, S. (1986) Becoming critical (Lewes, Falmer Press).

Carpenter, C. (2004) A consideration of the role of the school experience journal in developing reflective student teachers. Paper given at Professional Mentor conference, Canterbury Christ Church University College July 2004.

Claxton, G. (1984) Live and learn: an introduction to the psychology of growth and change in everyday life (Milton Keynes, Open University Press).

Cooper (1991) Telling our own stories, in Stories lives tell: Narrative and dialogue in education, Ed. Whitehead. C. Noddings, N. (New York, Teachers College Press).

Crème, P. (2005) Should student learning journals be assessed? Assessment and Evaluation in Higher Education. Vol. 30, No. 3, pp287-296.

Dewey, J. (1933) How we think. (Boston MA, DC Heath and Co.) cited in Moon (1999).

Elton, L. (1996) Strategies to enhance student motivation: a conceptual analysis, Studies in Higher Education, 21 (1), 57-68.

Furlong, J. (2003) Intuition and the crisis in teacher professionalism, chapter 2 in Atkinson, T and Claxton, G. (Eds.) The intuitive practitioner (Maidenhead, Open University Press).

Ghaye, T. and Lillyman, S. (1997) Learning journals and critical Incidents: reflective practice for health professionals (Salisbury, Quay Books).

Ginty, A. (2007) Problem Based Learning. ESCalate Busy Teacher Educator Guides No. 4. Bristol.

Grumet, M. (1990) Retrospective: autobiography and the analysis of educational experience, Cambridge Journal of Education, 20 (3): 321-326.

Habermas, J. (1971) Knowledge and human interests (London, Heinemann), cited in Moon (1999).

Jarvis, P., Holford, J. and Griffin, C. (2003) The theory and practice of learning (London, Routledge-Falmer).

Kolb, D. (1984) Experiential learning: experience as the source of learning and development (New Jersey, Prentice-Hall).

Langer, A. (2002) Reflecting on practice: using learning journals in Higher and continuing Education, Teaching in Higher Education, Vol. 7, No. 3, pp 337-352.

McIntyre, D. (1993) Theory, theorising and reflection in Initial Teacher Education, in Calderhead, J. and Gates, P., Conceptualizing reflection in Teacher Development (London, Falmer Press).

Moon, J. (1999a) Reflection in learning and professional development (Abingdon, Routledge-Falmer).

Moon, J. (1999b) Learning Journals: a handbook for academics, students and professional development (London, Kogan Page).

Moore, A. (2000) Teaching and learning. Pedagogy curriculum and culture (London, Routledge-Falmer).

Moore, A. (2004) The Good Teacher. Dominant discourses in teaching and teacher education (London, Routledge-Falmer).

Morrison, K. (1996) Developing reflective practice in Higher Degree students through a Learning Journal, Studies in Higher Education, 21 (3), 317- 332.

Schön, D. (1983) The Reflective Practitioner (New York, Basic Books).

Schön, D. (1987) Educating the Reflective Practitioner (San Francisco CA, Jossey-Bass).

Tomlinson, P. (1995) Understanding mentoring: reflective strategies for school-based teacher preparation (Buckingham, Open University Press).

Usher, R and Bryant, I. (1987) Re examining the theory-practice relationship in Continuing Professional Education, Studies in Higher Education., 12 (2), 201-212.

3. The efficacy of reflection in learning to teach

If reflection is a *sine qua non* of learning to teach; How is reflection represented in post lesson discussions between physical education students and their subject mentors?

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Summary
The reflective practitioner discourses are well established in teaching and are frequently promoted as an element of Initial Teacher Education (ITE) programmes in the United Kingdom. The post lesson discussion with student teachers is an established feature of ITE programmes. This study seeks to establish how reflection is represented in post lesson discussions between seven student teachers and their subject mentors through the analysis of the transcriptions of their discussions.

Analysis of the data showed that while there was evidence that reflection was taking place, it tended to be essentially convergent, consisted primarily of reflection on performance and was generally centred on dealing with technical issues of perfecting teaching methods. There was evidence in some of the transcriptions that some mentors were helping students to be reflective but that when this was featured it tended to be without any significant 'follow through.'

Keywords
Reflection / post lesson discussions

Introduction
Reflection is a concept which is widely accepted in teacher education indeed Furlong and Smith (1996:22) points out that '... throughout the 1990s the overwhelming majority of those leading teacher education programmes in England and Wales claimed their courses were explicitly informed by a notion of reflection'. In terms of its place in learning, many (Race, 1988; Boud, Keogh and Walker, 1985; Moon, 1999; Moon, 2004; Brookfield, 1995; Loughran, 1996; Pollard, 2005) suggest that reflection is an important element of learning. If reflection in learning to teach is a sine qua non then it seems logical that it must be a feature for students who are learning to become teachers.

The post lesson discussion is a well-established feature of all teacher education programmes (ITE). This study seeks to establish the extent to which the Physical Education (PE) subject mentors (SM) who participated in this study promoted reflective dialogue in post lesson discussions with their student teachers.

Review of related literature

In order to establish the basis for the data analysis in this investigation, four themes will be considered.

- An overview of the main discourses in reflective practice;
- Classifying reflection;
- Post lesson discussions;
- A consideration of activities that aid reflection.

An overview of the main discourses in reflective practice
The capacity to reflect assumes that teachers are what Atkinson (2004) refers to

as 'rational agents' who are able to evaluate their teaching through reflection. The notion of reflection in the context of education has been subject to a number of different interpretations. Schön (1988) promotes a view of reflection that Atkinson (2004:380) refers to as '....a single hermeneutic process which seeks to reflect upon events in the classroom in order to improve practice'. However, a limitation of this interpretation of reflection is highlighted by Smyth (1991:3), who has argued that many of the advocates of reflective practice are 'remarkably unreflexive of their own agenda'. Goudie (1999, in Moore, 2000) has suggested that reflection which does not challenge its own presuppositions and the discursive ideologies bases upon which it is constructed will simply end up as another way of re-enforcing dominant ideologies and reproducing dominant (and potentially exclusive) cultural practices. Atkinson (2004) describes the reflexive perspective as a double hermeneutic process whereby the teacher engages in rational reflection upon classroom practice but also on the effects of institutional structures and a critical consideration of the self in terms of beliefs, attitudes, prejudices and suppositions. Atkinson (2004) suggests a third stance is that of the 'critical practitioner' as developed by Carr and Kemmis (1986) which involves what Brookfield (1995) refers to as being 'surprised by the familiar'. Carr and Kemmis (1986:41) suggest that:

> *Some of the knowledge teachers have, like the notion that classrooms are the appropriate place for education to go on in, has its roots in habit, ritual, precedent, custom, opinion or mere impressions. Its rationale must first be recovered from assumption before critical work can begin.*

It might be suggested that while such thinking is appropriate for experienced practitioners then how appropriate is this for novice teachers?

> *Although reflection has limited importance as a means to learning for student teachers, learning to reflect must surely be an important goal for student teachers, since it is through reflection on their own teaching that they will be able to continue learning.*
> McIntyre (1993:44).

If McIntyre's point is adopted then it might be expected that part of the SM role is to help students learn to be reflective and that this would be a feature of post lesson discussions. So part of the SM's role would be to induct student teachers into the reflective world of the teaching.

Zanting et al. (2001) found that although the capacity for reflection is considered a crucial outcome in trainees, the nature of lesson feedback tends to focus on teaching as a 'performance.' If this is representative of the dominant practice then it can be seen that a focus on teaching as a 'performance' might be a strong message to student teachers. It seems logical to suggest that if reflection is a strongly desired aim then the feedback that students get from subject mentors and HEI tutors should give them feedback on their ability to reflect. More than this the dialogue between the student and mentor / tutor should be reflective in nature with both modelling the capacity to reflect in their discussions about teaching.

If notions of reflexivity and critical reflection are accepted then this should also be a feature of post lesson discussions. Tutors and mentors both modelling reflexivity, and also encouraging and valuing this in the student. Logically this might then be a feature of written feedback that the student is given, with improvements in reflection over a period of time noted and celebrated.

Classifying reflection

There have been a range of suggestions about ways to classify reflection. Grimmett et al. (1990) and Day (2004) have all proposed methods to provide frameworks for levels and types of reflection. For the purposes of

this study the 'orientations to reflection' proposed by Wellington and Austin (1996) (see table 1) were adopted as they provide a wide range of perspectives from the immediacy of practice to a focus on the person doing the reflection.

Post lesson discussions

Given that a post lesson discussion is an established feature of ITE programmes there is a comparative dearth of empirical studies. Edwards and Protheroe (2003), drawing on evidence from 125 student teachers on two training programmes, conclude that student teachers' learning is heavily situated and that trainees did not acquire ways of interpreting learning about teaching that were easily transferable. They also found that 79% of the talk during the feedback with subject mentors was focussed on descriptions of observed events with little time spent on analysis of alternatives. Christensen (1988) compared the feedback given to student teachers by University supervisors (tutors) and co-operating teachers (mentors) in the USA. In this study it was found that the tutors viewed teaching as a problem solving exercise and in the post lesson discussion encouraged students to participate in a discourse about learning. The co-operating teachers tended to view teaching as a performance and emphasised a more technical approach. Feedback from the co-operating teachers tended to focus on the trainees' performance and in most cases they led the discussion. It seems logical to propose that if teaching is viewed as a problem solving exercise then an open discussion might be seen to be more consistent than a 'feedback on performance' type of debrief. It may be that reflection and critical engagement with a range of learning strategies is more consistent with, and may support development in, a problem solving mode more effectively. In an activity such as teaching where the variables are complex it is impossible to cover every eventuality. Therefore, enabling student teachers to develop a conceptual framework and the confidence to solve problems through helping them to build a repertoire of principles, strategies and ways of thinking may be the most productive use of time. Of course, this may be countered by considering that at the start of a school placement the immediacy of practice may require student teachers to be able to 'perform'. This may lead them to appropriating classroom practices from their mentors or their memories of their time as

Table 1: Orientations to reflective practice (Wellington and Austin 1996, p309-311).

Reflective orientation	Defining the orientation
Immediate orientation	Emphasis upon pleasant survival Tendency to focus on immediate demands of the task in hand, pedagogy often eclectic, but shallow.
Technical orientation	Emphasis upon development and perfection of teaching methodology and deficient delivery of prescribed results. Typically emphasises behavioural techniques.
Deliberate orientation	Emphasis upon discovery, assignment and assessment of personal meaning within an educational setting. Accept given ends but negotiate the process.
Dialectic orientation	Emphasis upon political emancipation, questioning educational ends, content and means. Tendency to focus on political and social issues. Pedagogy involves continual questioning, revision and internal validation, stressing empowerment and personal responsibility.
Transpersonal orientation	Emphasis upon inner self-development and relationship of internal to external self.

pupils and teach in a way that they were taught at school in a relatively unthinking manner.

Edwards and Protheroe (2003) also suggest that subject mentors may well be led into focussing more on performance, as, in the partnership model, the role of the subject tutor, who in pre-partnership days came into school and carried out the 'high stakes' assessment has now been assumed by the subject mentor. By taking on this 'summative' assessment role and collecting evidence of the student's progress to the standards it is possible that mentors may be more focussed on demonstrating their accountability than helping students to learn. This might hinder the possibility of students' having access to mentors' thinking at the planning stage and developing a true sense of collaborative learning.

> *Mentoring which is based on an application of knowledge view of training is therefore not making the most of teachers' strengths, whereas mentoring based on a view of learning to teach in schools through participation in sets of practices alongside more expert practitioners does do so.*
> Edwards and Protheroe (2003:229)

Watkins (2001), reviewing the focus of approaches, in schools suggests that if the focus is on performance then performance suffers, whereas, if the focus is on learning, then performance will improve. If this principle is applied to the feedback that tutors and subject mentors give to student teachers, it might be consistent to construct an argument that recommends a focus on the ways in which students have improved from previous observations in terms of their ability to reflect as well as on their performance as a teacher.

There is some evidence that where debriefing is delayed then there is a higher level of reflective analysis by more reflective student teachers (Williams and Watson, 2004). This has a strong resonance with the notion of 'slow thinking' as proposed by Claxton (1998) who suggests that when it comes to understanding complex matters, time and space to reflect in an unhurried and relaxed manner is crucial. If the student is given time to internalise the events of a lesson then it seems likely that they will be able to demonstrate higher levels of reflection in any discussions that follow.

A consideration of activities that aid reflection

In a context such as a post lesson discussion where the SM is likely to hold the power it is up to them to set the conditions for the student teacher to be reflective. It may be worth considering here, not only the extent to which SM see the capacity to reflect as a worthwhile quality but the manner in which the SMs see the student teachers' capacity to reflect as an 'entity' (fixed) or 'incremental' (capable of being improved) capacity (Dweck, 2000).

Moon (2004:162) suggests that activities such as 'wait time'[1], confronting learners with their misconceptions, asking them to applying reasoning to other situations, presenting problem solving, and employing questions that promote reflection, will all help people to be reflective. Questions are not just about asking the person questioned to make something in their head explicit for an external audience. The process of articulating thinking can be helpful in actually building knowledge, assuming the question invites this and that the person being asked to respond is given sufficient 'think time'[2].

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[1] Length of time a teacher waits for students' responses after asking a question. Research shows that increasing wait time from the typical 1.5 seconds after a question to at least 3 seconds increases the likelihood of student participation. http://www.learnnc.org/glossary/wait+time Accessed 10.10.07

[2] Stahl (1985) constructed the concept of 'think-time', defined as a distinct period of uninterrupted silence by the teacher and all students so that they both can complete appropriate information processing tasks, feelings, oral responses, and actions. http://atozteacherstuff.com/pages/1884.shtml Accessed 15.10.07

Method

Seven subject mentors were asked to record a post lesson discussion between themselves and their student teachers (subject mentors profile, appendix 1). Each discussion was tape-recorded and the recordings transcribed. All the post lesson discussions occurred during school placement one which, in the Canterbury partnership, lies between November and February. The transcriptions were analysed from four perspectives:

- The nature of the reflection – reflection in/on action- reflexivity- critical reflection;
- The nature of the reflection using Wellington and Austin's (1996) orientations to reflection;
- Teaching as 'problem solving' or a 'performance';
- Ways in which subject mentors help student teachers to be reflective.

Results

The nature of the reflection – reflection in/on action- reflexivity- critical reflection

There was considerable evidence in the data that SMs were inviting the student teachers to reflect in their discussions, although the focus of this reflection tended to be exclusively a 'reflection on action'. There were no instances where the student teachers were asked to reflect on the reasons for the decisions that they had made either at the planning stage or during the lesson. There was scant evidence that the SMs were directing the conversation into reflexive areas, nor did they encourage the students to adopt a critically reflective, 'recovering rationale from assumption' line of thinking at any stage (see table 2).

Typically the SMs tended to consider alternative 'solutions' to the strategies that the student teachers had adopted in the lesson under discussion. With the exception of MP1 (male participant 1) and FP2 (female participant 2), there were no references to previous lessons so in effect the lessons under consideration were treated as discrete events. There were no references to values that might underpin practice and no attempt to consider the wider structural factors that might impact on the lesson such as the policy landscape, school ethos or even to consider the issues that the student teachers might have brought to the course in general and that lesson in particular.

Table 2: Analysis of reflection, reflexivity and critical reflection in transcriptions.

	MP1	MP2	MP3	MP4	FP1	FP2	FP3
Reflective practitioner	Reflection on aspects of 'performance.' Children's perspective. Reflects on lesson in sequence.	Seeks student perspectives on performance. Describes and interprets.	Seeks decisions underpinning teacher actions. Transfer of teacher actions to other contexts.	Minimal reflection. Mentor describes and 'lectures.'	Student asked to reflect on decisions. Mentor offers little reflection of her own.	Reflection on aspects of the lesson.	Any reflection present was about the student actions in the lesson
Reflexive practitioner	None	None	None	None	None	None	None
Critical practitioner	None	None	None	None	None	None	None

It was significant that in some instances the SMs demanded very little of the student teachers although this was manifested in different ways. MP2 described events in the lesson and then interpreted them himself. FP1 asked many questions but did not respond with reflections of her own nor did she build upon the points that the ST was raising.

The nature of the reflection using Wellington and Austin's (1996) orientations to reflection

Each transcription was considered and each verbal exchange was located with the Wellington and Austin's (1996) orientations to reflection (see table 3).

There was much discussion that centred on 'immediate orientation' where in effect the student teacher was 'given' strategies for surviving. There were few instances where the student teacher was invited to build their own. There was little evidence of SMs employing questions that might have established the values that the student teacher might have arrived with and be developing. Dialectic orientations place an emphasis on political emancipation and stress empowerment and personal responsibility. There were no instances of the SMs inviting any discussion along these lines. Of course it may be that in the SMs' minds the whole point is to help the student teachers solve the pressing problems presented by the immediacy of practice. It may also be that the prevailing cultures in many schools might restrict the possibility of discussions about such matters. Deliberate orientation in reflection places an emphasis on assessing personal meaning and accepts given ends while the processes may be negotiated. There was no sense in any of the discussions that student teachers were being invited to critique the national curriculum or the schemes of work in the schools.

However this method of mapping each verbal exchange onto the orientations while revealing does not resolve the question of the extent to which the discussion was 'reflective.' Rather that the topic under review was located within that orientation. It would be fair to say that the discussions tended to move to solutions and there was little exploration or tentative hypothesising which might be seen as characteristic of reflective discussions. However, given the 'business' of schools, this may be understandable.

Table 3: Analysis of Wellington and Austin's orientations to reflection in transcriptions.

	Immediate orientation	Technical orientation	Deliberate orientation	Dialectic orientation	Transpersonal orientation
M1	**1**	**16**	**0**	**0**	**0**
M2	**11**	**27**	**1**	**0**	**0**
M3	**0**	**27**	**1**	**0**	**0**
M4	**10**	**26**	**0**	**0**	**0**
F1	**0**	**8**	**0**	**0**	**0**
F2	**5**	**23**	**1**	**0**	**0**
F3	**0**	**33**	**0**	**0**	**0**

Teaching as 'problem solving' or a 'performance'

The general pattern of the discussions was of the SMs starting the discussion by asking the student to reflect on the lesson and then a period where incidents in the lesson were discussed and finally the student teacher being 'set' targets for the future. The lines of thought between the initial exploration and the targets that emerged were not always clear. In the case of MP1 the discussion seemed to be progressing in a divergent manner and then the SM 'dropped' the next actions on the student teacher in a perfunctory manner with no negotiation and little obvious linkage to the previous discussion.

In general the questions employed may be divided into convergent and divergent questions. Divergent questions being those that give the questionner the opportunity to explore the student teacher's thoughts while the convergent questions were in many cases where the SM clearly had one response in mind and were of the 'guess what is in the teacher's mind' kind. This cycle of the SM giving advice or 'performance things to do' and then being given feedback as to whether or not students did this in future lessons was a feature of many of the discussions.

In a study which sought to understand how mentors learn to mentor, Bryan and

Table 4: Analysis of teaching as 'performance' or 'problem solving' in transcriptions.

M1	• There was a sense that the mentor was helping the student to see the issues as a problem to solve but there was little follow through. • Mentor spends a good deal of time describing the student performance and then interpreting this himself.	*Some divergence initially but essentially convergent*
M2	• Mentor describes and interprets many of student's actions. • Explores alternative strategies with student as 'audience.'	*Essentially convergent*
M3	• Interprets events. • Focus is essentially on teaching as a performance.	*Divergent discussion within convergent frame*
M4	• Mentor describes events. • Sees teaching as relatively straightforward.	*Convergent*
F1	• Asks student to justify each aspect of lesson. • Strong sense of problem solving but little follow through or conviction. • *Mentor who is very good with weak students but not with stronger more reflective ones.*	*Divergent*
F2	• Mentor reflects back/ confirms. • Looks wider at implications. • Exploratory.	
F3	• *Very weak student.* • Focus on student performance. • Mentor gives solutions.	*Essentially divergent* *Convergent*

Carpenter (2006) concluded that there was a tendency for SMs to see student teachers as weak rather than powerful learners who arrive on ITE courses with values, knowledge and skills. There was only one instance where the SM displayed uncertainty and a professional dialogue ensued where the SM and the student teacher explored possibilities in practice.

Ways in which subject mentors help student teachers to be reflective

In general there was a dearth of strategies used to enable STs to be reflective. The one constant feature of all the transcriptions was that the SMs tended to get the discussion moving through asking questions, many of which were open so inviting divergent responses. However apart from FP1 there were few instances of the SM summarising and reflecting back to the student teacher to encourage deeper thinking. There were also no instances of the student teacher being asked to apply any of the strategies discussed in other contexts. There was one short episode where the SM was reflecting alongside the student teacher as they jointly considered an issue in the lesson that had wider ramifications.

Discussion

If developing student teachers who have the capacity to reflect reflexively and critically is integral to the process of educating student teachers, then it seems both logical and consistent that this should be a feature of the post lesson discussion. Indeed given that learning may be viewed as participation (Lave and Wenger, 1988), it might be argued that the post lesson discussion is an ideal site for such reflective activities as it provides a shared context for such discussion.

In the current era the extent to which the capacity to reflect forms an important part of teachers' identities might be open to question. While SMs might espouse the virtues of reflection it seems possible that the volume of tasks to be addressed leads them to subconsciously view reflective activity as peripheral, time- consuming, even indulgent. There were few instances of the SMs in this study reflecting in front of, or with the student teachers. Treating teaching as a problem- solving activity rather than as a technical matter or may be a useful route to this.

Conclusions/ Future actions

While in general the findings in this study are mixed, it is possible to draw out some tendencies which may inform future investigations. While the participating subject mentors might see reflection as a sine qua non of learning to teach, it was not a consistent feature of the post lesson discussions and, in the main, a relatively narrow range of strategies were used to invite the student teachers to be reflective. The participating SMs did promote opportunities for reflective dialogue in the post lesson discussions although this tended to reside principally in the single hermeneutic, reflection-on-action discourse. Three reasons are suggested to explain this; firstly, it may be that the participating SMs' own reflection on practice may tend to occur principally within that discourse; secondly, it may be that they did not see it as their job to help students learn to be reflective beyond that single hermeneutic process or saw it as an entity quality - either the student could do it they couldn't; thirdly, that they either did not have the skills or did not explicitly see it as part of their role to help the student teachers to become reflective.

Biography

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References

Atkinson, D. (2004) Theorising how student teachers form their identities in Initial Teacher Education, British Research Journal, 30(3), 379-394.

Boud, D., Keogh, R. and Walker, D. (1985) Reflection: turning experience into learning (London, Kogan Page).

Brookfield, S. (1995) Becoming a critically reflective teacher (San Francisco, Joey-Bass).

Bryan, H. and Carpenter (2006) If practice is developed in a social milieu: how do mentors in Initial Teacher Education contexts learn to mentor and how do they construct their communities of practice? Unpublished paper presented at IPDA Conference Stirling University.

Carr, W. and Kemmis, S. (1986) Becoming critical (London, Falmer).

Christensen, P (1988) The nature of feedback student teachers receive in post observation conferences with the university supervisor: A comparison with O'Neal's study of co-operating teacher feedback, Teaching and Teacher Education, 4(3), pp 275-286.

Claxton, G. (1998) Hare Brain Tortoise Mind (London, Fourth Estate).

Day C. (2004) A passion for teaching (London, Routledge Falmer).

Dweck, C. (2000) Self-Theories, their role in motivation, personality and development (Hove, Psychology Press).

Edwards, A. and Protheroe, A, (2003) Learning to see in classrooms: What are student teachers learning about teaching and learning while learning to teach in schools? British Educational Research Journal, Vol. 29 No. 2. p227-242.

Furlong, J. and Smith, R. (1996) The role of Higher Education in Initial Teacher Training (London, Kogan Page).

Grimmett, P., MacKinnon, A., Erickson, G. and Riecken, T. (1990) Reflective practice in Teacher Education in Clift, R., Houston, W. and Pugach, M. (Eds) Encouraging reflective practice in education: An analysis of issues and programs (New York, Teachers College Press).

Lave, J. and Wenger, E. (1991) Situated Learning: legitimate peripheral participation (Cambridge, Cambridge University Press).

Loughran, J. (1996) Developing reflective practice: a study of pre-service teachers (London, Falmer Press).

McIntyre, D. (1993) Theory, Theorizing and Reflection in Initial Teacher Training in Calderhead and Gates, P. Conceptualizing reflection in Teacher Development (London, Falmer Press).

Moon, J. (1999) Reflection in learning and professional development: theory and practice (London, Routledge Falmer).

Moon, J. (2004) A handbook of reflective and experiential learning: theory and practice (London, Routledge Falmer).

Moore, A. (2000) Teaching and Learning. Pedagogy, curriculum and culture (London, Routledge-Falmer).

Pollard, A. (2005) Reflective teaching; evidence informed practice (London, Continuum).

Race, P. (1998) What has assessment done for us? – and to us? in Knight, P. (Ed) Assessment for learning in Higher Education (London, Kogan Page).

Schön, D. (1988) Educating the Reflective Practitioner (London, Joey-Bass).

Smyth, W. (1991) Teachers as collaborative learners; challenging dominant forms of supervision (Milton Keynes: Open University Press).

Watkins, C. (2001) Learning about learning enhances performance, National School Improvement Network Research Matters No. 13. London: University of London, Institute of Education.

Wellington, B and Austin, P. (1996) Orientations to Reflective Practice, Educational Research, 38 (3), pp 307-316.

Williams, M and Watson, A (2004) Post –lesson Debriefing: delayed or immediate? An investigation of student teacher talk, Journal of Education for Teaching, 30(2).

Zanting, A., Verloop, N. and Vermunt, J. (2001) Student teachers' beliefs about mentoring and learning to teach during teaching practice, British Journal of Educational Psychology, 71, 57-80.

Appendix 1

Profile of subject mentors

Subject mentor code	Experience
Female Subject Mentor 1 F1	Second in Department 6 Years as a mentor
Female Subject Mentor 2 F2	Second in Department 3 Years as a mentor
Female Subject Mentor 3 F3	Head of Girls PE. Head of House Professional Mentor. 9 Years as a subject mentor
Male Subject Mentor 1 M1	Head of House Head of department 8 Years as a mentor
Male subject Mentor 2 M2	Head of House Second in Department 5 years as a mentor
Male Subject Mentor 3 M3	2 years as a mentor
Male Subject Mentor 4 M4	Head of year 2 years as a mentor

4. Reflective Practitioners in first year? Formative assessment using a peer and self-assessed approach.

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Summary
This paper reports on an action research project involving a structured, formative assessment feedback process, within a personal learning environment (PLE), to address concerns about the effectiveness of previous course delivery. The project ran during the session 2006-07 and involved the use of a series of tutor mediated self and peer assessed core tasks associated with five distinct learning milestones. These were associated with identifiable blocks of lectures delivered by different staff involved in the programme. The series of Core Tasks placed progressively increasing demands on students so helping them develop more sophisticated learning skills as the year progressed. The PLE is used as the medium for self/peer assessment processes and for tutor feedback and mediation.

Keywords
Peer-based formative assessment / e-portfolios / blended learning

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Context
This project was conducted in the first year education studies element of a four year teacher education degree for students intending to teach in primary schools in Scotland. The module involves over 170 students per year. The course was identified in feedback as being a 'difficult' class. Tutors saw a problem of lack of engagement with content and a disappointing quality of resulting student work. There was a perception of mismatch between requirements for final summative assessment and work expected from students during the module.

Strategic Learning Design
The main strategy was designed to help students to take greater responsibility for their own learning. This is notoriously difficult to establish, especially in the first year. Experience suggested that students generally held fairly passive views on learning. They also expected tutors to provide all the understandings needed for success.

It was decided to implement a learning design based on developing the use of formative assessment used as an integral part of the learning process.
Evidence from literature (Black and Wiliam, 1998; Gibbs and Simpson, 2004; Nicol and Milligan, 2006) on the benefits of peer and self assessment methods in improving quality of student engagement and achievement led to the introduction of a different teaching and learning approach in the session 2006-07. Three main research questions emerged:

- How can we change the assessment system to improve the learning experience of students?
- How can we modify the learning environment?
- How can we offer timely, high-quality feedback to support student learning and achievement?

Constructive alignment
The starting point for the intervention was the complete reappraisal of content structure and learning design.

The first research question led to the adoption of an assessment method to support a process of change to allow students more responsibility for their own progress. The most appropriate strategies were related to formative assessment.

The second research question prompted recognition that radical modification of the learning environment was required. A series of 'learning milestones' was identified for each block of lectures. This allowed workload to be spread more evenly throughout the course. It was facilitated by having different lecturers already responsible for separate 'blocks' of lectures, usually over periods of three or more blocks. The unifying theme was to help students develop critical skills in considering differing theoretical perspectives presented in the lecture programme.

The third research question led to the introduction of new tools for teaching, learning and assessment and the development of skills necessary to use these effectively.

Formative tasks became progressively more challenging. The fifth in the series doubled as a summative assessment instrument worth 50% of the tariff for the final examination. This ensured that students could perceive explicit value from their engagement with the entire formative sequence. It also helped reduce the overall assessment burden on both students and staff.

Nicol and Macfarlane-Dick (2006) and Nicol and Milligan (2006) offered models where seven principles of good feedback practice generate a framework promoting development of self-regulated learning, based on formative assessment. Nicol and Milligan (2006) examine how technology supports this.

A review of recent research literature identified the following seven principles:

Good feedback practice:
1. *helps clarify what good performance is (goals, criteria, expected standards);*
2. *facilitates the development of self-assessment (reflection) in learning;*
3. *delivers high quality information to students about their learning;*
4. *encourages teacher and peer dialogue around learning;*
5. *encourages positive motivational beliefs and self-esteem;*
6. *provides opportunities to close the gap between current and desired performance;*
7. *provides information to teachers that can be used to help shape teaching.*

(Nicol and Macfarlane-Dick, 2006:205).

It was recognised that students must have opportunities to practice self-assessment. Submission of core tasks was developed as a two-stage process. First, students were required to post personal responses to the core task for feedback by peers. Then individual responses were synthesised to provide a group response. Core tasks were issued at least four weeks before the required submission date with students free to offer feedback to peers during this period. Students were given training in use of the 'Two Stars and a Wish'[1] strategy.

In the second stage sub-groups met, face-to- face, or online, to synthesise their group response. Again, the 'Two Stars and a Wish' strategy was recommended to promote discussion and allow work to be selected for

1 A type of feedback given to pupils that identifies two strengths in their work and one area for future development. This enables learners to build on prior learning and breaks the process of improvement into manageable steps. http://www.ltscotland.org.uk/sharedglossary/twostarsandawish.asp Accessed 8.10.07.

the group portfolio submission. Early in the module students were given guidance on appropriate language to use as part of this process.

Boud (2000) stressed the importance of external feedback to close the gap between students' current performance and teacher's expected performance:

> *Unless students are able to use the feedback to produce improved work … neither they, nor those giving the feedback will know that it has been effective …* (Boud, 2000:158).

Gibbs and Simpson (2004-5), recognise the need for implicit, effective assessment conditions to exist within the structure:

> *Good assessment conditions support:*
> 1. *individual and group responses that require regular study activity out of class;*
> 2. *responses for each core task that are staged over a number of weeks;*
> 3. *staged responses that require progressively deeper levels of students' understanding;*
> 4. *core task requirements that are clearly stated and are progressively more challenging.'* (Adapted from Gibbs and Simpson, 2004-5:12-15).

To address these conditions the project design ensured that:

1. individual and group responses required regular study activity out of class;
2. responses for each core task were staged over a number of weeks;
3. staged responses required progressively deeper levels of students' understanding
4. core task requirements were clearly stated and progressively more challenging

One underpinning aim was to improve the quality of students' learning behaviour and develop awareness of the benefits of reflective, self regulated learning – an awareness that could be transferred to classroom practice. Elton and Laurillard, 1979, commented that '… the quickest way to change student learning is to change the assessment system …' (Elton and Laurillard, 1979:100).

It was intended that engagement with core tasks would result in students engaging with other materials related to the topic. Evidence from tutor focus group meetings, regarding discussion of core tasks in tutorials, appears to support this view.

One sustainable approach, which addresses the needs of large classes, is the use of self- and peer based assessment (Black and Wiliam, 1998; Boud, 2000). The relationship between formative process and final summative product must be made explicit to both students and staff. Boud, (2007:3) confirms his belief that 'assessment, rather than teaching, is the major influence on students' learning'.

To maximise the effectiveness of tutor feedback, this was provided to only one sub-group in a tutor's class for each Core Task submission. It was given very quickly, within a maximum of 7 days after student submission. Sub groups within a tutor group were identified for tutor feedback for each Core Task. Students were invited to participate in further peer analysis and interpretation of the submission and tutor feedback to encourage the development of professional reflective skills.

Core task requirements were progressively more challenging. Lecturers attempted to build in progression by making explicit links between separate sections of the programme. This process occurred spontaneously – a tribute to the determination of staff to provide the best possible learning experience.

Identification of learning milestones also made it possible to consider appropriate formative assessment tasks to associate with each 'milestone'. It is this alignment of the learning experiences with identified milestones and closely related formative assessment tasks that is proposed by Biggs, (2003).

Blended Learning and Self-Reflection Methodology

If student teachers are required to develop the skills to become reflective practitioners, it is essential to provide them with three elements – experience, language, and tools – and to provide contexts, based on the real-life experiences of practitioners, in which students may rehearse, refine and develop their skills. This process may be implemented in a variety of ways: by inviting students to engage with literature relevant to their own domain; by providing them with opportunities to engage in professional dialogic narratives; and by providing opportunities for participation in problem based learning.

Use of the language necessary to construct knowledge, skills and understanding in the domain may be developed through engagement with the activities above, and through engagement with more experienced practitioners, e.g. tutors. When people learn a foreign language they need to practice using it in order to build understanding of how that language works. Similarly for novice practitioners; they need to be taught the professional language necessary to build conceptual understanding and be given opportunities to practice. To use formative assessment strategies, novices need to understand the underpinning concepts of this method and the language used to describe its practice.

The third element, tools, is the vital element forming the basis of this paper. Novice practitioners need a medium in which experience and language may be developed without fear of ridicule or criticism. Often, such a medium is difficult to create. However, research has demonstrated that effective use of blended learning strategies, in this case the development peer and self-assessment skills supported by an e-portfolio system, leads to the creation of practitioners who are truly reflective from the very beginning of their professional careers. It is not only technological skills that are developed, appropriate critical thinking skills and an understanding of what it means to be information literate, are developed also. It is the combination of all three of these that supports and enriches development of experience and language.

The specific trigger for innovation had been recognition that an e-platform being introduced elsewhere in this undergraduate programme had potential to be used in a completely different way as a vehicle to facilitate transparent self and peer-based formative assessment processes.

There was no suggestion that the development would lead to a predominantly e-learning approach or that traditional approaches to lectures or tutor led seminars would be abandoned. What has now become clear however is that the new blend of methodologies has had a feedback effect leading to subtle and sometimes significant, changes in normal operational practice across the whole range of learning experiences.

The outcome of adopting this particular blend has been to improve quality of student engagement and learning and has also enabled significant savings in staff time in both the seminar programme and in assessment activities.

Research methodology

It was agreed that action research was the most appropriate design for the research due to its ability to support a process of

change in which researchers would be active participants. The project would also be subjected to on-going development throughout its implementation.

The merits of action research as a method of improvement and involvement in educational settings have long been recognised. Robson (2002) highlights the emancipatory nature of its purpose; '… It adds the promotion of change to the traditional research purposes of description, understanding and explanation …' (Robson, 2002:214).

Due to this underlying purpose, many of the best known action researchers in education have been practitioners in that context, or have been professional researchers supporting practitioners who wish to initiate change in the setting in which they work. Latterly, McNiff and Whitehead (2003) comment on the ability of action research to improve practitioners' practice and learning. Somekh (2006) argues for '…a process of "dialectical interpretation" that generates a substantial body of knowledge, communicatively validated and capable of becoming the basis for action' (Somekh, 2006:30).

Data collection and analysis

Mixed-method data collection allowed both quantitative and qualitative data to be collected and analysed. Previous evaluation was carried out using a questionnaire, issued to all students, following the final summative exam. At the end of the second semester of this year, the process was repeated. A modified version of the previous questionnaire was used in order that some comparisons might be made between results Data from this questionnaire was subjected to descriptive statistical analysis by a member of the module research team, using SPSS[2].

The REAP[3] evaluation team administered a second questionnaire. This was developed and analysed independently by the evaluators who also conducted focus group meetings, one for students, and one for staff They also interviewed the research team.

Findings and conclusions

Preliminary findings from focus groups and questionnaires have shown that students were positive about this learning experience with the majority agreeing that it was possible to relate the module to the course (Table 1).

Table 1: It was possible to relate the module to my course

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	10	8.7	8.9	8.9
	Agree	45	39.1	40.2	49.1
	Neutral	32	27.8	28.6	77.7
	Disagree	16	13.9	14.3	92.0
	Strongly Disagree	9	7.8	8.0	100.0
	Total	112	97.4	100.0	
Missing	999	3	2.6		
Total		115	100.0		

[2] Statistical Package for the Social Sciences – information at http://www.spss.com/spss/ Accessed 8.10.07

[3] Re-Engineering Assessment Practices – information at http://www.reap.ac.uk/ Accessed 8.10.07

Table 2: The module provided a good insight to the subject

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	16	13.9	14.2	14.2
	Agree	64	55.7	55.6	70.8
	Neutral	25	21.7	22.1	92.9
	Disagree	6	5.2	5.3	98.2
	Strongly Disagree	2	1.7	1.8	100.0
	Total	113	98.3	100.0	
Missing	999	2	1.7		
Total		115	100.0		

The course provided good insight to the subject (Table 2).

Nevertheless, there are significant anomalies. 72.2% reported that collaborative working enhanced their learning, however, in spite of 67.5 % of respondents finding peer feedback helpful, only 50.9% found group feedback, offered by tutors, relevant to their own work. This would seem to imply that students themselves assumed the role of tutors for each other and are perceived as effective in that role by peers (Table 3).

Open responses in the questionnaire indicate that peer based formative assessment has been effective in promoting reflection and self-regulation. Typical comments were:

'I liked working in groups for the core tasks. It helped me to understand things better when the group discussed it and bounced ideas off each other.'

'Group work really helped me further my development … '

Table 3: I found the feedback from my peers useful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	18	15.7	15.8	15.8
	Agree	59	51.3	51.8	67.5
	Neutral	28	24.3	24.6	92.1
	Disagree	7	6.1	6.1	98.2
	Strongly Disagree	2	1.7	1.8	100.0
	Total	114	99.1	100.0	

Table 4: The workload for the module was appropriate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	3	2.6	2.6	2.6
	Agree	44	38.3	38.6	41.2
	Neutral	23	20.0	20.2	61.4
	Disagree	29	25.2	25.4	86.8
	Strongly Disagree	15	13.0	13.2	100.0
	Total	114	99.1	100.0	
Missing	999	1	.9		
Total		115	100.0		

However there are still some challenges. 52.7% of respondents either 'Strongly Agreed' or 'Agreed' that use of the e-portfolio environment to support the blended learning approach made an impact on their ability to engage in the course at a distance, but only 23.5% said it helped them organise their course work. Awareness of the wider benefits of blended learning appears still to be lacking and requires further research.

Despite attempts to spread workload more evenly, there were still some concerns (Table 4).

There was also a desire (64.9%), for individual written submissions to group tasks, posted in the e-portfolio environment, to be marked by the tutor (Table 5).

Technical problems within the e-portfolio environment also caused some dissatisfaction with the process. 68.3% of respondents either, 'Strongly Disagreed' or 'Disagreed', that they found working in PebblePad an enjoyable experience. The research team is keen to explore other avenues in this area, including alternative platforms/media (Table 6).

Table 5: Marks should be awarded for individual contributions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	26	22.6	22.8	22.8
	Agree	48	41.7	42.1	64.9
	Neutral	14	12.2	12.3	77.2
	Disagree	23	20.0	20.2	97.4
	Strongly Disagree	3	2.6	2.6	100.0
	Total	114	99.1	100.0	
Missing	999	1	.9		
Total		115	100.0		

Table 6: I found working with Pebblepad an enjoyable experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	8	7.0	7.0	7.0
	Neutral	27	23.5	23.7	30.7
	Disagree	45	39.1	39.5	70.2
	Strongly Disagree	34	29.6	29.8	100.0
	Total	114	99.1	100.0	
Missing	999	1	.9		
Total		115	100.0		

The team recognised that global trends in assessment were beginning to impact on higher education more forcibly than before. Challenges to traditional views on effective assessment practice have encouraged educators to adopt assessment methods promoting assessment for learning instead of assessment of learning
(Elton and Laurillard, 1979; Natriello, 1987; Sadler, 1987, 1988; Crooks, 1988).
Three succinct extracts from the literature highlight the main themes of this long debate:

1. '… the quickest way to change student learning is to change the assessment system …' (Elton and Laurillard, 1979:100).

One of the aims underpinning the project was to develop reflective, self-regulated learners who assume responsibility for their own learning. To help students develop these skills, they need to be given opportunities to set their own targets and work towards them. This process should include fostering skills in planning, implementing and evaluating learning. The role of motivation and assessment should also be explored.

The adoption of a blended learning approach provided opportunities to bridge traditional and e-learning approaches. For this to succeed it is essential that differences are highlighted and a range of appropriate resources developed. Students and staff must be made aware of the challenges involved and provided with strategies which allow them to experience success. This involves looking at the difference between synchronous and asynchronous learning, and also examining how differences in learning and teaching styles can be addressed. It requires an understanding that no matter what blend of traditional and e-learning approach is used, rigorous planning and constant monitoring to monitor effectiveness must be applied.

2. '…substantial modification to the learning environment through changes to regular classroom practice involves turning the learning culture around.' (Sadler, 1998:77)

This 'turning the learning culture around' has been slow to reach the higher education sector, but recent developments would seem to indicate that a change of direction is beginning to take hold. (Boud, 2000; Biggs, 2003; Gibbs and Simpson, 2004; Gibbs, 2006; Nicol and Macfarlane-Dick, 2006). To maximise the impact of these developments, higher education institutions must find ways of promoting formative assessment - to

improve the effectiveness of student learning and also to achieve efficiency gains in deployment of staff. Skills, which encourage social construction of knowledge and understanding, should be developed and course modules should provide opportunities for students and staff to develop knowledge, skills and understanding of the entire learning process and of metacognition.

Students on this module have generally felt empowered, but there are some for whom the process has been painful,

> *'I appreciate the necessity and advantages of working in groups, but this only works if all groups have the same commitment and level of input. Group work does not place the same incentive to study as individual work which is submitted and assessed individually.'* (Student, aged 39+).

3. '… the quality of the feedback is the crucial issue …' (Sadler, 1998:78).

Peer feedback played a crucial role, one supported by tutor mediation and by the e-portfolio system, but was only one tool. The vital factor underpinning the success of this particular blend of methods was the extent to which students and staff engaged in peer assessment processes. For this engagement to be maximised, learning outcomes for every aspect of the course needed to be made explicit for both staff and students. Students needed guidance in identifying the standards/ criteria that apply to their work and in making evaluations about how their work related to these standards (Boud, 2000). The experience of staff in making such judgments provides the essential scaffolding for the student learning process.

The benefits of the process are clear; in the final summative exam. the arithmetic mean score for the written section rose from 59% in the academic year 2005-2006 to 70% in the following one.

Peer based formative assessment has been seen to bring about learning, social and professional gains for all involved. The use of blended learning to support the development of reflective, self-regulated classroom practitioners, skilled in formative assessment strategies, requires further research and development. Let's do it!

Biographies

Magnus Ross is a lecturer in the Department of Educational and Professional Studies, of the University of Strathclyde and is leader of the module which was the subject of the project described above. His research interests include Higher Education, formative assessment, social justice and the student experience.

Mary Welsh is a lecturer in the Department of Educational and Professional Studies of the University of Strathclyde and is a tutor on the module described above. Her research interests include ICT (information and Communications Technology) and E-Learning, higher education, formative assessment and social justice.

References

Biggs, J. (2003) Teaching for quality learning at university (Second ed.), (London, SRHE and Open University Press).

Black, P., and Wiliam, P. (1998) Assessment and classroom learning, Assessment in Education, 5(1), 7-74.

Boud, D. (2000) Sustainable Assessment: rethinking assessment for the learning society, Studies in Continuing Education, 22(2), 151-167.

Crooks, T. J. (1988) The Impact of Classroom Evaluation Practices on Students, Review of Educational Research, 58(4), 438-481.

Gibbs, G., and Simpson, C. (2004) Conditions under which assessment supports students' learning, Learning and Teaching in Higher Education (1), 3-31.

Gibbs, G. (2006) How assessment frames student learning in: C. Bryan and K. Clegg (Eds) Innovative Assessment in Higher Education), (London, Routledge), 23-36.

Elton, L and Laurillard, D. (1979) (1979) Trends in research on student learning, Studies in Higher Education, 4(1), 87-102.

McNiff, J., and Whitehead, J. (2006) All You Need to Know About Action Research (London, Sage).

Natriello, G. (1987) The Impact of Evaluation Processes on Students, Educational Psychologist, 22(2), 155-175.

Nicol, D., and Milligan, C. (2006) Rethinking technology-supported assessment practices in relation to the seven principles of good feedback practice, in: C. Bryan and K. Clegg (Eds) Innovative Assessment in Higher Education (pp. 64-77), (London, Routledge), 53-75.

Nicol, D. J., and Macfarlane Dick, D. (2006) Formative assessment and self-regulated learning: a model and seven principles of good feedback practice, Studies in Higher Education, 31(2), 199-218.

Robson, C. (2002) Real World Research (Second ed.) (Oxford, Blackwell).

Sadler, D. R. (1987) Specifying and Promulgating Achievement Standards, Oxford Review of Education, 13(2), 191-209.

Sadler, D. R. (1998) Formative Assessment: revisiting the territory, Assessment in Education, 5(1), 77-84.

Somekh, B. (2006) Action Research A Methodology for Change and Development. (Maidenhead, Open University Press).

5. Professional reflection on ITE placements

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Summary
This paper draws directly on work that the University of Derby and others have been carrying out in respect of the development of assessment criteria and the approaches to reflective practice on placements under the 02/02 Qualified Teacher Status (QTS) Standards (TTA, 2002) and the revised QTS Standards (TDA, 2007). It investigates professional reflection on teacher placements and how the so called 'academic' and 'professional' dimensions can be reconciled

Keywords
Qualified Teacher Status / assessment / teacher reflection / communities of practice

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Introduction
It is generally agreed between those involved in pre-service Initial Teacher Education (ITE), that the ability to reflect on one's practice is an important pre-requisite for a successful career in teaching. So the logic goes, students should be able to reflect on progress in their own teaching and that of their learners. This provides teachers with the ability to respond and adapt to new challenges in the classroom. Indeed this is written into the latest standards for Qualified Teacher Status (TDA, 2007). The relevant Q[1] standards are listed below:

Those recommended for the award of QTS should:

> *Q9 Act upon advice and feedback and be open to coaching and mentoring.*
>
> *Q7 (a) Reflect on and improve their practice, and take responsibility for identifying and meeting their developing professional needs.*
>
> *Q29 Evaluate the impact of their teaching on the progress of all learners, and modify their planning and classroom practice where necessary.*
>
> *Q8 Have a creative and constructively critical approach towards innovation; being prepared to adapt their practice where benefits and improvements are identified.*
>
> *Q7 (b) Identify priorities for their early professional development in the context of induction.*
>
> TDA (2007)

These 'standards' supersede S1.7 of the earlier 02/02 standards which required students to demonstrate that:

> *They are able to improve their own teaching, by evaluating it, learning from the effective practice of others and from evidence. They are motivated and able to take increasing responsibility for their own professional development.*
>
> TTA (2002)

Whilst many professionals involved in teacher education might question the validity and reliability of assessment against such a constrained list, most would agree that reflection is a rather vague concept. It is very difficult to define and certainly difficult to achieve in practice. As one tutor said, 'I find

[1] Q refers to what those recommended for the award of QTS should do.

it really difficult to get a lot of students to go beyond description of their practice'.

This paper will provide an insight into the challenges of developing reflection in trainee teachers. This includes sections on:

- Developing a conception of professional reflective practice for Initial Teacher Education;
- Professional and academic tensions and challenges on teaching placement;
- Assessment of teacher reflection at the University of Derby.

Dewey (1933) may have been one of the first to develop notions of reflection in education, but there is considerable theoretical work in respect of this area both in education and in other professional settings.

Developing a conception of professional reflective practice for Initial Teacher Education

The terms 'reflective practice' and 'reflective practitioner' are often used in connection with teacher education. What are the origins of these terms? How are the terms used differently? Are there any alternatives to the conception of reflective practice?

The reflective field is replete with the seminal works of Dewey (1933), Schön (1983, 1987), van Manen (1977), alongside more contemporary writers such as Zeichner and Liston (1987), Calderhead (1991), Valli (1993). Historically, there have been many suggestions proposed about how reflective practice occurs within teaching and in particular how it might be taught in teacher education programmes. There are three key ways which reflection might be theorised:

1. **As a way of thinking** (Zeichner and Liston, 1987), ranging from the teacher as technician, who achieves tasks set by others, to the teacher working as a moral craftsperson, grounded in the moral and ethical implications of educational activities;
2. **Based on pedagogical knowledge** (after Schön, 1983) which legitimises teaching as a knowledge-based intellectual activity where teachers construct and deconstruct pedagogical knowledge. The ever-popular term 'reflective practitioner' has become synonymous with 'good practice';
3. **Concerned with values,** and the degree to which teacher educators take cognisance of teachers' emerging philosophy of education, their attitudes and beliefs to teaching as a social process (rather than an individually introspective approach), and a recognition of how such skills are learnt over a period of time.

All students enter teacher education programmes with a personal belief system, which will inevitably inform students' pedagogical decisions. Any changes to their beliefs will arguably be through course readings, texts and lecture information, coupled with practical experiences in school (Bean and Stevens, 2002). There will be variance from institution to institution historically and contextually and the quest for students to look at their past, present and future in order for them to understand the type of teacher they are hoping to become. Experiencing this 'dynamic tension' (Pedro, 2005:60) is predicated on students being able to critically reflect within these opposing time frames.

One of the main issues in teacher education is the division of labour between University and school settings. There is a realisation that teaching trainees the art of reflective practice should be agreed and shared between tutors and school mentors. Ottesen (2007) argues for more theoretical understanding by both school mentors and university tutors. The implication is that students may learn how to cope in the 'ready-made world' of teaching, not only as performers in classrooms, but as learners having experienced these events. Alger (2006) supports this view, and argues that

University tutors need to be more proactive in modelling what reflection looks like, first from the evaluative approach used to deconstruct a lesson, and second from the critical reflection viewpoint, where students place the situation in a context of human behaviour and interaction, considering such issues as race, class, gender and similar.

Furlong et al. (2000:165) suggested that the so called 'more practical' focus of training programmes has been a by product of the diminishing of the influence and control of Higher Education Institutions and the greater part played by schools. For a wider political influence on public services, one need look no further than the movement known as 'what works' (Davies et al., 2000). Even where there is an acceptance of the need for practice underpinned by theory and evidenced-based research, it is widely agreed that this is a difficult situation to foster successfully (Westbury et al., 2005: 480)

Westbury et al. (2005) discuss the problems in Finnish education. They report significant concerns about a former model of training which they argued did not produce teachers capable of dealing with the complex issues which constitute school and classroom. They suggested a model of teacher preparation as characterised by the following diagram:

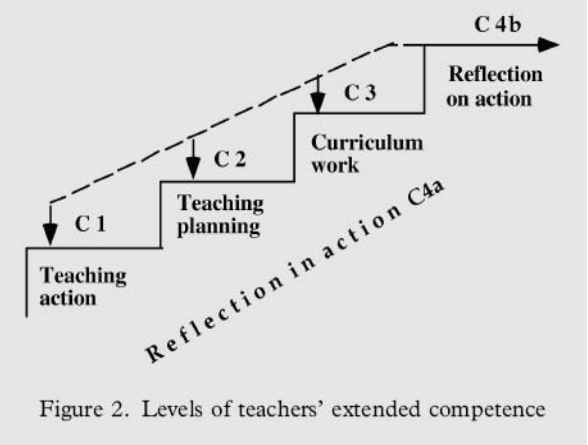

Figure 2. Levels of teachers' extended competence

Westbury et al. (2005:481)

The aim of such a pre-service teacher education—as this is understood in Finland—is to prepare teachers who are aware of the effects of their actions and factors around their work, thus equipping them to control their own activity and, perhaps, these factors. The goal is to develop teachers who will base their educational decisions on rational arguments in addition to experiential arguments; or, to put this in another way, to develop teachers who have the capacity to use research and research-derived competencies in their on-going teaching and decision-making. Westbury, et al. (2005:475–485)

Jones and Straker (2006) support the desire for a wider appreciation of the skills, understanding and attitudes of a teacher beyond:

> *the boundaries of the standards framework in order to develop a wider perspective. By adopting a more holistic approach than is currently the case, it needs to take into consideration the social, cultural and political contexts within which education is embedded.* Jones and Straker (2006:179)

It is argued that a model of pre-service teacher preparation in school conceived as apprenticeship can lead to a limited understanding of the nuances surrounding the classroom (Wilkin, 1992). An alternative to the apprenticeship model of teacher training focuses on the importance of the social dimensions to learning. Altricter (2005) for instance, suggests that teachers exist in professional communities of practice. Formal and informal opportunities for dialogue and reflection help the student teacher to develop an awareness of their own identity as a professional. It is argued that the wider conception of professional self in a professional learning community more effectively predicts those qualities of a teacher which will enable them to cope with issues of the nuanced classroom.

There are significant tensions in developing so called reflection in students on placement. Amongst these, there is the notion of a dichotomy between academic and professional development of the trainee teacher/ student. Is this a valid depiction?

Professional and academic tensions and challenges for students on teaching placement

University and school-based trainers frequently highlight challenges in managing the transition from training to professional practice. This is not helped by an interpretation of what works. This interpretation, which has dominated education for much of the last decade (Jones and Straker, 2006) is narrow and lacks recognition of the nuanced reality of the classroom. A narrow focus on practice assumed at a superficial level assumed to 'work' ignores the wider more complex and problematic aspects of the 'practice' of teaching. Issues of social justice, class and race are complex areas, which cannot be resolved with 'off the shelf' routines which neglect the complexities of these issues.

Burnett (2006) offers an alternative conceptual framework which explains the need for a more social constructivist conception of pre-service preparation. Borrowing from Bruner, she describes two modes of thinking. Paradigmatic thinking sees the training of teachers as a development of technical skills. The narrative view sees student teachers' previous experiences and current experiences of working with others in a community of practice, as more predictive of a wider understanding of the complexities of the school and classroom. A narrative view of teacher development would see learning as:

- Formation of identity in communities of practice;
- Occurring in socially structured situations;
- Engaging in the social world;
- Occurring in and through communities of practice.

Burnett, C. (2006:315)

The social dimensions of teacher development were reflected in a small-scale research project undertaken by the authors. This focused on the students' own experience of assessment in the University of Derby BEd and PGCE Primary courses. Reflection on practice was an important dimension in the project. The predominant concern of all the students interviewed was the desire to become a good teacher; many often focused on the 'practical' dimension to teaching. However, there was a marked change in the responses from the undergraduate as opposed to the Postgraduate students (but still a professional PGCE with no Masters credits at the time of writing).

Assessment lives of student teachers research

In a piece of small scale qualitative research the authors set out to answer the following questions in respect of assessment and Initial Teacher Education:

- How does assessment impact on the lives of student teachers?
- What coping strategies do effective learners use to meet the demands of assessment?
- How do the assessment demands of teacher education compare with other programmes?

Whilst some of the students' views were predictable, others were not. So for example, what the students viewed as learning was itself open to some debate. Students recognised that assessment was used both formatively and summatively on the courses. However, they had a tendency to see any activity as an assessment even when the tutor's focus was on learning and reflection on practice. This could be conceived of as

'assessment for, of, and as learning'. However, the students stressed the importance of constructive feedback and targets for future learning. Formative assessment, both in University modules and on school placement, was valued by students as contributing to their understanding of teaching and learning.

> *'Written and oral feedback is important to me, but it's important to know that the tutors see me as a good student. I know from their comments.'*
> PGCE student

It will not be a surprise that both teacher education and nurse education programmes were seen as more intensive both in work-load and the amount of assessment, which frequently drove the students in their learning.

An important difference in the BEd students compared to the PGCE primary students centred on the type of motivation underpinning their work. Following Dweck (2002) we could conceive of the small sample of BEd students as having been driven by a mastery approach to their development as teachers. There were certainly elements of instrumentalism in the learning of all students, it seems that more of the BEd students were driven by a conception of the teacher that they wanted to be:

> *'Whenever things get tough, I just think of the teacher I want to be.'*
> BEd 3 student

Whereas a PGCE primary student had a very strategic approach to assessment:

> *'My advice for assignments is "just do what you need to do to get through" '.*
> PGCE primary student

There are clear implications for teacher education:

- **Less is more:** too heavy a workload actually diminishes the chance of developing reflection. Students need space to learn as developing professionals.
- **Use student testimony for motivation and coping strategies.** Video recordings of the students' views on assessment and placements have formed strong working materials for the education strand of the taught programme as well as for mentor training.
- **Scaffold coping/ learning strategies not assessment outcomes.** Otherwise students have a tendency to focus on learning activities to satisfy assessment advice rather than the learning which underpins it.

These points are being now built into the University of Derby's framework for assessing students both formatively and summatively in the context of the new Standards for Qualified teachers (TDA, 2007). The following section explains where we are as the University of Derby.

Assessment of teacher reflection at the University of Derby

The content of any given learning outcome should play a major role in determining the optimal assessment strategy. In this case, at the University of Derby, the learning outcomes for final school experiences read:

> Trainees should be able to:
> - Demonstrate the standards for the award of QTS
> - Critically analyse and articulate their own practice and systems of professional records establishing clear links with theory.
>
> University of Derby, BEd/ PGCE Validated Document, (2002)

The first learning outcome is assessed by school-based colleagues in relation to student performance against QTS standards. The second learning outcome is assessed through a viva voce.

Clearly, in order to satisfy the demands of this learning outcome, students are challenged to demonstrate many sophisticated qualities. If it is to be achieved rigorously and convincingly, the student must engage in deep levels of self-reflection. Students are required to demonstrate an ability to evaluate and criticise not just the outcomes of their placement and professional practice but also, crucially, the processes they have employed to advance their pedagogical, professional and intellectual skills.

The principal instrument by which students reflect on their progress towards QTS standards is the Professional Development Portfolio (PDP), informed by the East Midlands Assessment Consortium (EMAC) Primary Profile. The EMAC project, established in 2003 with funding through the Training and Development Agency (TDA), set out to 'develop better understandings about ways of assessing students' and 'to develop materials that could be used to enhance assessment against the Standards' (EMAC, 2003).

The Standards for QTS are arranged in distinct areas of professional attributes, knowledge and understanding, and skills, but teaching itself is a complex undertaking and in practice bridges these areas. For example, managing pupil behaviour is inherent in all these areas.

The EMAC profile draws like standards together into 'user-friendly sets . . . giving levels of development that should celebrate and encourage progress' (EMAC, 2003). These levels of development are informed by Ofsted guidance and correlate to very good, good, satisfactory and unsatisfactory indicators of practice for students approaching QTS (Ofsted, 2005).

The PDP provides a means by which students can reflect on their performance within the standard groups provided by the EMAC profile. They are required to briefly describe their practice, reflect on this in terms of the standards and set targets for the future. Over a school placement the PDP becomes a record of the journey made by the student towards practice that embodies the standards. In fact the record produced is usually a series of sometimes inter-twined journeys within the different groupings.

Comments made in the PDP are those of the student, but are informed by mentors and other professionals from both the school and the university. The PDP forms the focus of weekly discussions between student and mentor. This helps to align interpretations of the standards and also enables the mentor to support the development needs identified by the student, and suggest other points for development where appropriate. Effective use of the PDP drives school experiences and provides a focal point for reflecting on the progress being made. When asked who assesses school experience one student commented:

> *'The lecturers, the mentor and SLT [school-based colleagues] on placement and the ULT [university-based tutor]……..there's also the assessment of myself, which I do through the PDP.'*
> BEd student

The comments cited in the PDP are supported by a range of evidence within the placement files which could include documentary evidence (such as lesson plans, draft reports, lesson resources), evidence of activities (such as school visits), observation records, assessment records, minutes from meetings attended, audits and assignments, pupil work, photographs and witness testimonies and so on (EMAC, 2003).

Whilst on placement, through regular use of the PDP and evaluation of lessons, reflection takes a day-to-day, formative guise with the emphasis on professional and intellectual self-improvement. A student commented:

> *'The PDP is a good way to see how you are developing as a professional . . . . At the mid-point review we used the EMAC to create my targets and (think about) how I could meet them.'*
> BEd student

The viva voce is summative in nature and is regarded as a formal examination. It provides students with genuine opportunities to 'articulate their own practice' and challenges them to construct a 'meta-view' of the effectiveness of the processes of reflection in which they have engaged as well as the outcomes of their efforts.

In preparation for the examination, students are encouraged to focus on this reflective aspect. Implicitly through the learning outcome, the viva voce expects students to address three crucial questions:

- How do you know what you have achieved?
- How have you used reflective practice to track and progress your intellectual and professional development?
- How have you captured evidence of the intellectual and professional journey on which you embarked?

Students are provided with a common range of questions in advance of the viva voce which focus on their progress towards the QTS Standards as starting points for their responses. It is made clear that supplementary questions might be asked. In preparing for the viva both the EMAC profile and their PDP provide valuable reference points for the learning journeys they need to articulate.

Tutors choose any three questions and additionally pose a final question which challenges students to identify how research and theoretical perspectives have impacted on their professional and intellectual progress. Throughout, students are expected to produce an analytical justification for their assertions and responses supported by an evidence base drawn from teaching practice files. Students should move beyond simple description and seek to demonstrate the objective 'meta-view' discussed earlier as they evaluate their practice.

At the heart of a viva voce in this context is the scope for the student 'to articulate their own practice'. It provides a genuine opportunity for the student to engage in an intellectually challenging dialogue vis-à-vis the learning outcome, describing their way of thinking about their pedagogical knowledge (Zeichner and Liston, 1987; Schön, 1983). Alternative modes of assessment would clearly be possible. However, the essentially 'exploratory' nature of this form of examination would seem to make it 'fit for purpose' for effective assessment of the learning outcome.

Conclusion

There are competing views of teacher reflection and how best to foster it. The University of Derby with other providers feels that the EMAC framework has been a very successful innovation in the assessment of students against the QTS standards. However, there are new challenges in the form of level 7 (Masters) credits for modules on the PGCE course. How should we assess these modules? How can we best prepare reflective and articulate teachers, capable of meeting new challenges in the future? Writing this paper has gone a long way to support that thinking.

The Primary programme team at the University of Derby is strongly committed to a view of education which acknowledges the

problematic, nuanced and complex reality of the classroom. Both in school and at the University we have recognised how we needed to change our own programmes and practices in order to best foster a deeper understanding of the classroom reality. Of course, this is a challenge, which we accept with a great sense of responsibility

Biographies

Dr. Des Hewitt has taught from Year 5 to doctoral students. As Assistant Head of Teacher Education he has principal responsibility for managing the Initial Teacher Education of Primary teachers. His research and teaching encompass Primary English, Primary Modern Foreign Languages, English as an Additional Language, E-learning and the development of self-regulated learning.

Dr Val Poultney has taught and led science in secondary schools for many years. As Assistant Head of Teacher Education she leads the Masters and PPD courses at the University in addition to the wider postgraduate work of the department. Her research interests particularly lie in notions of subject leadership and teacher reflection.

Dave Benson was Head of Mathematics in a secondary school before moving to Stoke as a numeracy consultant. Now at the University of Derby, he is maths coordinator and PGCE Programme Leader. For several years now he has been researching the role of visualisation in mathematical problem solving.

Dave Cunningham worked for many years in Primary schools before joining Derbyshire as a literacy consultant. Now at the University of Derby he leads the Education studies team in addition to teaching on ICT and English.

References

Altricter, H. (2005) The role of professional communities in action research, Educational Action Research, Volume 13, Number 1, 2005.

Alger, C. (2006) 'What went well, what didn't go so well': growth of reflection pre-service teachers, Reflective Practice Vol. 7, No. 3: 287-301.

Bean, T.W. and Stevens, L.P. (2002) Scaffolding Reflection for Pre-service and in service Teachers, Reflective Practice, Vol. 3, No.2: 205-218.

Burnett, C. (2006) Constructions of professional knowledge among student and practising primary teachers: paradigmatic and narrative orientations, Research Papers in Education Vol. 21, No. 3, September 2006, pp. 315–333.

Calderhead, J. (1991) The nature and growth of knowledge in student teaching, Teaching and Teacher Education, Vol. 7, No. 5/6: 531-535.

Davies, H., Nutley, S. and Smith, P. (2000) What works? Evidence-based practice in public services (Bristol, Policy Press).

Dewey, O. (1933) How We Think (Chicago, Regnery).

EMAC - East Midlands Assessment Consortium (2003) http://www.emac.org.uk, accessed 10/05/2007.

Furlong, J., Wilkin, M., Miles, S. and Maynard, T. (2000) The subject mentors handbook (London, Kogan Page).

Jones, M and Straker, K. (2006) What informs mentors' practice when working with trainees and Newly Qualified Teachers? An investigation into mentors' professional knowledge base, Journal of Education for Teaching Vol. 32, No. 2, May 2006, pp. 165–184.

Ofsted, (2005) Handbook for the Inspection of Initial Teacher Training (London, Ofsted).

Ottesen, E. (2007): Reflection in teacher education. Reflective Practice, Vol. 8, No. 1: 31-46.

Pedro, J.Y. (2005): Reflection in teacher education: exploring pre-service teachers' meaning of reflective practice, Reflective Practice, Vol. 6, No.1: 49 66.

Schön, D. (1983): The Reflective Practitioner (New York, Basic Books).

TTA - Teacher Training Agency (2002), Qualifying to teach. Standards for Qualified Teacher Status.

TDA – Training and Development Agency for schools (2007)
http://www.tda.gov.uk/upload/resources/pdf/s/standards_framework.pdf
Accessed 17.10.07

University of Derby, (2002) BEd / PGCE Validation Document. Unpublished course documentation.

Valli, L. (1993) Reconsidering technical and reflective concepts in teacher education, Action in Teacher Education, Vol. 15, No.2: 35-44.

van Manen, M. (1977) Linking ways of knowing with ways of being practical, Curriculum Inquiry, Vol. 6, 205-228.

Westbury, I, Hanse, S, Kansanenc, P. and Bjorkvist O, (2005) Teacher education for Research-based Practice in expanded roles: Finland's experience, Scandinavian Journal of Educational Research Vol. 49, No. 5, November 2005, pp. 475–485.

Wilkin, M. (1992) Mentoring in schools (London, Kogan Page).

Zeichner, R. and Liston, P. (1987) Teaching student teachers to reflect, Harvard Educational Review, 57, 1: 23-48.

6. Learning groups in practice: students' experience of learning groups in supporting academic and professional learning with a primary Masters level PGCE.

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Summary
A key element of the newly introduced Masters level Primary and Early Years PGCEs (Postgraduate Certificate in Education) at Sheffield Hallam University has been the use of learning groups. Learning groups are small groups of students who meet regularly to engage in academic and professional tasks. Designed to promote collaborative learning and peer support, some students have reported that learning groups have been highly successful in providing emotional, academic and professional support during an intensive and demanding course. Others have reported frustration caused by the varied level of commitment exhibited by members of the group. This paper reports on students' experience of learning groups during the first year of our Masters level PGCE. Drawing from data generated through interviews with eight students, it explores the diverse ways in which students engaged with such groups and highlights considerations for using such an approach.

Keywords
Collaborative learning / learning groups / Masters level / peer tutoring / PGCE

Context
At Sheffield Hallam University, the introduction of the Primary and Early Years PGCEs at Masters level in 2006/7 prompted a review of our approach to supporting students' academic and professional learning. This provided an opportunity to strengthen links between research and practice and consider new ways of supporting students in their development as autonomous, reflective practitioners. A key initiative was the introduction of 'learning groups', creating a series of learning communities embedded within the broader learning community of the PGCE course.

Within the PGCE at Sheffield Hallam, a 'learning group' consists of up to five students who meet regularly to discuss a series of structured tasks. The tasks encourage students to reflect critically upon research and practice and then provide formative feedback upon each others' plans for professional and academic work. In addition to structured tasks, PGCE students are encouraged to identify their own foci for discussion. It was hoped that the learning groups would provide a forum in which the diverse strengths and extensive expertise of PGCE students could be shared.

The learning groups were established on the second day of the course and required students to engage immediately in a series of induction week tasks. As well as supporting their preparation for the first Masters level assignment this approach also ensured that students had a reason to work together on a meaningful task very early on in the PGCE. The learning groups were established as sub-sets of tutor groups to facilitate academic input and encouragement. Finally a four hour slot was also timetabled each week for all students to ensure that

competing course commitments would not undermine learning group activities.

As the first year of implementation unfolded, informal feedback suggested that these learning groups were working in different ways. Some had merged with other groups, some had re-formed and others continued to operate with the same small ‘family’ of students established at the beginning of the year. Just as the formation of groups had evolved, it was anticipated that the operation of these groups would vary considerably in relation to group dynamics, levels of enthusiasm and the scope of student discussion.

This paper reports on a study designed to explore this diversity and gain insights into the experience of students within these different learning groups. It focuses on the student experience, by investigating student-teachers’ perceptions of their learning groups and the role these played within their professional and academic development.

Theoretical background – peer to peer support/collaborative learning

When managed and organised carefully, collaborative learning can promote a 'structuring of positive interdependence' in pursuit of a shared goal (Slavin, 1990). The learning groups approach held out the prospect of maximising the potentially empowering and enabling effects of the learning experience. Organising ITE (Initial Teacher Education) provision to allow space for reflection and guidance could enable the participants to review and possibly to revise their own beliefs about teaching, learning and their own roles as teachers, as well as to apply any newly gained insight when planning their own teaching.

The learning groups initiative drew from research relating to peer learning, collaborative learning and peer tutoring, and seemed to offer an approach to teacher training that had potential additional gains for students in terms of social and communication skills. It also provided a mechanism to enhance students' affective functioning, including improved self-esteem and positive attitudes to each other and to teaching (Rhorbeck et al., 2003; Topping, 2005). Cognitively, peer learning involves challenge and scaffolding. Through the process the learner is helped to extend her / his knowledge and procedural skills as well as conditional and selective application of knowledge and skills by adding to and extending current capabilities; a process referred to by Topping and Ehly (2001) as accretion.

Although the literature clearly articulated the many potential benefits and advantages associated with peer learning or learning groups it also warned of potential risks. One danger was that the learning groups approach might draw attention to, make more visible, or expose weaker students to peer scrutiny (Wilson and Reiser, 1982). It also risked favouring students with 'interpersonally orientated learning styles’ (Andrews, 1981). A third risk was that it might fly directly in the face of some students' previous educational experiences and associated assumptions about the relationships between learners and teachers. The fourth concern identified during the planning was that the introduction of learning groups would demand much more engagement from students who were already pressurised. Ironically then, if faced with having to make strategic and instrumental decisions about where to apply their energies some students might actually prefer a more traditionally didactic approach.

Methods

As the purpose of the study was not to articulate any sense of a typical experience, but rather to capture the diversity of individuals’ experiences, central data were generated through semi-structured individual interviews. Eight students who had talked informally to tutors about very different kinds

of experience were invited to participate in interviews. Some of these students had been very positive about the experience whilst others had expressed concerns. Importantly for the significance of the findings of this study, all the students interviewed had participated in groups and attempted to make these work. As a result semi - structured interviews were conducted by interviewers who were outside the central course team, although students were aware that their interview data would be shared with the three tutors within the research group. Whilst knowledge that their views would be reported back to tutors may have caused the students to qualify the kinds of experiences they shared, all students spoke extensively about experiences which were relevant to our focus.

Findings

Systematic inductive analysis was used throughout the process to both characterise individual student-teachers' experiences of learning groups and identify themes generated by the data. This involved repeated readings of the interview transcripts to identify and develop emerging themes.

Analysis of the data suggested that the learning groups had provided a positive context for learning for the majority of students on the PGCE. Most suggested that learning groups had been particularly valuable at the beginning of the course, when the need for social, emotional and intellectual support may be at its strongest. It was felt that this had not only provided support for engaging with work at Masters level but had established a climate of collaboration. Genuine friendships had been cultivated through the groups which formed contexts for both social and intellectual support.

Whilst participation in learning group activity may have decreased during the year, it seemed that mutual support continued. What was particularly striking during 2006/7 was the supportive ethos which seemed to underpin the whole course. It is possible that, as the course design was seen to value collaborative working and create contexts for this, that the students took this model and developed their own, informal communities of learning. Clearly this is speculative, but anecdotal evidence suggests that the new PGCE has an even stronger culture of peer support than previous manifestations and for us this is an area for further research.

Importantly, however, our analysis suggested that the groups performed different functions for different groups of students, or at least different functions at different times within the course. Sometimes the groups seemed most significant for the social support they provided, whilst at other times, they provided a context for sharing perspectives and deepening learning. For some, learning groups were the means by which they managed to tackle a demanding course, supporting one another, dividing up tasks and sharing knowledge gained. Some students' learning group experience was less successful, undermined by other work demands or by a lack of commitment from members of the group. The following brief pen-portraits provide an insight into the very different experiences of the individuals.

> Julia was a highly committed and enthusiastic student, keen to engage in all parts of the course. She was supportive to her peers and valued the opportunity to discuss theory and practice with them. However, during the year she was frustrated by other members of her learning group who seemed to demonstrate less commitment than she did. One member in particular rarely turned up and, in the absence of tutor monitoring of learning groups, she found herself in the role of encouraging, or even policing, others' participation. This was a role with which she felt uncomfortable, wanting to position herself as a learner rather than a director of others' learning.

She was also frustrated that others may benefit from the work she was doing whilst she felt she gained little support in return.

Laura's experience was similar to that of Julia. She too felt that there would have been more commitment from others if tutors had been involved in the meetings. However she also recognised that the tutor may have affected the openness of the discussions and valued the opportunity to speak frankly. Whenever possible, Laura 'tagged on' to another group which maintained a more supportive structure throughout the course.

Mark was extremely positive about the role his learning group had played during the course. This operated as a supportive family unit within which he shared ideas, developed his thinking and managed his own learning. He welcomed the opportunity to work with people who he might not otherwise have worked with. It seemed that this in itself had been useful in broadening his ideas about who he could work with effectively and had possibly enabled him to explore ideas (or even enact identity) in ways he would not have done previously. The learning group seemed to provide a haven from the demands of the course. This was where he and his peers ensured that they were clear about expectations and they also began to address their own agenda, for example supporting one another with job applications.

Karla who had a graphic arts degree was placed in a learning group with some who had childhood studies degrees. During the initial meetings the latter group discussed confidently issues relating to the assignment leaving Karla feeling daunted and intimidated. She needed more time to read and consider and understand the issues before she could contribute to any discussion, rather than listen to a conversation which was 'taken over' by others. Although she thought the learning group would support her, it initially made her feel that she did not know as much as she should.

Jane commented positively on the framework whereby 'you have to work with people who maybe you wouldn't work with out of choice'. She related this to professional expectations and that working in smaller groups can be much more comfortable than working in seminar groups, thus enabling people to be more open and honest. She particularly liked the structure of the groups stating, ' if it was too regimented or prescribed, I don't think it would work but at the moment it allows for peer support and it's flexible - it's good it's flexible in that it leads to responsibility to the student position'. Support included sharing information on vacancies in schools, proof reading each others' application forms and sharing lifts to look round schools.

Conclusion

This study has led to a number of implications for the Sheffield Hallam team. Student feedback provided us with some clear pointers for developments regarding the timing of learning group meetings and nature and communication of tasks. Part of the rationale for the introduction of learning groups was to provide a forum for students to share experience and direct their own learning in ways devised by the group. Whilst some groups reported using learning groups for self-directed learning, instances of this seemed to be rare. Providing more support for students in reflecting on experience and identifying areas to address may help to encourage this kind of activity.

Perhaps more significantly for this study, however, the students' narratives have highlighted tensions related to the role of collaborative work. Some appeared to have

participated in what could be seen as true collaborative learning, challenging their own thinking through interactions with others. Others seemed to have failed to see the value of such tasks and either conducted learning groups pragmatically (dividing up tasks amongst the group to save time) or had failed to participate at all.

Other studies of students' engagement in self-directed collaborative work have identified similar findings. Lizzio and Keithia (2006) for example explored the different orientations brought by students to group work. Yan and Kember (2004) differentiate between collaboration to get the task done and collaboration to support learning. Ohl and Cates (2006) explore the notion that students' conceptions of group work may be influenced by prior experience and emphasise the importance of reflecting on the role of group work within an educational context. In attempting to address such different interpretations, they suggest that reflection on the aims of collaborative work is vital if students are to begin to use it to support their progress. In line with such recommendations, the team is keen to support extended reflection on the role and purpose of groupwork. However, the significance of these varied experiences seemed to go beyond the implications for the setting up of learning groups. They seemed to signal something about the students' varied relationships with the course itself and their identities as learners.

The interview data raised questions about how the students (and we) viewed their relationship to the course. The most successful learning groups seem to have built upon a sense of joint responsibility. In these cases, students had engaged with themes introduced by the course but mediated these through the learning group; the learning group was the site where students considered the implications of the ideas and practices they had encountered. For some students, such as Mark, the idea that they should take responsibility for their own and others' learning seemed to sit comfortably. Indeed the relationship between the social and cognitive development of the group may have been symbiotic. Perhaps the mutual responsibility (and enactment of this) affirmed the relationships between group members which, in turn, made it more likely that the mutual support would continue.

Others had a more difficult task. They felt that colleagues did not accept the mutual responsibility necessary for learning groups to function effectively and had to choose between opting out or being proactive in encouraging others to participate. Within this kind of situation, some students found themselves forced into roles which they found incompatible with their notions of learning. Julia, for example, felt she was forced to position herself as an authority figure in her learning group in order to try to get the group to function. She responded to the dysfunctional group situation by adopting an identity with which she was uncomfortable and which she felt clashed with how she felt she should be positioned as a learner.

Discussions around these experiences revealed a particular tension between the students' desire for autonomy and control. The freedom with which learning groups had been implemented had provided space for students to make them work in different ways. Where they had been less effective, however, some students were frustrated by what they saw as a lost opportunity. They suggested that more explicit monitoring by tutors would have ensured that more students engaged actively with the activities. At the same time, there was a recognition that, at postgraduate level, they should be able to take responsibility. There was perhaps a sense that the notions of learner responsibility could be more effectively articulated by staff and students.

Biographies

Cathy Burnett is a senior lecturer at Sheffield Hallam University, where she currently leads the full time PGCE in Primary Education. Her current research focuses on student teacher's developing professional identities, with a particular interest in the relationship between prior and informal learning and their professional development. Her previous work has explored children's in and out-of-school digital literacy practices and student-teachers' use of online communication within Initial Teacher Education.

Dr Mark O'Hara is a principal lecturer in Early Years education at Sheffield Hallam University and is currently the Programme Leader for Applied Studies in Education, Childhood and Counselling. He is the author of a number of books including 'Teaching 3-8: Meeting the Standards for Initial Teacher Training and Induction', 'Teaching History 3-11' and 'ICT in the Early Years'. His research interests lie in the area of young children's knowledge and understanding of the world. He has recently led TDA (the Training and Development Agency for Schools) and BECTA[1] sponsored projects at Sheffield Hallam University on peer tutoring in ICT for Early Years students and setting up an on-line community of practice for Early Years students and trainers interested in making appropriate use of ICT in foundation stage settings.

Tricia Young is a principal lecturer at Sheffield Hallam University and is currently Head of Area for Primary and Early Years Education. The focus of her teaching is in science education in which she has written a range of published curriculum development materials. Her research interests lie in attitudes towards science, creative approaches to teaching and learning and using learning groups to enhance learning.

References

Andrews, J. D. (1981) Teaching format and student style: their interactive effects on learning, Research in Higher Education, 14, (2), 161-178.

Lizzio, Z. and Keithia, W. (2006) Enhancing the effectiveness of self-managed learning groups: understanding students choices and concerns,
Studies in Higher Education, 31 (6), 689-703.

Ohl, T. and Cates, W. (2006) The nature of groups: implications for learning design, Journal of Interactive Learning Research, 17 (1), 71-89.

Rohrbeck, C. A., Ginsburg-Block, M. D., Fantuzzo, J. W., and Miller, T. R. (2003) Peer-assisted learning interventions with elementary school students: a meta-analytic review, Journal of Educational Psychology, 95, 240–257.

Slavin, R. E. (1990) Co-operative learning: theory, research and practice (Englewood Cliffs, Prentice Hall).

Topping K. J. (2005) Trends in peer learning, Educational Psychology, 25, (6), 631-645.

Topping, K. J., and Ehly, S. W. (2001) Peer assisted learning: a framework for consultation, Journal of Educational and Psychological Consultation, 12, 113–132.

Wilson, J and Reiser, C (1982), An active Introduction to sociology explanation and evaluation, Teaching Sociology, 9, (3), 273-290.

Yan, L. and Kember, D. (2004) 'Engager and avoider behaviour in types of activities performed by out-of-class learning groups', Higher Education: The International Journal of Higher Education and Educational Planning, 48 (4), 419-438.

[1] Becta leads the national drive to improve learning through technology. We do this by working with industry to ensure we have the right technology for education in place. We also support the education sector to make the best use of technology so that every learner in the UK is able to benefit from its advantages and achieves the best they can. http://www.becta.org.uk/ Accessed 8.10.07

7. Developing a tolerance of ambiguity: the contrasting experiences of training teachers in college and school

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Summary
This paper relates to a small-scale study carried out with Secondary PGCE students during the academic year 2006 – 2007. The study explored the student perception of the difference between theory and practice in teaching as they experienced it during their school placements. Examples of student posts to an on-line discussion board are included. The authors are developing this work further and seeking to produce a model and framework for reflection in teacher education based on on-line interactions.

Keywords
Theory / practice / on-line discussion / reflection / school-based experience

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Main text
Lecturers and tutors involved in Initial Teacher Education (ITE) courses of whatever phase of education or level of study will be familiar with the notion that some students appear to approach their ITE course in what could be described as a 'survivalist' mode. The students want to know what they need to survive in the classroom and do not appear to be interested in anything else. Tickle (1994 and 2000) has written extensively about this and Hobson terms students with this orientation to ITE as the 'proceduralist apprentice' (Hobson 2003:252).

For some students there is no doubt a reluctance to engage with educational theory that may seem to have only an ephemeral relevance to the 'survival pack' of techniques and methods they will use in their early experiences in the classroom. Yet, many Postgraduate ITE courses are now refocusing the academic nature of their provision towards Masters level where it is expected that students are able to critically reflect and synthesise concepts and ideas about teaching and learning at a higher level than has been expected hitherto.

The Secondary PGCE course at St Martin's College (now University of Cumbria) is one such course and this paper describes some work that has been done with a cohort of ICT students to try and rehearse some models of practice that will be exploited in the future as the programme becomes an M Level course.

Throughout the Secondary ICT PGCE course students are encouraged to consider their practice in school in the light of theoretical perspectives they are introduced to in college. The aim is to empower the students to question accepted practices in school in order to develop their own teaching away from what Eraut describes as being '… prisoners of their early school experience' (Eraut 1994:71).

Eraut goes on to quote Calderhead (1988) and this extract is especially relevant to this discussion:

> *Recent research on student teachers tends to suggest that their teaching relies heavily on the images of practice that are acquired from past and current experiences in schools. These images can be taken and implemented uncritically.*

> *The evaluation of practice might remain at a superficial level and knowledge bases which could potentially inform practice be little utilised. Furthermore, the school, and sometimes college, ethos might support a conception of teaching which does not encourage and may even impede an analytical response to one's own teaching, leading in some cases to opinionated or self-defensive approaches to professional learning. As a result, student teachers' learning could quite quickly reach a plateau where teaching has become routine, conservative and unproblematic.* (Calderhead 1999, in Eraut 1994:71).

Asher and Malet (in Hobson 2003:246) identify the tendency for students on ITE courses to value the practical aspects of their courses over the elements that could be described as theoretical. As Calderhead indicates, this tendency is often reinforced when students go into school placement where they may find an attitude amongst colleagues in school that suggests 'now you'll find out what teaching is really like!' Even where this is not explicitly stated, the current balance of time spent in school within PGCE courses in England reinforces the mind set that school is more important than college and hence student perceptions of the importance of what they learn in school can be enhanced to the detriment of what they learn in college.

It has not been our intention to challenge the importance of school-based practice with our students, but instead, and much rather, we have attempted to challenge our students to strive for more than 'survival' in the classroom. We hoped to produce a 'tolerance of ambiguity' (hence the title of this paper) where our students could accept the differences between the practice they find in schools and the messages received from college, but also look for ways to reconcile their own developing teaching to incorporate elements of 'best practice' from a sound theoretical base.

During the course we noted a greater tendency for our students to comment on the wide difference they see in school practice compared with what they perceive to be the idealised messages that they are being given in college sessions. Some students have clearly found the tolerance of ambiguity rather difficult to achieve. In the light of these comments we decided to use a mechanism to try and capture some of the disparities and open them up for wider debate amongst the cohort. We set up a Blackboard discussion area and invited students to start their own threads and contribute to the threads that were started by others. We deliberately kept a low profile in these discussions, contributing rarely. We felt it was more important to allow the discussion to develop so that participants felt enabled to comment freely. Only where we felt that we had something very specific and useful to contribute to the discussion did we enter in.

The cohort were used to this kind of discussion activity, having used it within a number of contexts in the course, so we were confident that the mechanism for encouraging debate was one they were familiar with.

Unfortunately the timing of the introduction of this discussion tool was rather late in the year. By the time we had set up the discussion area, the students were well into their first school placement and, consequently, the quantity of discussion has been limited (41 posts in 6 threads). However, some of the comments posted by students do provide early evidence of the value of this exercise.

The forum was left deliberately open so that students could raise any issues that they wished within the overall theme of 'Theory Practice Divide'. Tutor intervention was minimal and limited to occasional posts mainly designed to refocus the 'theoretical' aspect of the discussion and provide some limited comment on the issues raised.

Participation by the cohort was voluntary and hence limited; only 10 out of the 28 students in the cohort posted any comment at all. Also, the discussions tended to be initiated by one or two students; one in particular was an enthusiastic 'poster' who always had something interesting to say. However, the point of this exercise was not to try and create a 'model' on-line discussion community and so we were happy to allow participation in the discussion to be a matter of choice. As ever with this type of activity, the number of 'hits' on the forum was much greater than the number of posts. Over the period of the existence of the forum, there have been over 900 hits illustrating that many more people were reading the discussion than were participating in it by posting comment.

In terms of content, the discussion was dominated by two main threads relating to lesson structure (17 out of 41 posts). If nothing else, this indicates the issue that students are most concerned about. Perhaps this is no surprise for beginning teachers at their stage of development. However, it is a relevant topic in that it would seem to us that schools are often reluctant to change accepted practice or try new ideas, and, for students who are trying to develop their own approaches to teaching this can be a source of tension. Two examples from the discussion board exemplify this tension well (all spelling and grammar are as per the original):

Initial post:
Okay, at the risk of being the first with my head on the block.... I have spoken to several of you on this issue, and have noticed inconsistency in this area (some are, some are not)

I will use my experience as an example. There is most definitley an absence of starters and plenaries in pretty much all of the ICT lessonsI have observed. There is an acceptance that they should be there, and occasionally, there will be a very brief introduction of sorts, but not always. Plenaries dissapear because it can take up to ten minutes simply to get students to put work away or save it, put folders away (I have my own thoughts on this), and then to resettle enough for a plenary to happen.

Further to this, students do not queue outside (unless there is no teacher in the room), they come in, log on and quickly (or it should be) get to work.

I have been given the reason for this is that a starter wastes time at the start of the lesson (lessons are 'only' 50 minutes long) and the students are always very difficult to settle at the start (often wasting 10 minutes).

I have suggested if this was routine (settle quickly, starter etc) then the issue would not be present... however as a student teacher this has presented some very difficult situations.

I have been insisting on a formal start to my lessons (which after 6 weeks of teaching some classes) is starting to bed in... but I am having to fight hard against a very established routine.

The reaction to the introduction of a 'fun' starter activity has in some cases been quite hostile (I was asked on one occasion why I had bothered trying?? and have also been told its difficult to get them to listen in an ICT lessons as they expect to be using the computers straight away, its much better to get them straight on them and working....) Whilst I appreciate the sentiment of giving them maximum time on the computers, and have no problem with them going straight to the computers to log on.... this has created some difficulty with the expectation that they will get started on their work almost immediately.

I don't want to go on because you get the idea and I just wanted to start the ball rolling for everyone.

Not too bothered about being anonymous if this is indeed going to be private to our group, as I feel that these are things we are discussing anyway, and I think it is important for us to think about these 'taboo' things. As long as we aren't seen as supergrasses!!!

Response:
I thought I should contribute to this part of the discussion as the absence of starters and plenaries in my second placement is common practice. I have been told not to bother and to get the pupils straight on the computers. However I do feel strongly about having a formal start and separate "learning episodes", to keep the class engaged which is necessary in some classes. Having observed some classes I do feel as though the main task is just not enough; pupils get bored and are regularly off task after 20 minutes. I have been planning different "learning episodes" for my classes now but feel as though I am fighting a losing battle. Pupils as well as the teachers expect the standard regime and do not like the change being imposed.

I am not going to let this get me down and follow MY own structure and continue to be as enthuastic about actual learning taking as I have always been.

What is encouraging here is not the 'gripes' of the students, but the fact that they feel that this forum gives them an opportunity to raise these issues and discuss amongst themselves the practice they are experiencing in their placement schools. For our ITE course, we wanted to encourage reflection and critical engagement with both theory and practice; to provide an environment where students could feel part of what Lave and Wenger (1991) call 'a community of practice'. The comments that were posted to this forum suggest that this is happening (at least with some students). In this second example taken from the forum, we can see critical reflection not only of practice in school, but also of the policies that the schools are being encouraged to adopt. Thus the underpinning theory is being questioned in a constructive manner and the student is publicly externalising their own internal debate:

There was a discussion in my GPS session yesterday which really got me thinking, and it was some serious criticism of the 3 part lesson.

Its hard for me to formalise what was said in words but here goes.

One of the problems in schools is that students expect to be entertained. Part of this stems from the 3-part format and the idea that the starter should be 'engaging'.

This creates a problem because...
It takes a great deal to 'entertain' todays students because of the multi media world we live in.

Some teachers have better 'multi media' skills than others (which leads to 'why do we not have good presentations like we do in XXXXX's class)

BUT it was this next comment that got me..

The students are bored of it.
Now then, look at it like this... every lesson should follow the same format, so every lesson should have a starter, you prepare this starter you have discovered that you think is all singing all dancing, to find out they did the same thing in maths and science last week. The problem is there is only so many singing and dancing starters in the pocket before you start to repeat. 30 lessons a week (average), however many weeks in the year... you get the idea.

So, starters getting boring and nowhere to turn because the students want to be entertained. What are you doing that could possibly be different enough to keep them engaged? Are we raising expectations so high that it cannot be perpetuated? Maybe the teacher who said initial lessons should be boring had something after all!

Now I am an advocate of the three parter (but don't actually deem that it is necessary for the starter to always be 'exciting', just relevant to the task.)

But consider that comment the next time you have your starter 'poo pooed' as boring or rubbish. Maybe its just one too many.

Maybe there is an argument here for just giving a breif and easy intro and letting them get on with it. I remember Martin once saying that we needed to rememeber that these students are on the go all day, possibly bouncing from one energetic lesson to another.

I think of me in a lecture sometimes and all I want is for someone to 'educate' me or give me something to think about.

Maybe there is something here to think about for us? Maybe I'll end up arguing myself into a complete circle!

Having thought about this a little longer (I guess again because I like the idea of the three part format) I thought maybe I should add this...
I believe there needs to be a distinction between each of the following - exciting, entertaining and engaging.

In that, does engaging necessarily have to be one or both of the other two? Do some teachers believe that a starter has to be one of the other two?

You could then start to ask the question - how are we engaging students at the start of the lesson? The answer would not necessarily have to be with something exciting and entertaining .

After all I like to participate in this forum, I am engaged, but it is neither entertaining nor exciting in the true sense of the word. ???

Conclusion

Colleagues participating in the ESCalate workshop were very helpful in providing us with comments and ideas about this small-scale study. Generally, colleagues were supportive of our study and were able to empathise with the overall aim of the activities we had set up for our students. One very helpful theme that emerged from the workshop relates to the perception of theory and practice as a divide. A colleague pointed us to some research undertaken by Gallagher (2004) which looks at the relationship between theory and practice in Nursing. The discussion in this article indicates that the 'gap' between theory and practice, whilst a powerful force in the learning process undertaken by students, is essentially a constructed metaphor and, rather than seeking to accentuate the 'gap', educators would be better served in looking for ways to conceptualise theory and practice as part of the same continuum and emphasise how theory and practice work constructively together to inform good professional practice. This feedback has helped us to look forward in terms of providing our students with a framework in which to reflect on their own growing experience in the light of theoretical perspectives that they are exposed to on the course. This has resulted in a further study using a conceptual framework originally produced by Ward and McCotter (2004). This work is ongoing and a paper is being prepared for delivery at conferences in 2008.

Biographies

Dr Martin Watts is the Cohort Leader for the Secondary ICT PGCE at the University of Cumbria. His EdD in Educational Management was awarded by Leicester University in 2006.

Martyn Lawson is the Coordinator of Secondary ITE at the University of Cumbria. He is currently researching the Assessment of ICT at KS3 (Key Stage 3) for an EdD award form the University of Huddersfield.

References

Eraut, M. (1994) Developing professional knowledge and competence (RoutledgeFalmer, London).

Gallagher, P. (2004) How the metaphor of a gap between theory and practice has influenced nursing education, Nurse Education Today, Vol. 24. pp. 263-268.

Hobson, A. J. (2003). Student teachers' conceptions and evaluations of 'theory' in Initial Teacher Training (ITT), Mentoring and Training, Vol. 11, No. 3, pp. 245-261.

Lave, J. Wenger, E. (1991) Situated Learning (Cambridge, Cambridge University Press).

Tickle, L. (1994) The induction of new teachers – reflective professional practice (Cassell, London).

Tickle, L. (2000). Teacher induction: the way ahead (OU Press, Buckingham).

Ward, J. R. McCotter, S. S. (2004) Reflection as a Visible Outcome for Preservice Teachers, Teaching and Teacher Education, Vol. 20, pp. 243-257.

8. Beyond mentoring? Supporting school-based tutors working with trainees on the Graduate Teacher Programme – a pilot

Mary Dunne
University of Wolverhampton

Summary
This paper reports on a development arising from previous research into the characteristics of training for secondary English trainees on the Graduate Teacher Programme compared with training for those following the post-graduate certificate route into teaching. In line with concerns identified by Ofsted (Office for Standards in Education) about the quality of subject-specific training offered on employment-based routes, it identifies some of the perceived training needs of school-based tutors responsible for the training of beginning teachers on the Graduate Teacher Programme, particularly in relation to training to teach their subject. The paper reports on a pilot study with 18 school-based tutors working with secondary English trainees on the Graduate Teacher Programme in association with the University of Wolverhampton.

Keywords
Employment-based routes / Initial Teacher Education and training / school-based tutor training / subject-specific training

Context

By 2006-2007, the Graduate Teacher Programme (GTP) accounted for around one fifth of all secondary Newly Qualified Teachers (NQTs) as seen in table 1.

Table 1: Numbers of Newly Qualified Teachers by training route, 2000-2007

	2000-01	01-02	02-03	03-04	04-05	05-06	06-07[3]
Sec GTP	860	2010	2540	3370	3510	3550	2650
Sec RTP	20	60	70	60	80	60	20
Sec GRTPTotal[1]	960	2510	3120	4300	4740	4530	3150
Sec All non-EBT routes[2]	14540	16060	16760	18290	17890	17440	17040
% GTP of whole	6.1%	13.5%	15.6%	19%	21%	21%	Autumn figures only
Prim GTP	650	1200	1230	1860	1960	1940	1550
Prim RTP	70	100	140	150	200	160	110
Prim GRTP Total[1]	830	1610	1690	2510	2750	2690	1890
Prim All non-EBT routes[2]	13170	13140	14520	15640	16540	16260	15610
% GRTP of whole	5.9%	10.9%	10.4%	13.8%	14.2%	14.2%	Autumn figures only

1 Includes OTT and Teach First
2 Includes UG, PG, SCITT and Fast Track
3 Autumn term only
Source: DCSF website: teachers and school staff http://www.dcsf.gov.uk/rsgateway/DB/SFR/s000681/addition8.xls#'A1'!A1 and http://www.dcsf.gov.uk/rsgateway/DB/SFR/s000681/addition8.xls#'A2'!A1 (accessed 18th September, 2007)

Despite this being a significant number, there has been relatively little published research (for example, Foster 2002, Griffiths 2003, Brookes 2005) into the effectiveness of the programme although Ofsted has inspected the route across all providers, reporting most years since 2000, with an overview of 2003-06 published in 2007 (Ofsted, 2002, 2005, 2006, 2007).

The research that has been done has indicated some of the strengths of the programme for individual trainees for whom the route does meet the needs of 'those who may not be able to pursue a more traditional teacher training course' (DfES, 1998:46). However there has also emerged an indication of the gap that can appear between the rhetoric surrounding the GTP and the reality as it is experienced by individual graduate trainee teachers in their schools. A major factor emerging from the research into school-based training in general has been the importance of the quality of the school-based tutor (SBT) in terms of both their relationship with the trainee and the effectiveness of the training programme facilitated by them (for example, Maynard, 2000). This role is particularly significant when the trainee is on an employment-based route where the SBT within the school is largely responsible for the training programme and where the associated Higher Education Institution (HEI) or other designated recommending bodies (DRBs) have a much smaller role to play in the training than they do in relation to other routes such as the Post-graduate Certificate of Education (PGCE). Andrew Reid, Head of Institutional Inspection at Ofsted, emphasised that the success of the trainee is dependent upon the quality of mentoring:

> *There is still work to be done to further improve the quality of their teaching, particularly to ensure that secondary trainees are given a good grounding in teaching their specialist subject. To achieve this, the mentoring of the trainees needs to be improved.* (Ofsted, 2007)

Ofsted, reporting in 2007 on the outcomes of the previous three years' inspections, commented:

> *For example, in most secondary placements a subject teacher has an hour set aside for mentoring. This is similar to the allocation for a PGCE trainee, but a GTP trainer shoulders more training responsibility, especially where there is no central provision by the DRB. Mentors and trainees are often resourceful in using a wide range of opportunities for training, but the limited protected time for intensive instruction and discussion makes it difficult for mentors to fulfil all that is expected of them.* (Ofsted, 2007)

The earlier research undertaken by the author of this paper (Dunne, 2004, 2005), of which the current paper is a development, highlighted the trainees' recognition that their SBT played a crucial role in the perceived effectiveness of their training. Yet in 2005, Ofsted was observing that time to carry out the role was not the only issue since whilst 'most mentors have previous ITT (Initial Teacher Training) experience… four in ten are inadequately prepared to undertake the training and assessment responsibilities required of them by an employment-based route' (Ofsted, 2005).

The current research that is the focus of this paper therefore sought to identify the training needs of SBTs to enable them to provide effective training that will produce more than simply 'adequate' trainees who 'do not always fulfil their potential' and who are 'generally less skilled than their peers on Postgraduate Certificate in Education (PGCE) courses in applying their subject knowledge to teaching and devising strategies to support and assess pupils' learning' (Ofsted, 2007:1).

Key issues arising

The government's Green Paper 'Teachers: Meeting the challenge of change' emphasised that:

> *employment-based routes into teaching should be recognised as providing high quality preparation for entry into the profession, open to those who may not be able to pursue a more traditional teacher training course…'* (DfES, 1998:46)

It is the 'high quality preparation' that has been the focus of the research that has been done and of subsequent Ofsted reports. There is some contradictory evidence arising from the research, for example that being carried out currently by Hobson, Malderez et al. in their six year longitudinal study of student teachers on a variety of routes. In an interim report, they reflect more positive views from those following the GTP route in comparison to other routes; 'trainees on employment-based routes were more likely to report that they had benefited from a gradual lead-in to teaching' although GTP respondents were 'more likely than those on other routes to report a concern about whether they would get sufficient help for teaching' (Hobson, Malderez et al., 2005:4)

Earlier studies by Griffiths (2003) refer to conflicting notions of 'access or exploitation?' in relation to the GTP route. Brookes (2005:45) refers to 'Abuses of the spirit if not the letter of GTP'. Research into trainees' perceptions of their comparative routes (Dunne, 2004, 2005) showed that trainees on the GTP experienced wider variations than those on a PGCE route in the quality of the training that was provided and saw the strengths of their training in terms of their ability to manage pupils' behaviour and their inculcation into the whole school culture with most focus on the generic aspects of their role. Those on the PGCE route saw the strengths of their training in terms of their preparation to teach and assess their subject and to address pupils' learning in their subject. As one GTP trainee expressed her perception of the difference between the two routes: 'We feel we're all right because we survived; they feel all right because they know what they're doing' (GTP trainee). This finding was reflected in a comment by Miriam Rosen (Director of Education at Ofsted) that:

> *the Graduate Teacher Programme helps trainees develop classroom management skills quickly and those who choose this route are often more confident in dealing with discipline problems. But more attention needs to be paid to developing trainees' ability to teach their subject to a high standard.* (Ofsted, 2005).

The contradictions emerging from these various studies could be a reflection of the fact that the Training and Development Agency (TDA) (formerly the Teacher Training Agency) has implemented a range of measures to strengthen the programme since its introduction in the late nineteen-nineties. For example, funding and control over recruitment was devolved to the designated recommending bodies (DRBs) so that they could exercise tighter control over enrolment to the programme and over the quality of training offered by participating schools. Following an Ofsted inspection in 2003-2004, one-third of the DRBs inspected were de-selected because of serious weaknesses in their provision. However, the evidence suggests that despite these measures, provision is still very patchy and by December 2006, the TDA was acknowledging that:

> *There has always been a tension about the use of the GRTP (Graduate and Registered Teacher Programme) by schools. The TDA perspective is that the GRTP is primarily an Initial Teacher Training (ITT) training route, which has a strong focus on meeting local labour market demands for particular types of teachers. Schools, however, have too often used GRTP trainees to solve recruitment problems and fill vacancies, without giving sufficient attention to the training aspects of a GRTP placement ... Trainees are often expected to teach a*

> *substantial amount of time, in some cases as much as a Newly Qualified Teacher (NQT). Ofsted will note, in the third report on GRTP, that mentors' limited time to work with trainees hampers the quality of the training.* (Board Meeting: Improving the quality of the Graduate Teacher Programme, Dec 2006)

Although the DRBs are responsible for monitoring the quality of the programme offered in the participating schools, this can be a very challenging brief since there are so many variables to consider and can amount to what a colleague describes as 'spraying a moving object with paint'. There can be, for example, wide variations in the schools' motivations for taking on a GTP, high turnover of SBTs, competing claims on the SBTs' time, variations in schools' commitment to teacher training and their role in relation to that. A school's motivation in taking on a GTP can be a significant factor in determining the quality of the training offered. The success of the programme depends on the extent to which the school:

- is committed to ensuring that trainees are well-supported;
- is committed to ensuring that school-based tutors have adequate training for the role;
- constructs a manageable timetable for the trainee;
- ensures that trainees are given access to 'training in…' as opposed to simply 'experience of…' teaching their subject;
- has developed an underpinning rationale for the training with a graduated programme that sets sufficiently high expectations rather than working to a minimum competency model but that does not overwhelm the trainee with too demanding expectations too soon.

Method

In order to explore further the SBTs' perceptions of their own training needs in training a beginning teacher employed by their schools, trainees' evaluations of their training year, along with university tutors' judgements about the effectiveness of the SBTs with whom they were working, were used to identify a group of 18 SBTs whose own practice with their GTP trainees and that of their school was considered to contain characteristics that could be disseminated to other SBTs (see appendix 1).

The SBTs were interviewed face-to-face, having been given a semi-structured agenda before the interview through which they were informed that the interview would focus on the training they had received for their role in supporting a GTP trainee and on what further training and support they would have liked. Interviews were recorded and transcribed. All the SBTs interviewed were linked to the researcher's own university although some also work with other DRBs and with PGCEs from different institutions. All were involved in secondary English.

Discussion during the interview focused on their perceptions of the quality of the training that they had been given both by the school and by the DRBs with whom they were working to carry out their role. They were asked to consider the extent to which they felt the training and support they had been given was generic rather than subject-specific and they were asked to identify what they felt their subject-specific needs might be in relation to understanding and carrying out their subject-specific role.

Participants were asked:

- whether they felt that they were able to articulate a rationale underpinning their devised training plan and how the training plan was constructed;
- to consider the links between the university-based and the school-based training and how these could be consolidated further;

- how they approached any theoretical underpinning, including models of reflective practice and supporting reading;
- how they developed the trainees' knowledge and understanding of subject-based knowledge and pedagogy;
- what form any subject-specific support materials for SBTs should take.

SBTs' perceptions
All the SBTs interviewed felt that the GTP could be an effective route for the right candidate in the right circumstances. All those interviewed were committed to the success of the programme although they had reservations about the following: the time they were allocated for the role; the reduction of the age limit since 2004; the rigour of the selection procedures; the degree to which they were supported in their training role at whole school level; and the training, particularly subject-specific, that they received in preparation, since the generic training was largely seen as procedural and concerned with assessment procedures.

Underpinning rationale and training plans
One of the SBTs was able to articulate her rationale for a training plan that was based on the PGCE course with which she and her department have worked closely for six years; the others had less secure rationales. A common response to this area was that they 'responded to the trainees' needs' by focusing on key issues that had been identified in the initial SBT training given by the DRB and matching these to the trainees' previous experiences. A training plan was then drawn up giving the trainees experience in those areas of the QtT (Qualifying to Teach) standards (TTA, 2002) that they had not yet addressed, a process the SBT described as the 'have a go' method, followed by evaluation and discussion with an experienced teacher:

> *'Because he'd taught as an unqualified teacher for a year, I wanted to observe him as soon as possible and then look at the standards he had met and the standards he needed to address'* (SBT 1).

Another, realising that he was having difficulty articulating a clear rationale, described his approach as:

> *'Obviously it's not ad hoc but perhaps it's not…given as much thought as it should be. I look at suggested topics for meetings using the handbook provided and I loosely base what I do around that. It's partly organic as well because you see what they need….I would want it to be flexible'* (SBT6).

There was a heavy emphasis on observation from the trainee's first day in school and there was an assumption that this was the best approach for a trainee on an employment-based route, even though they were aware that trainees on a PGCE route did not begin their preparation in this way:

> *'We wanted her to see lots of good practice…we wanted her to see lots of other…sort of …people teaching in the first couple of years so she'd got some idea of progression and where people are'* (SBT 5).

All felt that techniques of behaviour management were a priority for trainees. Planning was largely addressed through giving trainees parts of lessons or whole lessons to teach with plans provided for them and then gradually learning how to adapt them and write their own. Unless trainees were filling a vacancy and therefore teaching a timetable from day one, training programmes largely followed the same pattern based on:

- Induction into school and department
- Observation of experienced practitioners with some discussion of issues arising

- Joint work on planning
- Working with small groups
- Taking starters/parts of lesson
- 'Team-teaching'
- Responsibility for key stage 3 group(s)
- Responsibility for key stage 4 group(s)
- Close focus on behaviour management, often in isolation from other aspects
- Subject-knowledge development as appropriate to schemes taught
- Independent planning
- Teaching bigger timetables very quickly
- Close focus on assessment only later in the training
- Addressing issues arising from observations
- Differentiation and inclusion

SBTs' identified needs

Although they had been identified as providing effective training for their trainees, all those interviewed expressed a degree of anxiety about the quality of the training they were providing for their trainees and some resentment that this was not their fault since the time and support provided for them were inadequate. In particular, they wanted more guidance on how to structure a coherent training plan that would integrate more effectively the training given by the DRB and that would prevent them from having to 're-invent the wheel in each school' (SBT12), although they wanted to be able to retain flexibility for the individual trainee. Construction of these was felt to be very time-consuming and they wanted support material that would encourage them to consider alternative models for approaching the training to the ones they had devised 'by trial and error' (SBT 9). Although they felt that the generic ones provided gave them some guidance, they wanted exemplars that were much more subject-specific.

They wanted much more guidance about subject-specific support materials and training activities to address gaps in trainee knowledge, for example in relation to grammatical and linguistic concepts. They were aware of the gaps in trainee knowledge but felt that time constraints prevented them from doing the necessary research themselves in order to share this with trainees. One, for example, mentioned the wealth of materials provided by the KS3 Strategy that she felt would be very helpful for the trainee but she had no time to sift through these in order to direct the trainee's own reading effectively with follow-up discussion.

Several others felt that the provision of case studies of different approaches to subject training would be helpful in order to 'see how others have done it' (SBT5). They wanted a list of 'what ifs…? ' with suggestions of how to deal with different scenarios that occur during the training year, along with better exemplification of the expectations that are realistic at various stages of the training year, as they had difficulty in pitching their expectations, particularly with trainees who were more able or who were struggling.

They also wanted guidance about how to develop their trainees' reflective skills especially where trainee evaluations were 'bland, descriptive or inaccurate' (SBT1). Although there was a tendency to see the 'theory' as the preserve of the DRB, they felt that if they were given easier access to more academic reading, for example chapters from educational texts or journal articles, they could integrate these into discussion with their trainee and focus their reading much more purposefully.

Although time to access them was considered to be problematic, all felt that electronic and web-based resources, where they had the option to print out hard copies, were the most convenient means of supplying the support material.

The next stage of the research will therefore be to address the areas identified and provide these electronic resources for the SBTs working with the next cohort of GTPs, including the 18 in the pilot study. They will then be interviewed to identify the extent to which they feel the additional support has helped them to improve the quality of the training and in their understanding and execution of their role in creating 'Communities of practice … who share a concern or a passion for something they do and learn how to do it better as they interact regularly' (Wenger, 1998:79)

Biography

Mary Dunne is Pathway Leader for Secondary English at Wolverhampton University, responsible for secondary English trainees on both the PGCE and the GTP routes. Before taking up this post in 2001, she worked in comprehensive schools in Birmingham for 24 years as a secondary English teacher.

References

Brookes, W. (2005) The Graduate Teacher Programme in England: mentor training, quality assurance and the findings of inspection, Journal of In-Service Education, Vol. 31, no. 1, pp. 43-61.

DfES (Department for Education and Skills) (1998) Teachers: Meeting the Challenge of Change (London: TSO).

Dunne, M (2004) Anyone can teach: a case study of Newly Qualified Teachers' perceptions of their training following the PGCE route compared to the GTP route, Unpublished dissertation towards Masters' degree: University of Wolverhampton.

Dunne, M (2005) Beyond Mentoring? School-based tutors' perceptions of the Graduate Teacher Programme, Conference paper: British Educational Research Conference, Sept 2005 http://www.leeds.ac.uk/educol/documents/144077.htm accessed 8.10.07.

Foster, R. (2002) 'The Carrot at the end of the tunnel': appointment and retention rates of teachers trained on the Graduate Teacher Programme and a full-time PGCE compared, Paper presented at the Annual Conference of the British Educational Research Association, University of Exeter, 12-14 September.

Griffiths, V (2003) Access or exploitation? A case study of an employment-based route into teaching, paper presented at Teachers as Leaders: Teacher Education for a Global Profession, ICET/ATEA conference, Melbourne, Australia, July 20th-25th.

Hobson, A., Malderez, A., Tracey, L., Kerr, K. and Pell, G. (2005) Becoming a teacher: student teachers' perceptions and early experiences in school, DfES Research brief RB673, http://www.dfes.gov.uk/research/programmeofresearch/index.cfm?type=0andkeywordlist1=0andkeywordlist2=0andkeywordlist3=0andandor=orandkeyword=RB673andx=68andy=1 Accessed 23.7.2007

Maynard, T. (2000) Learning to teach or learning to manage mentors: experiences of school-based teacher training, Mentoring and Tutoring, 8(1) 17-30.

Ofsted, (2002) The Graduate Teacher Programme (London, Ofsted).

Ofsted (2005) An employment-based route into teaching: an overview of the first year of the inspection of designated recommended bodies for the Graduate Teacher Programme 2003/04 (London, Ofsted).

Ofsted (2006) An employment-based route into teaching 2004/2005 (London, Ofsted)

Ofsted (2007) An employment-based route into teaching 2003-06 (London, Ofsted)

TTA (Teacher Training Agency) (2002) Qualifying to Teach (London, TTA).

Wenger, E. (1998) Communities of practice: learning, meaning and identity (London, Cambridge University Press).

Appendix 1:

Characteristics of perceived good practice demonstrated by schools in study

- generic training that was GTP specific
- formal selection procedures for SBTs
- formal and informal monitoring of SBTs by the professional tutor and/or the school leadership group
- a formal programme of support meetings for all SBTs in school
- weekly meetings timetabled as part of SBT's contact time
- a *timetabled* schedule for observation of the trainee
- the trainee as supernumerary to staffing
- a library of resources available for trainees
- a separate workroom with IT facilities for trainees
- a graduated programme with increasing timetable
- the sharing of a formal training programme for the trainee at whole-school level
- an initial (planned) induction period before beginning programme for trainees new to school

9. Now we are seven:- Employment-based Routes in Initial Teacher Education; looking back and looking into the future

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Summary
This paper seeks to draw upon the collective experiences of University Tutors and school-based trainers who have collaborated on the development and delivery of school-based Initial Teacher Education; the Graduate and Registered Teacher Programme (GRTP). An employment-based route (EBR) began at Canterbury over seven years ago from a small innovative project involving twenty Mathematics and Science Secondary beginner teachers, to one that currently supports the training of over 300. Our aim in this paper is to reflect on our own journey and to begin to engage with some of the complexities of leading and managing this innovation in Initial Teacher Training.

Keywords
Initial Teacher Education / Graduate and Registered Teacher Programme / employment-based routes / school-based training

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Introduction
As the Graduate and Registered Teacher Programme (GRTP) celebrates its seventh year at Canterbury Christ Church University, we find ourselves examining a journey which has seen a small project develop into a mainstream programme. During this time, the GRTP has enjoyed a period of rapid growth since it began with a dozen or so secondary mathematics and science trainees in 1999. The growth in employment-based Initial Teacher Training experienced by Canterbury Christ Church University is not dissimilar to what has happened across the country as highlighted by Dunne (2005).

Over the past seven years, Canterbury Christ Church University has recommended over 1,500 teachers for Qualified Teacher Status via this route, with over 300 graduate, registered and overseas trained teachers currently registered with Canterbury Christ Church. Employment-based Initial Teacher Training is just one part of the wide portfolio of teaching education provision at Canterbury, currently with over thirty-eight separate pathways ranging from traditional postgraduate programmes, to the highly innovative Iteach programme.

Employment-Based Initial Teacher Training
The Teacher Training Agency consultation document (October, 1996) set out the rationale behind employment-based Initial Teacher Training. It claimed that this route to Qualified Teacher Status would be:

- High quality
- Cost effective
- Provide an alternative to traditional pre-service routes (e.g. PGCE)
- Provide individualised training
- Provide employment
- Address schools' own desire to be more involved in training their own teachers

Aim
Our aim in this paper is to reflect on our own journey and to begin to engage with some of the complexities of leading and managing this innovation in Initial Teacher Training (ITT). There have been a number of internal and external catalysts for this paper, which include University revalidation of the programme, the appointment of a new Director of the Programme, evaluations from our stakeholders, research on employment-based Initial Teacher Training and Ofsted and Teacher Development Agency for Schools (TDA) national directives.

We will focus specifically on:
- Why employment-based Initial Teacher Training has been introduced
- How we went about establishing our own provision
- The lessons we are learning about leading and managing an individualised employment-based Initial Teacher Training programme

Methodology
This paper draws upon the experiences of our academic colleagues and school-based trainers who have been involved in leading, developing, managing and delivering the GRTP. In addition we have used the extensive records of evaluations completed by trainees and school-based trainers and external examiners' reports. These voices have combined to enable us to develop the programme over the last seven years. We have used some quantitative data to illustrate and support some of our stories. This data exists within our extensive programme management archives.

Writing this paper has provided us with an opportunity to step back from the day-to-day demands of working on the programme and adopt a more reflective, perhaps detached perspective, whilst acknowledging the difficulties of this when we are so embroiled. The researchers for this paper are guided by Bassey's (1999) model of case study research. Our methodological approach has also been informed by Schön's ideas of reflective practice (1983), in so far as we attempt to move from the routine and habitual action to that which is characterised by self-evaluation, critical analysis, systematic enquiry, greater awareness of influencing factors, to both offer a more informed position and to help construct future actions.

Why Employment-based Initial Teacher Training?
Foster (2001) has suggested that it is 'difficult to detect a consistent rationale behind' employment-based routes. It is possible, according to Foster, to identify an ideological positioning, which has sought to distance ITT from HEI (Higher Education Institutions), which Furlong (1996) suggests has been evident in a string of government interventions in ITT since 1984. But also the need to address severe recruitment problems of teachers (secondary science and mathematics in particular) can be seen as a policy driver behind moves to bring about diversity in pathways to Qualified Teacher Status (QTS).

From our current cohort 55% of trainees have already been employed in schools in support roles. The opportunity to continue training in a familiar context has been a consistent feature for many of our trainees. We have just awarded QTS to a new teacher whose own journey began fourteen years ago, helping with Physical Education for two hours a week. She has managed the demands of parenting, studying for an academic degree and learning to teach through the provision of an employment-based pathway. Data such as this supports the claim that the GRTP provides a route to QTS for potential teachers for whom other pathways might not be open, by providing paid employment and the motivation to train in a familiar setting among supportive colleagues, and it cannot be reduced to a shallow 'dash for cash' rationale.

Currently 64% of our trainees are over 26 and 36% have come into the profession having already followed a different career.

The opportunity to 'choose' a school within a geographical proximity to one's own home again overcomes a potential barrier from enrolling on a traditional PGCE with the potential of being placed anywhere.

Some of the questions asked of employment-based training

But is employment-based training sufficiently rigorous? Can it have parity of esteem with other Initial Teacher Training programmes? By its very nature of being school-based learning, can it ever be as good as training delivered via a pre-service PGCE route? Is it good enough? Such questions have shaped the growing body of research into employment-based training (Foster, 2001; Brookes, 2003, Dunne, 2005; Jacklin, Griffiths and Robinson, 2006) and certainly inform much of our ongoing evaluation and development planning here at Canterbury Christ Church University.

These questions may inevitably return us to the debate about how to learn to teach, the polemic and rhetoric between the perceived dichotomy of theory and practice, the currency of academic versus practitioner knowledge (Furlong, 1996; Sachs, 2003). Brookes (2003) notes that this discourse has been going on for at least the last two hundred years it could be argued that this is now being played out in the context of employment-based Initial Teacher Training. Whilst the debate continues, it is largely accepted that 'learning to teach demands that direct practical experience is placed at the heart of the training process' (Furlong and Maynard, 1993). However, the extent to which the school-based trainer's role has been fully understood, is at the centre of the debate about employment-based training.

Research undertaken by Foster (2001) based upon employment-based training in the North West found that 'the standards to be achieved were at least as demanding as those pertaining to other QTS programmes'. There was, however, evidence of 'haphazard and infrequent' mentoring, and the trainee being 'used virtually as a full time member of staff'. Brookes' (2003) research also highlighted deficiencies in mentoring, but even though Ofsted identified similar weaknesses, it optimistically concluded that 'the minority of cases of good practice in the training programmes and of high quality teaching by trainees indicate that the GTP can be an effective alternative for training teachers' (2001), a position also adopted by Griffiths (2003). Certainly, issues relating to the quality of school-based training and specifically mentoring have featured in our development plans and we will go on to explore this later in the paper.

In an attempt to make greater sense of our journey, we have found some of the ideas expressed by Judyth Sachs very thought provoking (2003). She challenges us to reconceptualise the role of Higher Education Institutions (HEI) in Initial Teacher Training and questions the apparent threat to the hegemony of university- based Initial Teacher Education posed by employment-based training (2003). Whilst writing to defend the place of HEI in ITT, Grimmett (1995) warned of the danger of 'restructuring without reconceptualisation' and this idea we have found a useful tool to use to examine the development of employment-based Initial Teacher Training and also the challenges that have beset this particular pathway to QTS.

The need to fully understand and appreciate the nature of our (HEI) role in employment-based Initial Teacher Training has become very apparent. We would assert that HEI do have a critical role but a role that has to be reconceptualised, not merely restructured. Perhaps our failure to reconceptualise our role at the beginning was a causal factor in the challenges we have subsequently faced. Seven years on we can see and make sense of this.

Our own innovation project
To develop a new innovative programme based upon a very different premise, i.e. schools as the training provider, was no simple task. Of course, Canterbury Christ Church University has many years of experience and expertise in Initial Teaching Education to draw upon, and initially, not surprisingly, the employment-based programme appropriated documentation from existing programmes.

However, over time a distinct set of philosophies to guide the GRTP was formulated:

- enabling trainees to individualise their training, based on their background experience and the circumstances of their training context;
- promoting independent professional learning through reflective practice and professional dialogue in school.

And to achieve this, the University's role in employment-based Initial Teacher Training became more clearly formulated in terms of:

- scaffolding the situated learning in schools;
- provision of rigorous mentor training well beyond that of a PGCE programme;
- providing central learning enrichment opportunities for trainees by university teacher educators.

Over this period it is recognised that developments have been both reactive, for example in responding to the TDA's agenda for improving trainees' subject knowledge and subject knowledge development, and proactive, for example, in the way we have designed our 'Menu of Learning Opportunities' to scaffold the design of trainees' individual training plans.

We briefly outline some of the innovations and developments of the GRTP in this period.

Supporting and Managing Individualised School-Based Training
One particular issue with which we have had to grapple was the contrasting approaches to how the Professional Standards for Qualified Teacher Status are used on different routes. Overall, it seems to have been established practice on pre-service Initial Teacher Training programmes to adopt an holistic approach to the Standards for QTS.

For employment-based routes, perhaps to make Initial Teacher Training provision manageable in schools, a competency model of systematic training was promoted. Areas of professionalism became discrete key foci for training, and a 'standards-based' approach to the training was formulated to provide a framework within which individual training plans could be devised. This standards-based approach also facilitated the assessment of trainees on the GRTP. As employment-based Initial Teacher Training emerged, advice and guidance from the TDA seemed to direct training providers to adopt such an approach.

Perhaps as a consequence of understanding more about employment-based Initial Teacher Training, we are now engaged in an evaluation of this specific feature of the GRTP at Canterbury Christ Church University, as we produce documentation to reflect and address the revised Standards beginning in September 2007. The debate about why and how to cluster the Standards is ongoing both within the GRTP Team and across the Faculty. But perhaps more significant, it is a debate the school-based trainers are fully engaged with too. This could be seen as evidence to support the idea that employment-based Initial Teacher Training is coming of age and now has the confidence, informed by experience, to construct its own frameworks, as opposed to appropriating those from traditional, but very different, pathways.

Increasingly, it might be argued that the GRTP has become mainstream, and as such, what began as a small development project, now sits more comfortably beside the long established and highly respected training routes in the Faculty. The growth of provision and confidence has promoted an increasingly unilateral approach to programme development, endorsed by the Faculty of Education which seeks opportunities for cross programme collaboration.

The Individual Training Plan (ITP)
The ITP has developed from the original learning journal documentation, which replicated that which was used on the PGCE to a document that promotes and supports individualised learning and is used by the school-based beginner teachers and trainers to manage the training in a focused and systematic way. The development of documentation to scaffold school-based learning has been welcomed by school-based trainers.

The experiences described by employment-based trainees from Dunne's (2005) research who spoke of little or no structure to their training - 'I didn't receive any training as such …I don't think … nothing formal anyway' and 'I didn't expect to walk into a classroom without even knowing what a lesson plan was and being expected to teach completely on my own all day' - have been addressed through the very structured, but individualised, framework for managing employment-based training, provided by the University Team.

Reflective Practice
An area of concern for providers of employment-based training both at Canterbury Christ Church University and by others is the extent to which this pathway could be contributing to the dilution of quality of the teaching profession. Specifically, colleagues at Canterbury have tried to reconcile the 'practical' (i.e. learning on the job) approach and the team's ideological commitment to the philosophy of reflective practice. To this end again, detailed attention has been given to ensuring that the ITP and other supporting documentation, core provision and not least the training of the school-based trainer (which has to be provided by the HEI), promotes and in fact makes explicit the need for trainees to acquire the capacity to be reflective practitioners, or the 'disposition to theorise' (Eraut, 1994)

Training the Trainers
In the early days of the programme, the GRTP Team tried to address weaknesses in school-based training by providing more central input (as contradictory as this might seem). However, as the team gained deeper insights into the challenges of school-based training, the emphasis shifted to empowering the trainers within schools to develop their own provision. One school mentor wrote on her evaluation that she 'was dismayed' and 'confidence was undermined by the disparity of training opportunity between what her school was providing and what other schools could provide' following a mentor training event. As a result of the mentor training 'provision was improved … but there was valuable time lost in the early stages of the Programme due to poor understanding of the full responsibility undertaken'.

A comprehensive programme of mentor training has been developed, which supports schools from recruiting and selecting potential trainees, through the whole training year, to managing final assessment. Schools are eager to participate in these mentor training events and 'want more of this to be provided by the central provider' (Mentor evaluation, 2007).

The role of HEI colleagues in Initial Teacher Training begins to take on a new dimension, but a dimension which is no less challenging. As teachers begin to engage with the enormity of their new role of school-based

initial teacher trainer, the demands placed on the central provider have grown (as opposed to making us redundant!)

Developing the role of the school trainers has been a key concern for employment -based routes. There is a significant difference in the roles and responsibilities of a mentor supervising the school experience of students on a traditional Initial Teacher Training Programme (e.g. PGCE), and those of an employment-based trainer, who has to implement and co-ordinate an entire training programme in the workplace. Perhaps those involved in employment-based Initial Teacher Training were slow to recognise the level of understanding and responsibility this entails, and to provide the range of practical (e.g. time) and theoretical resources (e.g. training that was extended beyond that typically associated with PGCE), needed to deliver school- based Initial Teacher Training effectively. Brookes' research suggested few mentors had had specific training (2003) and Dunne (2005) highlights the deficiencies in the preparation of school-based trainers for their role:

> *None of the respondents (school based trainers on an employment-based route) felt that they had been provided with a rationale that should underpin training on the employment-based route in contrast to their PGCE experience.*

The ongoing challenge for us has been to support schools in accepting the significantly different role they are taking on with employment-based Initial Teacher Training and in deciding what remodelling of the school workforce might be called for to enable them to successfully make this transition. This situation is compounded by the fact that year on year two thirds of our Primary employment-based trainers are new to the programme.

Looking into the future for employment-based Initial Teacher Training

Much of the evidence suggests that there are significant challenges with leading, managing and developing the innovation of employment-based training. However, it does not follow that the model is itself at fault, but perhaps how the development has been managed. We are all too familiar with developments that have not been sufficiently planned and resourced. The project's success or failure, strengths or weaknesses, hinge upon pragmatic factors rather than ideological.

It might be argued that those who attack employment-based training do so in fact from a position of self interest (Smith, 2000). Our own experience would demonstrate that whilst schools seek to deliver employment-based training they do so from a position that situated learning cannot be totally divorced from academic learning. They want and need HEI, recognising the unique contribution academic teacher educators have to play. Thus, HEI does have a fundamental role to play in the delivery of employment-based Initial Teacher Training, but as Sachs has argued, ITT 'should not be owned by the University; it should be recognised that it is the joint property of the University and the profession' (2003). The notion of partnership needs has to be reconceptualised.

In order to maximise the potential of school-based training, a potential future pathway is the development of ever stronger partnerships between established training schools committed to providing employment-based training, and HEIs. By 'training school', perhaps an ideal model for the future would be a school in which all qualified staff were trained mentors, and in which university staff worked on a regular basis providing collaborative support for mentors and continuing professional learning for all, at the same time maintaining contact with the ever-changing face of education.

The future for the leaders of employment-based training requires the acknowledgement that if this pathway to QTS is to have parity of esteem with other traditional routes, it must continue to engage in significant management of change. For us this includes:

- developing new models of using the Standards for QTS to support learning and not merely to drive assessment;
- continuing to embed reflection on practice and theory into school-based learning;
- promoting employment-based training school consortia, who are collaborating to deliver a cross-school (and cross-phase) employment-based provision;
- a total commitment to the development of mentor training for mentors/trainers delivering employment-based Initial Teacher Training, which includes the active promotion of the South East Regional mentoring standards;
- A programme of University GRTP Team professional development to ensure that their own ongoing learning about school-based Initial Teacher Training continues to be underpinned by research and development

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Biographies

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Dr Carol Tingey has been working on the GRTP Team at Canterbury Christ Church University for four years. Previously, she was a primary school teacher in Kent.

Heather Howe was a school-based trainer in one of the University partnership schools. She joined the GRTP Team in 2006 and is now employed as a Team Leader

References

Bassey, M. (1999) Case study research in educational settings (Doing qualitative research in educational settings) (Buckingham, Open University).

Brookes, W. (2003) GTP training – Is adequate good enough? Paper presented at the Annual Conference of the British Educational Research Association, 2003.

Dunne, M. (2005) Beyond mentoring, Paper presented at the Annual Conference of the British Educational Research Association, 2005.

Eraut, M. (1994) Developing professional knowledge and competence (London, Falmer Press).

Foster, R. (2001) The graduate teacher route to QTS – motorway, by-way, or by-pass? Paper presented at the Annual Conference of the British Educational Research Association, 2001.

Furlong, J. (1996) Do students need higher education, in The role of Higher Education in Initial Teacher Training, Furlong J and Smith R (Ed). (London, KoganPage)

Furlong, J, Maynard, T. (1993) in Mentoring; perspectives on school-based teacher education, McIntyre D, Hagger H, Wilkin M (Eds) (London, RoutledgeFalmer).

Griffiths, V. (2003) Access or exploitation, a case study of an employment –based route into teaching, Paper presented at 'Teachers as Teachers: Teacher Education for a Global Profession', ICET/ATEA conference, Melbourne, Australia, 2003.

Grimmett, P. (1995) in Changing times in teacher education; restructuring or reconceptualisation, Widen M., Grimmett, P. (Ed.) (London, RoutledgeFalmer).

Jacklin, A, Griffiths, V, Robinson, C. (2006) Beginning primary teaching; moving beyond survival (Berkshire, Open University Press).

HMI (2001) The Graduate Programme, HMI 346.

Sachs, J. (2003) The activist teaching profession (Berkshire, Open University Press).

Schön, D (1983) The Reflective Practitioner (New York, Basic Books).

Smith, R (2000) The future of teacher education: principles and prospects, Asia Pacific Journal of Teacher Education, (28), 7-28.

10. Masters Level Accreditation via the Bath Spa PGCE Leadership Module

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Summary
During 2006-7, the author developed and piloted an optional module for PGCE trainees at Bath Spa University, providing the option for Masters (M) level accreditation during the participants' Initial Teacher Training. The module focussed upon the development of early leadership skills and consisted of a number of twilight seminars, running concurrently with PGCE programmes. A peer-reviewed seminar, including a written discussion paper, together with a portfolio of evidence collected in school and a critical reflection on the role of pupil performance data analysis in school improvement, constituted the assessment of the module for 30 M level credits. Although the submission rate was high, module recruitment was disappointing and trainees reported considerable difficulty in meeting the additional assessment burden, so it was decided to replace the module in 2007-8 with M level accreditation options within core PGCE assignments.

Keywords
PGCE / Masters level / leadership / assessment / performance data

Background

From September 2007, all PGCE courses are required to accredit at either H (Honours) level – leading to a Professional Graduate Certificate in Education or M (Masters) level, Postgraduate Certificate in Education. These correspond to levels 6 and 7 respectively of the National Qualifications Framework (QCA, 2004). Along with 77% of other Higher Education providers (UCET, 2006) Bath Spa University has taken the decision to offer its PGCE primary, secondary and Key Stage 2/3 programmes (totalling around 520 trainees per year) at both H and M levels. It is intended that the 'default' qualification will be at Professional Graduate level in order to allow the majority of trainees to focus on the core business of gaining Qualified Teachers Status (QTS). However, we recognise that a proportion of trainees may wish to have the option of upgrading their qualifications to 'postgraduate' level by undertaking additional M level accreditation during their PGCE year.

During 2006-7 we have explored a number of mechanisms by which trainees might gain the additional M level credits required to upgrade. One option the author has piloted is an optional module focusing on school leadership, which has been open to all trainees and has run alongside the PGCE programmes. The taught component of the module was based around the additional seminar programme developed for Fast Track trainees at the university over the previous five years - the Department for Education and Skills (DfES) Fast Track programme for Initial Teacher Training (ITT) having been discontinued at the end of 2005-6. In order to fund the module and to provide additional incentive for trainees to enrol it was decided to accredit it as part of the Bath Spa Professional Masters Programme (PMP). The PMP receives funding from the Training and Development Agency for Schools (TDA) to accredit professional development for qualified

teachers, so we decided to postpone participants' official registration on the PMP until they had gained QTS (in July 2007). Their assessed work as part of the module could then be accredited at the PMP examination board in November 2007, providing them with up to 30 M level credits towards a Masters degree.

Module aims and learning outcomes
The module aimed to:

1. provide PGCE trainees on primary, secondary and KS2/3 programmes with opportunities to explore their own potential for future school leadership;
2. enable PGCE trainees to gain Masters level credit during their PGCE year;
3. explore the potential for offering a 'Postgraduate' Certificate of Education qualification as an alternative to a 'Professional Graduate' Certificate from 2007 onwards, through additional study.

It was intended that participants should gain:

1. an understanding of the current context for school leadership at different levels;
2. an understanding of the characteristics of effective leaders in school settings;
3. a critical appreciation of the role of data analysis in school improvement.

Recruitment and Selection
Following validation of the module within the PMP in September 2006, participants were recruited from within the current PGCE programmes via presentations during introductory lectures, distribution of a single-page information flyer and optional question and answer sessions. As this was a pilot project it was decided to limit numbers to 30 participants, which required the establishment of a selection process. Applicants were invited to apply by curriculum vitae with covering letter. They were asked to state why they wanted to undertake the module and provide evidence of their ability to work at Masters level (i.e. that they were able to reflect critically upon their own work and published research, and could use theoretical frameworks in their writing). It was acknowledged that providing evidence of this might be problematic, particularly in the case of applicants who had not been involved in recent academic study. It was therefore proposed that such evidence could come from activities undertaken as part of professional practice. In the event, any difficulty in judging whether such evidence demonstrated the potential to work at M level was avoided since fewer than the maximum of 30 trainees applied for the module. In all, seven trainees on the 3-7 Early Years route applied, together with 16 primary (5-11 age range), two secondary and one Key Stage 2/3 (7-14 age range) trainee made applications. The reasons for the disappointing take up by post-primary trainees are difficult to deduce. The module may have been perceived as more relevant to a primary audience (though the guest speakers were drawn equally from secondary and primary contexts), or it may not have been promoted as enthusiastically by secondary tutors. Possibly secondary and Key Stage 2/3 trainees perceived their PGCE workloads as greater or the prospects of leadership as more distant than their primary counterparts. This would however be inconsistent with our experience of Fast Track training, for which roughly equal proportions of primary and secondary trainees had applied over the 2001-5 period. As all applicants had provided satisfactory evidence of engaging with the requirement of demonstrating M level potential, they were all admitted to the module. Of these 26 applicants, only 17 subsequently took up the offer of a place, as some were already realising the challenging nature of a PGCE course by early October.

Module Content
The module content was developed from our experience as a 'Fast Track' training provider from 2001-5 and included twilight sessions examining the nature of leadership, the role

of the headteacher, middle manager and subject leader; and the role of data analysis in school improvement. The session titles were as follows:

1. 'What Leaders Are', led by the university's educational leadership and management specialist.
2. Data Analysis and School Improvement: a critical perspective, led by the module leader.
3. Writing at Masters level, led by the module leader.
4. The role of the Headteacher, led by a secondary headteacher from an inner-city school.
5. The role of the subject leader, led by a science co-ordinator from a junior (7-11) school.
6. The roles of the deputy headteacher and special educational needs co-ordinator (SENCO), led by a senior manager in a special school and the university's specialist in special educational needs.

These two-hour twilight seminars were timed to fit in with the various patterns of university-based training and school experience of the different age phase routes of training. In practice, it proved extremely difficult to meet the needs of all the groups of participants, so some had to travel considerable distances after a day's teaching in a partnership school to attend. This greatly added to the perceived workload of the module.

The module took as its framework the model of sustainable leadership and change management proposed by Fullan (2005), together with the critique of published statistical pupil performance data undertaken by Tymms (2004). Although invited to investigate how school leaders make use of statistical data in school improvement (see assessment below), participants were expected to take a critical stance by examining the validity, reliability and utility of such data by comparison with other qualitative sources of information on teaching and learning.

Module Assessment

This module was validated at 30 M level credits, and was designed to employ two of the assessment modes validated for use within the Professional Masters Programme (table 1):

Table 1: PMP assessment modes used within the module

Assessment Mode	**Equivalent Evidences (minimum per 15 credits)**
Peer-reviewed seminars and professional meetings/conferences.	1000-2000 words (+/- 10%) seminar/conference paper, appendices to include additional handouts, acetates and/or PowerPoint presentations used.
Accreditation of Professional Development Learning (APDL) and APEL portfolios (http://www.materials.ac.uk/resources/library/apelintro.asp. Accessed 10.10.07	1000-2000 words reflective commentary plus appendices source material submitted as a CPD portfolio

The participants were required to undertake and submit the following tasks to gain accreditation:

School-based Task
During participants' first block school experience (from November to December 2006 for secondary and KS2/3 trainees, or from January to February 2007 for primary and Early Years trainees) they were required to carry out the following activities:

- Arrange to meet with a senior member of staff in the school. This might be the headteacher or deputy headteacher in a primary school, but was more likely to be a member of the senior management team in a secondary school.
- Ask to discuss pupil performance data with the designated member of staff. This could include quantitative data such as national test or GCSE data (possibly drawn from the school PANDA[1] report, the Pupil Attainment Tracker or RAISEonline[2]), or internal test data collected by the school or department on its own pupils. It could also include qualitative data such as comments in an OFSTED report or informal monitoring of a pupil's progress by the school/department.
- With the senior member of staff, identify an issue arising from the data discussed that the trainee could investigate in more depth (for example, they might choose to examine the performance of pupils from particular groups, e.g. boys, pupils with minority ethnic backgrounds or a group with a particular identity within the school, for example travellers' children). Other choices of emphasis were negotiable, such as a focus on the development of cross-curricular literacy or numeracy.
- Once the focus had been identified, interrogate the available data (both qualitative and quantitative) in more depth, to enable them to comment critically on what the data could (and could not) tell them about the issue. Talk with other staff and pupils if necessary to further add to the data set.
- Through wider reading, discussions with colleagues and pupils, and their own classroom teaching experience, begin to formulate proposals for addressing the issue identified.
- If possible, identify a 'critical friend' to discuss the project with as it proceeded. This could have been one of the other trainees on the leadership module, or a trusted colleague in the school placement.
- Keep copies of all data collected, and record 'field notes' of their discussions and observations, together with their emerging thoughts about the issue as they went along.

The module leader wrote to the Headteacher of each participant's school asking permission for them to carry out these school-based tasks, and to offer payment of £100 to cover the additional time and work involved. It was acknowledged that this additional payment would need to be reviewed, were the module to be 'rolled out' across the programmes. Unfortunately, one school declined to participate owing to a philosophical objection to the use of performance data analysis for making management decisions on the part of the headteacher, and the strongly held view that it was too early in the participants' careers to be considering leadership issues.

Peer-reviewed Seminar (15 M level credits)
Once participants had completed the school-based task, they were asked to lead a short seminar to present and discuss their findings with their peers on the leadership module. These seminars consisted of:

1 PANDA is an acronym for Ofsted's Performance AND Assessment Reports. www.teachernet.gov.uk/management/tools/panda/ Accessed 10.10.07
2 Reporting and Analysis for Improvement through School Evaluation www.raiseonline.org/ Accessed 10.10.07

- A short PowerPoint presentation (maximum 15 minutes) outlining the process described above, i.e. the reasons for the choice of focus, the various sources of pupil performance data used, interpretation of these data and any proposals for addressing the issue identified.
- A short discussion paper (1000 words) describing the school-based project, relating it to some of the literature on data analysis and school improvement, and posing some questions for discussion by the audience.

Portfolio of Evidence

This constituted the second part of the assignment, worth a further 15 credits at M level. It was designed to avoid a great deal of additional work, as most of the evidence within the portfolio would already have been gathered during the school-based task. Each portfolio was to include:

- Notes of the participant's discussion with a senior member to identify the focus for the data analysis project;
- Notes on all other discussions with colleagues and pupils;
- Notes on discussions with any 'critical friend' identified;
- Classroom observation notes (if appropriate);
- Print-outs of all the data analysed (suitably anonymised if necessary);
- Lesson plans and/or evaluations relating to any proposals for improvement (if appropriate);
- A reflective commentary and critical analysis (for which a proforma was provided);
- An impact evaluation (for which a proforma was provided);
- A self-assessment grid. Participants were required to annotate their work to demonstrate where they felt they had met the H and M level criteria (see table 2). They were also required to submit a short, reflective paragraph to illustrate their sense of how they had met the M level criteria, and what they have learnt about their own learning process;
- A completed module evaluation.

Table 2: PMP Assessment Criteria

Level H Criteria	**Level M Criteria**
H1 Can reflect on and describe an element of their own professional experience showing awareness of different perspectives.	M1 Can critically analyse and reflect on professional practice using an identified framework and/or general theory.
H2 Can recognise and describe features of an educational issue of relevance to their own professional practice and development.	
H3 Can use appropriate literature to identify and discuss the main features of a professional issue.	M2 Can use published research and other literature in a critical way to evaluate findings of an original enquiry or other professional activity.
H4 Knows the major contents of the area of study and shows evidence in writing or action that the relationship of these concepts to workplace practice is understood.	
H5 Can write a coherent and concise report presenting a position or argument based on the outcomes of reading and/or enquiry.	

In all, 14 of the 17 enrolled participants in the programme submitted work for assessment, representing a relatively high submission rate for PMP modules. 13 of these passed at first attempt. The topics selected included the following:

- Gender-split teaching of primary mathematics (3 trainees working in same school);
- Topic work as a catalyst to improving speaking and listening skills;
- Creating a climate for life long learning (secondary);
- Improving boys' writing;
- Is the Foundation Stage Profile effective?
- Do graphs aid school improvement?
- Raising achievement in children's writing.

Submissions generally reflected a thoughtful and reflective approach to the issues surrounding school leadership, with a constructively critical approach to the use of performance data.

Impact upon participants
Although all participants found additional workload surrounding the module burdensome whilst undertaking a PGCE programme, they did testify to its significant impact upon their views of themselves as potential leaders. The following quotes were typical:

> '*When going into school I feel that I have a better understanding of how the leadership teams work and the kind of decisions they will be faced with making. As an NQT, I feel this will be an invaluable insight when I start work and has enabled me to look at my own professional development and make judgements and decisions about my own role within the profession.'* (module participant)

> *'It has allowed me to reflect on and consider how I appear to other people with particular regard to leadership style and I have come to realise that this is of particular importance when leading a team of people.'* (module participant)

> *'It has also made me realise how important it is to have a strong sense of "emotional self-awareness" (Goleman, 1996) in order to assist our own self-motivation and to recognise others feelings…'* (module participant)

> *'Doing the assignment was an excellent way of seeing data in real life contexts and looking at how schools can use this information to aid school improvement.'* (module participant)

> *'I have also gained a greater depth of knowledge and understanding regarding school self-evaluation especially with regards to what SATs results for example can tell us or not tell us about the actual achievement of individual schools.'* (module participant)

Comments such as these within the impact evaluations, together with the content of assessed seminars and portfolios, suggested that the learning outcomes, and hence aim one of the module had been met.

Summary and Conclusions
The PGCE leadership module was a useful pilot project in that it enabled exploration of some of the issues facing PGCE trainees when asked to undertake Masters level study. As such, it provided valuable information against each of the module aims, but demonstrated that undertaking additional study not directly related to the main content of the PGCE programmes placed such an additional burden on participants that this model could not be implemented widely. In discussion with our school-based partners it was decided that a focus on leadership was perhaps somewhat premature for the

majority of trainees, and that M level accreditation should be offered to those prepared to 'go deeper' with their subject and professional studies as part of the PGCE programme. Accordingly, all PGCE assignments have been re-written and validated at both H and M level for 2007-8, with trainees given the option at the end of the first term to opt for either 'Professional' or 'Postgraduate' status, with guidance from tutors and the expectation of wider reading, deeper reflection and more penetrating critical analysis for M level accreditation. Along with the majority of the sector – and consistent with our own PMP – we have accredited the PGCE at 60 credits (45 of which must be at M level for a 'Postgraduate' certificate). Elements of the leadership module will be incorporated into core PGCE provision and other PMP modules for those slightly further on in their careers.

Biography

Dan Davies is Professor of Science and Technology Education, Head of Primary Education and Assistant Dean of Education at Bath Spa University. He taught in London primary schools before lecturing in primary science at Goldsmiths College. He has researched and published widely, mainly in the fields of primary science and design and technology education.

References

Fullan, M. (2005) Leadership and Sustainability (Thousand Oaks, California, Corwin).

Qualifications and Curriculum Authority (QCA) (2004) The statutory regulation of external qualifications in England, Wales and Northern Ireland (London, QCA).

Universities Council for the Education of Teachers (UCET) (2006) Survey results: PGCE qualification levels (3rd survey) (London, UCET).

Tymms, P. (2004) Are standards rising in English primary schools? British Educational Research Journal, 30 (4): 477-494.

11. A new model of observing students teach: an opportunity for Practitioner Enquiry

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Summary
In ITTE (Initial Teacher Training Education) models based on partnership, student teachers can expect to be observed teaching regularly. These experiences provide opportunities for the student to share an expert's perspective on their classroom practice and for joint evaluation of professional progress. In the best cases observations create moments when the mentoring dialogue becomes a genuine learning conversation based on mutual interest in the student teacher's professional development, shared expectations and a supportive culture. In the worse cases what follows from observation can feel like a hierarchical judgement within which the student teacher has limited agency. This paper will summarise the outcomes of action research conducted with a sample of student teachers and their subject mentors within the Newcastle University Secondary PGCE course. This research was centred on a new model of observation based around the premise of practitioner enquiry, which was piloted in 2006-7.

Keywords
Observation / Practitioner Enquiry / Professional Dialogue / Mentoring / Action Research / Learning conversation

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Introduction: Learning how to learn how to teach

Although no one doubts that becoming an effective new teacher involves a significant learning curve; few students commencing Initial Teacher Education can conceive the myriad of barriers they will face, many of which will be internal rather than institutional. Student teachers sometimes anticipate that tutors and mentors will be able to hand over their wisdom and skills, and that their development will occur through osmosis once they are immersed in a teaching context. This may be a parody of the innocence of the novice, but perhaps it hides some essential truths.

A PGCE course is relatively brief, very intensive and can be driven by a culture of standards. In this context there is a risk that Initial Teacher Education (ITE) becomes dominated by the 'strategy culture'. Students often find themselves in teaching situations which they want 'tools' to deal with. Problems occur when they run out of appropriate techniques and have no other resources to draw upon. As university teacher educators we believe that our essential role is to equip new teachers with the capacities and attitudes that will enable them to keep their practice evolving and improving throughout their career. Thus we believe the PGCE should be about 'learning

how to learn how to teach'. We want the NQTs (Newly Qualified Teachers) leaving the course to have substantial internal resources and the professional confidence to draw upon the resources of the communities within which they work.

PGCE based on Practitioner Enquiry

Since 2005-6 the Masters level PGCE programme at Newcastle University has been based on the principle of practitioner enquiry (Baumfield et al., 2006). The intention is that students take an investigative and reflective approach to their teaching placements and university experiences. Ideally practitioner enquiry puts the student teacher in the centre-ground and draws the students' school mentors, university tutors and other colleagues into a co-enquiry relationship. Developing a working understanding of the relationships between practice, theory and research is critical in this model. The aim is to provide a robust platform for both initial and future professional learning.

Students document their experiences and progress through reflective training diaries, which enable them to make links to QTS (Qualified Teacher Status) standards as appropriate. The tension between the need to demonstrate both academic and practical knowledge is mediated through assessed portfolios of evidence and reflective commentaries. These involve the students in an enquiry cycle of lesson observations, individual and collaborative school-based tasks analysing aspects of teaching and learning, action research and structured reflection.

Re-thinking observation

Observation is a key component of the PGCE course, with student teachers routinely observing lessons and being observed. This is situated within the relationship between the student as a relative novice, and the mentor (and other school teachers) as more experienced practitioners. These differences allow alternative perspectives on the observed lesson which are valuable in the training model. However the implicit hierarchy can lead to a level of detachment from the feedback process as each party cannot easily put themselves in the other's shoes.

A key issue in this relationship is the quality of feedback from the observation. We believe that the principle role of feedback is to prompt the student teacher into reflection and critical thought about the episode which has been observed. This is an essential component in supporting the student teacher moving through the Kolb learning cycle (Kolb, 1984) and developing from Schön's 'reflection about action' to 'reflecting in action' (Schön, 1983).

This is an active process which the student teacher must do for her/him self. The role of the observer is to 'scaffold' the student teacher's thinking at this stage. So we ask; what type of feedback provides the most effective scaffolding in this situation? Our thinking has been influenced by a seminar on professional development and feedback given at Newcastle by Professor Mark Stoner from the State University of California at Sacramento. He proposed that feedback should be evaluated using criteria which judged the extent to which the recipient was prompted to critically reflect on their actions. On this basis the least effective feedback was ready made evaluative judgements (both positive and negative) since the thinking had already been done, but not by the student teacher. Next most effective was 'witness statements' where the observer provided a relatively detached and 'objective' account of the episode. The most effective feedback was in the form of probing questions which prompted the recipient to reflect on the learning opportunities afforded by their teaching and significant issues arising from the episode. It is clear that evaluative judgements can be implicit in the focus and tone of the questions asked, but we believe that even these sort of questions place the responsibility for thinking on the recipient,

which are better than ready made judgements.

We reviewed our conventional observation proforma, on which observers keep a 'witness account' and students write a response to the observation notes. This led us to design a new observation proforma to support the process of posing questions. It provides areas and prompts for capturing the questions arising from various stages in the observation. This is shown in figure 1.

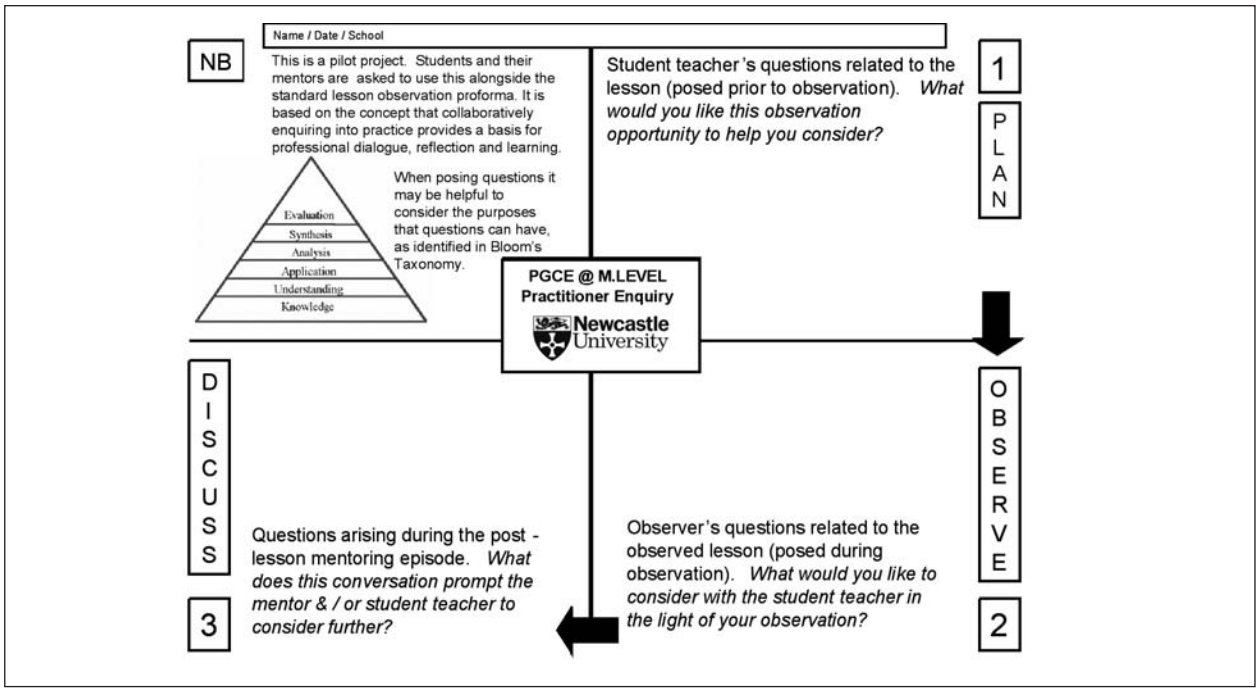
Modelling action research through a pilot project

A decision was taken to use action research (Ronnerman, 2003) to pilot and evaluate the new observation schedule as an opportunity to model action research to the students and their mentors. The pilot ran in 06/07 and involved two out of seven PGCE curriculum groups. We wanted to develop our understanding of the potential benefits and problems of the new observation process and to feed our findings back to students and mentors as the year progressed. It was anticipated that this would inform the ways that the pilot evolved. In addition we modelled the new observation schedule during our PGCE visits to schools.

The first opportunity to gather evidence came after the short placement, when students returned to university to share their experiences. They reviewed the nature of the questions generated within their observation cycles. At this transition point between the two placements mentor development sessions were held, giving an opportunity for mentors to share with each other their experiences of using the new observation proforma.

Momentum built during the second placement with a larger proportion of student teachers and their mentors in the pilot groups using the new proforma. At an interim university day students again shared observation experiences, evaluated the new schedule and identified questions they had recorded which provoked particular types of student/mentor dialogue. Additional guidance was sent to mentors based on the outcomes. Students collaborated to construct an interview schedule which they used to investigate their mentor's responses

Figure 1 The enquiry-based observation proforma used in the pilot project



to the pilot. The emerging evidence was then contextualised through asking the whole student body about their experiences of using the conventional observation schedule. During the 2007 ESCalate ITE Conference authors asked workshop participants for permission to accommodate their reported experiences of PGCE observations within the action research.

Experiences of observation

Being observed is a core process of the learning experience for student teachers. ITE tutors attending the ESCalate workshop compared the observation practice between providers. Similarities included a focus on the professional standards being addressed and the use of observation to judge and give feedback on the students' individual progress over time. Observation is clearly embedded in the co-operative professional relationship between mentor and provider-based tutor. Features of this co-operation included joint observations, with tutors acting to support the mentoring process. Variations in practice included the number of visits made to students by tutors, and the relative significance of observations conducted by mentors compared to tutors. Differences also existed in the degree to which observations were used as individual assessment activities, or for quality assurance purposes.

When asked about their experiences of observation outside the pilot project, Newcastle University students reported on its value as well as their concerns. The student who wrote, 'University observations are horrendous - I build them up into a major event, and teach abnormally!' was thankfully a relatively lone voice. However some students did feel that an observer in the classroom had the potential to alter the class dynamics, diminishing their own confidence and leading to an atypical lesson. A minority of students questioned the value of our 'witness' approach and reported a desire for direct feedback on the quality of their teaching (with one student stating that this would be effective preparation for the inspection regime). In contrast many students recognised that observations gave them useful and detailed accounts of their lessons, as observers had the experience to identify more characteristics of the teaching and learning than they themselves could. They linked this with good professional discussions leading to negotiated target setting. One student summed up his experience by stating, 'Observations are challenging and force you to move out of your comfort zone and be adventurous'. Table 1 summarises the typical statements students made in relation to our conventional lesson observation schedule.

Table 1 Typical statements made by student teachers in relation to our conventional lesson observation schedule.

Positive characteristics of the conventional observation process	Problematic characteristics of the conventional observation process
• Provides almost immediate feedback through a detailed account of the lesson, showing interaction, classroom presence, timekeeping etc; • Observations are not judgemental, purely observational which enables self-evaluation of the lesson; • Space on sheet to respond to feedback promotes reflection; • Link made to target setting to focus on developing practice; • Provides evidence of QTS standards	• It is only one perception of the lesson that is recorded, and the observer may miss elements of the lesson while they write; • Can lack focus as observer tries to witness all dimensions of the lesson; • The real-time observation leads to a detailed retrospective discussion, which can limit the time available to consider how the student can improve or more generic issues; • Reference to QTS standards not formalised

The intention of this observation procedure is to provide objective feedback on the lesson and create a genuine opportunity for constructive dialogue between the mentor and/or tutor and student. We are aware that this is not always the result, and during the ESCalate workshop asked participants to consider the barriers that exist within their observation processes. The most commonly identified barriers were the inevitable emotional engagement participants had in the teaching and mentoring processes, and the differing perceptions gained about what happened during the lesson and why. These were also the most significant issues identified by students. Both students and tutors recognised other barriers including the status of the mentor as the arbiter of professional standards, the language used to discuss teaching and learning, the observation framework required by the ITE provider and the mentors' other experiences of lesson observations, such as performance management and inspection.

Outcomes of the pilot project: the practitioner enquiry approach

As PGCE tutors we are concerned with developing approaches that engage student teachers in valuable and diverse professional learning activities. It is with this aim that the new observation process was piloted, and data gathered from students and mentors about its impact.

Data from student questionnaires and the students' interviews with their mentors demonstrate the value they placed in the enquiry based observation process; as one mentor stated 'open questions provide more routes for discussion'. All mentors and students agreed that it created genuine focussed opportunities for discussion. When students reviewed questions posed on the observation proformas during their first placement, they identified those which led to a valuable dialogue. These included:

- How significant are pupils' personal experiences in their learning?
- How can we review learning objectives in a more interactive way?
- Could groups / pair work create better learning outcomes?

Most students and half of the mentors interviewed agreed that the process promoted student investigation beyond individual lessons and encouraged students to think for themselves. A critical component of practitioner enquiry is the students' ability to make informed used of evidence collected about their own practice. Students reported that the following questions posed prompted them to consider how they might use evidence from observed lessons to review their own teaching:

- Do tasks and activities help keep pupils engaged?
- How can pace of lessons determine behaviour of the class?
- How well do I use the praise code?

In addition mentors noted that it encouraged reflection (by both the student and mentor), facilitated planning and target setting and helped students to make connections beyond the QTS standards to support their professional learning.

Students discussed their experiences in focus groups and statements emerging from these were used as part of their interview with their mentor in an attempt to better understand the impacts of the enquiry-based observation. These results are given in table 2. It is clear that the mentors recognised the role of objective critical analysis of observed lessons in supporting the professional relationship in the mentor/student partnership. Indeed one mentor stated that it was a 'good way to address issues without being confrontational'. Another recognised that he took on a 'coaching style', (Leat et al., 2006) and that there was less expectation that the mentor would provide all the answers. This suggests that it may go some way to creating rough relational parity (Awaya et al., 2002) between mentor and student and perhaps overcome some of the problems linked to its hierarchical nature.

Table 2 Mentors' views of the enquiry-based observation

Students' focus group comments given to mentors to consider	% Mentor view: 1 = strongly disagree 5 = strongly agree				
	1	2	3	4	5
Discussion based on objective critical analysis helps to maintain and sustain a positive relationship between student teacher and mentor	9		33	33	25
The mentor / student hierarchy seems more level when using the Practitioner enquiry observation sheets	16	9	33	9	33
The practitioner enquiry observation sheet explores student's teaching practices in a way that other observations may not focus on, forming basis for discussion	8	8		42	42
The resulting discussion provides the student with ideas that can be considered when solving problems rather than direct answer to follow	9	16		42	33
The questions posed are less intimidating than statements and answering them gives the student a chance to defend themselves	25	33	9	33	

Mentors saw the process having potential to better explore the influences on the students' teaching, one suggesting that 'students own questions helped develop their thinking'. Others stated the value of the 'student lead[ing] by filling in [questions] first' and felt that 'being asked questions, gives the student a chance to work out answers for him/her self'. It was suggested that the process opened up opportunities to extend the students' capacity for decision-making and problem solving.

The pilot also created a new opportunity for the students to review their progress and identify potential areas for development. The latter is implicit within the observation and discussion process, when the mentor and student record questions prompted by the post-lesson mentoring episode. It was also deliberately built into a university session following the first placement, during which students were asked which questions posed during the process they were likely to continue to consider and/or discuss during their subsequent placement.

These included:

- How can my focus be changed from behaviour to learning?
- How does thinking about the brain affect medium term lesson planning?
- How can we make learning activities more effective to promote higher order thinking?

When reviewing the pilot project we have tried to understand its limitations and accommodate the recommendations of mentors and participants into the revised version for 07/08. Students reported that they felt some insecurity about posing adequate questions, and questioned the time required to use both the conventional and pilot observation proformas. They were also aware that there had been limited time available for relevant mentor training. Mentors indicated that some students wanted 'answers' to the questions they had posed prior to the lesson, and wondered whether the proforma could be re-designed to allow this.

A case study

During her second teaching placement Liz worked with Amber as her mentor, making use of the enquiry-based observation proforma. An example comes from a Y8 Geography lesson which made use of de Bono's (1999) '6 Thinking Hats'[1] to encourage students to understand the implications of a natural disaster and to determine suitable responses. Liz's initial questions related to her handling of group work and the task debrief. As Liz states:

> *Through posing a question to my mentor I was able to focus on particular and specific themes which either I was interested in, had a strength for which I could receive guidance to extend further, or a worry or issue which was previously an internal concern. This was often the first opportunity in which it could be shared with another person who both understands the context of the classroom and has an insight into you.*

During their joint observation her mentor and tutor completed both the conventional and pilot observation schedules. Thus they also posed questions for discussion, which included one related to the transferability of the Y8 students' generic skills into the geography context. Following the observation the lesson was reviewed, first by identifying which of the questions posed (by all parties) the student wanted to prioritise in the discussion, and which ones there was evidence for from the observation notes. The resulting discussion enabled Liz to share her planning rationale and her responses to the group work. When considering how she had debriefed the task, the question related to transferable skills was found to be relevant. During the discussion the tutor was able to share her knowledge of '6 Thinking Hats' as a strategy in Design and Technology teaching. This led Liz to speculate about the value of knowing more about teaching and learning in other curriculum areas.

This discussion is interesting in relation to the concepts discussed, and certainly allowed Liz (as the learner) to 'go beyond the information given' (Bruner, 1973). What is more significant though is that it triggered a learning experience that could not have been predicted, which allowed the questions posed to be more fully investigated. In response to this prompt Amber described her experiences of 'Leading in Learning'[2], a National Strategy approach enabling teachers to plan and teach in cross-curricular teams with a focus on developing pupils' transferable thinking skills and enhancing coherence across the curriculum. Liz was interested and asked whether it would be appropriate for her to take part in a similar process. This resulted in Liz working alongside an ICT student teacher. In essence this allowed Liz to provide a geographical context for a spreadsheet activity, and for the two student teachers to share the teaching and debriefing of the lesson. It created a further opportunity for Liz to engage in professional dialogue and practitioner enquiry:

> *This process gave me ownership of the journey I took to find the solution, which was rewarding and emphasised the accomplishment. This allowed independence to flourish and meaningful quality academic discussion to take place in precious mentor meetings.*

Conclusion: stimulating learning conversation

The pilot project is on-going in 07/08, with a revised version of the enquiry-based observation proforma, and the opportunity to more fully engage mentors in its use. As a

1 Information at http://www.mindtools.com/pages/article/newTED_07.htm Accessed 15.10.07

2 http://www.lancsngfl.ac.uk/nationalstrategy/ks3/lil/?s=!B121cf29d70ec8a3d54a33343010cc2 Accessed 15.10.07

piece of action research it has thus moved on practice and heightened our understanding of the nature and scope of observation within ITE. The framework has now been adapted for use in a LA (Local Authority) consultancy project focussed on re-designing the secondary curriculum around teaching thinking.
Its significant and valuable characteristics can be summarised as follows:

- It provides a genuine reason and framework for professional dialogue;
- It created opportunities for enquiry and problem solving;
- It promotes students' engagement in own professional learning processes.

As such it has the potential to make a contribution to ITE programmes rooted in reflection and practitioner enquiry.

Biographies

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References

Awaya, A., McEwan, H., Heyler, D., Linsky, S., Lum, D. and Wakukawa, P. (2002) Mentoring as a journey, Teaching and Teacher Education, 19(1), 45–56.

Baumfield, V., Lofthouse, R., Kelleher, E., and Wilkes, S. (2006) Video as a tool to support Practitioner Enquiry, 2006 ESCalate ITE conference proceedings.

Bruner, J. (1973) Beyond the information given: studies in the psychology of knowing (New York: Norton).
De Bono, E. (1999) Six Thinking Hats, (Boston, MA, Back Bay Books).

Kolb, D.A. (1984) Experiential learning: experience as the source of learning and development (Englewood Cliffs, NJ: Prentice-Hall).

Leat, D., Lofthouse, R. and Wilcock, A. (2006), Teacher coaching – connecting research and practice, Teaching Education.
Ronnerman, K. (2003). Action Research: educational tools and the improvement of practice, Educational Action Research 11(1): 9-21.

Schön, D. (1983) The Reflective Practitioner How professionals think in action, (London: Temple Smith).

12. Wicked Wikis: using a wiki to transmit pre-course information to ITE students and to develop on course collaborative working

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Summary
The aim of this paper is to report on a recent and ongoing project which explores the use of wiki technology to:

- Disseminate key information to intending students effectively and efficiently;
- Facilitate collaboration between UEL central services, Secondary ITE administration and academics;
- Provide up to date information and communication with secondary PGCE offer holders;
- Enable offer holders to acquire and enhance online social and communication skills;
- Help administrative and academic staff as well as offer holders to understand the potential contribution of collaborative online technologies to student learning and support;
- Give tutors and trainees a positive experience of a learning technology, thus modelling the potential of such software during a teacher training programme and its potential use by trainees with pupils in the classroom.

Keywords
Initial Teacher Education / Learning Technologies / VLE (Virtual Learning Environment) / wikis

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Introduction
Imagine a blackboard, some chalk and a board rubber which we can all write on no matter whereabouts in the world we are – in London, Liverpool or Lagos. We can all write and share information and ideas on the same board.

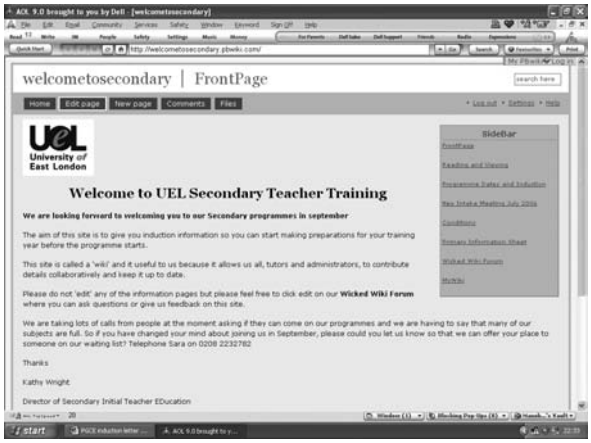
Figuratively speaking, this is what a wiki is. Wiki is a Hawaiian word meaning 'quick' or 'easy' and wiki software enables anyone to create a web site without knowledge of html or web authoring tools. The only skill required is that of being able to type, and more importantly once set up, any stakeholder can contribute information or views on to the wiki site.

Wikis are versatile websites that allow users to read and add content to a site. Raitman et al. (2004), in a study which reports on a wiki project at Deakin University, Australia, investigated how wikis have been used to 'break the ice' with a large group of new students and also facilitate computer supported collaborative learning. As noted by these authors, the particular strength of this type of collaborative learning is the promotion of peer interaction and the facilitation of knowledge sharing amongst a group of learners. Such interaction is not only non-threatening and user-friendly, but it can also be democratic and empowering (cf. Lipponen, 2002; Leuf and Cunningham, 2001):

> *Wikis are freely available, reliable and relatively easy to use. However they are not yet widely implemented in the education arena.* (Raitman R. et al., 2004)

In May 2006 a wiki was set up by the secondary teacher training team at UEL to transmit induction information to our new cohort. Below is the front page of the 2006 Induction wiki for secondary PGCE trainees:

Figure 1 Screen shot of the home page of the 2006 UEL Induction wiki



Context of Project
There were specific challenges which the Secondary ITE Team had to face in the summer of 2006 which made the use of a wiki more attractive to both academic and administrative staff. These were:

- Closure of UEL's Barking Campus which housed the School of Education and the subsequent relocation to Stratford at the beginning of July 2006;
- Consequent disruption to secondary teacher training administrative systems (e.g. IT/Phones/Post);
- Changes to national funding arrangements for secondary trainees which were not widely known (e.g. fees, loans, differentiated bursaries according to subject specialism);
- Administrative staffing shortages (e.g. unfilled vacancies covered by 'temps' with consequent risk of mistakes in despatch by post of subject and financial information which differed from subject to subject).

Each of our new PGCE trainees needed to receive programme induction information during the summer months prior to commencing the programme. 'The Campus Move' came at the busiest time of Secondary ITT operations in terms of recruitment and admission of a new group of students. (The pattern of recruitment in Secondary ITE is skewed to late applications which typically arrive during the summer months up to the beginning of September). This project sought to provide up-to-date and accurate information to the new PGCE group as the local course and national financial arrangements for this group were complicated, and information was being updated on an almost daily basis. In these circumstances the UEL secondary team felt that there would not be a date in June or July when all the complex induction information would be in a 'definitive' state, thus causing potential difficulties for a comprehensive 'mail out' of information.

The combination of these circumstances led to a review how information could be disseminated effectively to trainees. Wiki technology seemed to offer a solution to these problems.

The flexibility and user friendliness of the free wiki software chosen (http://pbwiki.com/ Accessed 15.10.07) offered the potential for a group of academics and administrators being able to input and update information easily and regularly without significant technical demands being placed on them and also to allow some interaction with and amongst our would-be trainees.

Content of the wiki
The wiki needed to contain the following information in a user friendly manner:

- Programme dates and outline (including all pre-course Booster dates)
- How trainees could meet their 'conditions' for entry
- How to prepare administratively and academically for the programme (e.g. reading lists, learning activities, arranging visits to a Primary school for September)

- Financial arrangements for teacher training programmes
- Invitation to a New Intake meeting in July 2006
- A forum for contributions and questions from offer holders
- A guide to UEL facilities and services

Preparations and Stakeholder analysis
Before launching the project the advantages and risks of giving induction information via a wiki were considered and management strategies implemented.

Resources
This project was low cost financially, (pbwiki provide a basic site at no cost) but had a potentially high cost in terms of staff time, particularly in the first year of the project.

IT Resources
Pbwiki provided a free wiki site with limited space allocation which was easy to use and had proved to be a reliable platform when used in earlier internal UEL projects.

IT/e-learning skills and capability
Three secondary tutors had participated in the creation of a wiki site as part of a UEL Masters module and had experience of designing and creating wiki pages using pbwiki software. A redesign of the secondary recruitment website had given tutors useful insights into the way pages are designed in terms of connections and hyperlinks. Tutors and administrators had extensive experience of using a Virtual Learning Environment (VLE) on programme. This meant that they had useful experience of working collaboratively with and organising people online.

Stakeholder	Issues
Pbwiki site	1. Reliability of platform. 2. Stability and ease of use of 'shell' provided. 3. Future pbwiki editorial changes to style and layout of pages could cause problems.
Programme Director/ Project Leader	1. Initial start up time needed for design, information collection. 2. Time needed for monitoring and maintenance of site.
Secondary ITE Admin Staff	1. Need time for training on wiki, updating of site information and daily maintenance. 2. Need to provide up to date admissions and enrolment information. 3. Need motivation and confidence to contribute to wiki site.
Secondary ITE Academic Staff	1. Need to provide updated reading lists, course outlines, answer subject specific questions on the Wiki Forum. 2. Need to contribute resources to as well as monitor and assess learning activity. 3. Need for training on design of site.
Intending trainees	1. Access to internet. 2. Confidence using IT and contributing to on-line 'discussions'. 3. Risk of inadvertent or deliberate/malicious changes to pages of key content.

Staff Time
Time was needed to liaise with colleagues within the Secondary ITT team (administrative and academic) as well as representatives from central services in order to compile up-to-date information on enrolment/ programme dates and content etc. Time is needed to design, create and upload content. In reality this would have had to be done even for a 'paper-based' induction pack.

Postage and admin time
An initial letter needed to be sent out by post to notify the new cohort about the wiki.

Data collection
Qualitative and quantitative feedback on the wiki project was sought in order to ascertain how well the project had met its aims as set out above.

Trialling
A small group of trainee representatives from the 2005-6 PGCE trainees who were approaching the end of their programme were consulted about content and they were given the username and password and invited to go on line and comment on the design and content of the wiki aimed at their successors.

Length of Project
The wiki project was initially intended to be launched at the end of June 2006 and it was assumed that it would no longer be used after late September 2006 when trainees would start using UEL's preferred VLE. In reality it became apparent in September that the flexibility of the wiki software meant that it was a more appropriate tool for certain on-course collaborative tasks, (such as group planning tasks and reports), than the Discussion Board of our VLE.

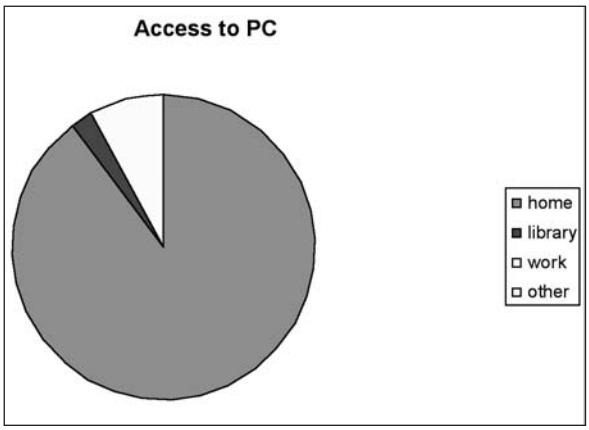
Evaluation of the Project
The most effective way of capturing a significant number of trainee perceptions was to distribute and collect questionnaires from those attending the New Intake Meeting in July 2006. By giving this feedback form as a hard copy during the meeting, it was hoped that there would be a better return rate than by putting the survey as an attachment on the wiki. 49 intending PGCE trainees completed the questionnaire at the meeting.

The aspects selected to be evaluated quantitatively by questionnaire were as follows:

1. User access to IT
2. User access to the internet
3. User familiarity with and use of internet
4. Knowledge of wikis
5. Ease of use /navigation and content of Induction Wiki
6. Induction information dissemination preference – paper or electronic

One of the initial concerns was that access to IT and specifically to the internet could be a problem for our intending cohort. If the trainees could not access the internet frequently and easily then disseminating key information through this channel could have been problematic. In reality every respondent had access to a PC, the majority at their home and only one person out of the 49 respondents reported that they did not have access to the internet. Out of those surveyed 88% accessed the internet on a daily basis and the remaining respondents accessed it occasionally.

Figure 2 Location of main access to PCs for UEL prospective secondary trainees



As 82% of those surveyed were regular users of the internet for news and information, it seemed likely that internet based induction information would be a familiar means of transmission and therefore readily accepted. Only 35% of those surveyed had heard of wikis before and of these over half had never accessed any wiki site before. This lack of knowledge and familiarity with wiki technology was anticipated and it was therefore important that the initial letter sent out to would be trainees was reassuring and easy to follow so as to encourage them to log on and have a look. By the time of the survey in mid-July, all but one of the group had accessed the Induction wiki.

The PGCE course requirement is that all secondary trainees have to interact on the VLE after enrolment. My assumption was that the majority of intending trainees would already have used or had experience of interaction on Discussion Boards/Forum areas on VLEs and in Chat Rooms from either previous study or from their personal use of the internet. However it was surprising to discover that over half the group (63.3%) had either never or only rarely participated in online discussions. Only 16.5% claimed to have had experience of basic interactions such as purchasing goods online. This finding could have had the potential to undermine the wiki project as many would be trainees appeared to lack the experience and the confidence to actively participate online. This was felt to illustrate a challenge to the secondary team in ensuring active participation in the VLE when on course.

In the initial design of the wiki, a simple activity had been incorporated asking participants to reply to an invitation to a New Intake Meeting which was modelled on children's party invitations ('Sorry I can't make it/ Yes I'll be there' reply format). The original purpose of the activity was to try to combat the feeling of isolation amongst recruits by allowing them to see a list of other people in exactly the same position as them:

> *'Am I the only person doing Design and Technology? Who else will be on course with me?' The achievement of this aim is reflected in the following comment from a trainee on the survey form: 'It (the wiki) gave me a sense of expectation. A link to the university, a link to other students who I would meet on the course'.*

One of the purposes of the wiki was also to give immediate feedback on who was accessing the site, picking up information and therefore giving us an indication of who was likely to turn up on day one of our secondary programmes. In previous years we had a significant number of 'no shows' in September.

Given the lack of experience of online interaction revealed in the questionnaire responses referred to above, the incorporation of these 'invitation' pages on the wiki was fortuitous. The majority of the cohort did 'dip their toes into the water' by replying to the invitation by writing their name and subject specialism on the pages on the wiki. Having designed the wiki to have some named participation by offer holders one could monitor postings and contact those who had not participated to find out their intentions. An extension to this basic interaction was provided by offering the participants a Forum area for questions and answers and the sharing of information.

Figure 3 Screen shot of the page inviting offer holders to accept or decline an invitation to a new intake meeting in July 2006

In response to specific questions on the survey, it was reassuring to note that about 79.6% of respondents felt confident enough to interact online and add information to our wiki pages and that 77.5% had actually contributed to the wiki by the time of the survey in mid-July 2006.

Figure 4 A screen shot of message forum on the 2006 Induction wiki

Amongst the questions and issues raised on the Forum by participants were:

- Where are UEL partnership schools
- How do placements work
- Primary school experience
- Enrolment and student numbers
- Status of the New Intake Meeting and dissemination of information given at the meeting
- Reading lists
- How to best prepare for the course
- Equivalency tests
- Worries about changes of address over the summer and about missing key information

This final point reinforces the value of the wiki as many offer holders travel or move over the summer period. Having a web based induction pack aided the effective transmission of induction information which can be accessed repeatedly and regularly for updates. In amongst the contributions on the Forum were several comments from participants praising the wiki.

It was reassuring to note from the questionnaire that the main areas of information or support for trainees had been predicted correctly and most respondents rated the content of individual pages as Very Good or Good. Only four respondents who had access to the wiki rated particular pages as poor, but this was in three of the cases due to problems opening attachments in Excel on their home PC, (possibly Macs). Suggested areas for more information or new areas on the wiki were:

- information about the local area;
- the location and facilities;
- documents needed for enrolment, more information on the financial arrangements for the course;
- a suggestion that important dates be put on the front page.

Gaps in coverage identified in the survey were added post survey (in July/August) and were also addressed in the 2007 Induction wiki.

In interviews and discussions with trainees after the programme started in September and in replies to more open questions on the feedback form, the trainee views can be summarised as follows:

Strengths of the web based pre-course information:

- Easy access anywhere, anytime
- Easy to use and update, faster, cheaper, safer
- Large amount of information which is always there and less paper to store
- Post unreliable and saves on wasted paper/photocopying.
- Made communication easier – another link to UEL and other intending trainees

Criticisms of the web based pre-course information:

- Possible problems with internet access/own PC
- Would like to have a hard copy of information as well as using PC
- If one registered on the site, frequent e-mail alerts from wiki were annoying!
- Post brings information to your attention

In all evaluations, written and verbal, the frequency and number of positive comments far outnumbered the critical comments.

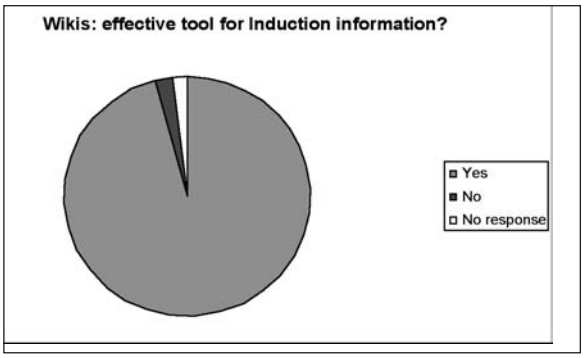
Conclusions

The use of the wiki seems to have had a positive impact on administrative workloads. An interview with an experienced secondary administrator indicated some evidence to show that the wiki had been effective in reducing the number and also the length of calls from the new cohort of trainees. Administrators could tell callers where to find the information on the wiki rather than engaging in longer detailed conversations. The web based information pages also reduced the risk of wrong information being given by inexperienced, possibly temporary, administrators.

Interviews with wiki users when on course also indicated that the format of hyperlinked web based pages and documents led to a more reliable, comprehensible and intuitive flow of information rather than a large envelope full of different letters, information sheets and forms. There appears to be some anecdotal evidence from this project to support the view that as tutors and administrators have to pay attention to the design of wiki pages, there is less text to absorb. Information is broken up into 'bite size' portions and the reader can follow a pathway more easily through information via the hyperlinks and sidebar rather than leafing through sheets of paper trying to find the relevant 'bits'.

The survey showed that the overwhelming majority (95.9%) felt that the wiki was an effective way of transmitting pre-course information. However 38.7% would have liked to have both the wiki and a paper based induction pack sent to their home. Suggestions for improvement and/or additional information were acted upon quickly and the data received following the New Intake Meeting was used to refine content of the current wiki but also to feed into the Induction wiki for 2007 as the satisfaction levels indicated below demonstrate that the project was successful and worth extending in 2007.

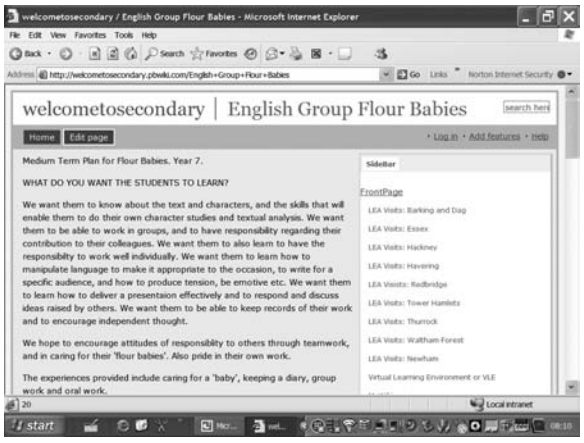
Figure 5 Responses to a question seeking the opinion of offer holders on the effectiveness of the wiki in transmitting pre course information.



Given the relatively short duration of each year's project and the potential impact on trainees' perceptions of UEL as a 'quality' training provider, it became clear throughout the project that the secondary team needed to monitor the site daily, in order to answer questions or amend unintentional changes to the wiki being made by inexperienced users. The team reacted immediately in order to preserve the positive view of UEL's provision. There were no instances of malicious changes being made to the wiki. (This has also been our experience in the 2007 Induction wiki despite this year's wiki

having over 200 users.) The evaluation data received determined that the site had relevant content which was communicated clearly to intending trainees and that they were able to access the information easily. Additionally the use of wiki software itself had had an impact on the practice of academics, administrative staff within the team and trainee teachers. Subject groups and their tutors chose to go back to the Induction wiki during the year to carry out collaborative planning tasks and reports on site visits as can be seen on the SideBar from the screen shot below taken in November 2006.

Figure 6 An example of English trainees using the wiki on course for collaboration on planning activities around teenage fiction in September and October 2006.



In June 2007 a group of trainees, mixed subjects, completed a project with pupils from a partner school at the British Museum and they set up a wiki site for the pupils to contribute their findings. An administrator for our Enhancement Courses (Physics and Maths) set up his own Induction wiki for this new group of students.
The Induction wiki project was launched again in June this year with more comprehensive information, all subject tutors and administrative staff contributing and with more collaborative tasks taking place. The content and layout of the wiki site was developed by the secondary team to meet our needs and the perceived needs of our future trainees. Our experience of wikis is confirmed by the experience of other educators surveyed by other educators:

> *…the users decided for themselves how the wiki would fulfil their objectives. Technical support and training was minimal: at most, one hour of instruction was needed, and in most cases, orientation was handled by a single e-mail. Even confirmed technophobes have grasped and mastered the system quickly. The structure of wikis is shaped from within—not imposed from above. Users do not have to adapt their practice to the dictates of a system but can allow their practice to define the structure'.* (Lamb, 2004)

And finally, it would seem that the use of the wiki had an impact on the recruitment of at least one would be trainee, who identified the impact of the wiki thus: 'It was an important factor in my decision to come to UEL'.

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References

Lamb, B. (2004) Wide open spaces: wikis, ready or not by Brian Lamb in EDUCAUSE Review, vol. 39, no. 5 (September/October 2004): 36–48 at http://www.educause.edu/pub/er/erm04/erm0452.asp?bhcp=1

Lipponen, L. (2002). Exploring foundations for computer-supported collaborative learning, Proceedings of the Computer-supported Collaborative Learning

Conference 2002, Boulder, CO: Jan 7-11, 72-81, Retrieved November 2006 from http://newmedia.colorado.edu/cscl/31.pdf

Leuf, B. and Cunningham, W. (2001) The Wiki Way: quick collaboration on the web, (Addison-Wesley Professional, Boston, MA).
Raitman, R., Augar, N. and Zhou, W. (2004) Constructing wikis as a platform for online collaboration in an e-learning environment, International Conference on Computers in Education 2004: A conference of the Asia-Pacific Society for Computers in Education, (1723-1730) Australia, Common Ground Publishing.

Websites:
Supporting Online Learning written by Online learning group available on line at http://www.essex.ac.uk/olg/supporting_online_learning.htm Accessed 15.10.07
'Using Wiki technology to support a community for learning'
http://www.heacademy.ac.uk/resources/detail/resources/casestudies/cs_126
Accessed 15.10.07

13. Differentiation in university teacher training: trainees and tutors responses

Jayne May and Duncan Reavey
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Summary
Some science lead lectures for primary trainee teachers were differentiated based on data from knowledge audits and from school experience. Lectures were run in parallel with different assumptions of prior knowledge, different intended learning and different learning approaches. Trainees who were higher achievers were slightly more positive about the experience than lower achievers. Most felt that differentiation should happen more frequently in science and across the teacher training curriculum. Trainees were divided on whether they or their tutors should decide which lecture the trainees attended. If they had the choice, the main influences would be choices made by their friends and the identity of the tutors. Some would be influenced by their embarrassment at giving themselves a 'lower achiever' label. Most felt that smaller group sizes improved learning. So long as there is sensitivity to such issues, differentiated lead lectures are likely to be helpful.

Keywords
Differentiation / science / teacher training / audit / needs analysis / labelling / profiling / monitoring and assessment / peer influences / personal development planning / group size

Introduction

Within initial teacher education, it is expected that trainee teachers will use differentiation in their school practice to ensure progression in children's achievement (e.g. Bearne, 1996; Tomlinson, 2003; Tomlinson, 2005). However it is a teaching technique that is rarely applied to them as learners in their training. This is despite the fact that trainees, like the children they teach, are diverse in their knowledge and understanding, motivation and ability, and they can be frustrated when time is wasted on tasks that are inappropriate.

Here we consider tutors' and trainees' views on novel approaches to differentiating lead lectures in university science courses for trainee primary teachers. Differentiation is based on audits of science knowledge and understanding (providing separate scores for different parts of the science curriculum) and on classroom performances in school. In one approach, some lead lectures are differentiated – two lectures are run in parallel with different assumptions of prior knowledge, different intended learning and different learning approaches emphasised. Based on their scores in appropriate parts of the audit or in school, trainees are told in advance which of the two lectures they need to attend. In this study, we consider:

- tutors' use of different teaching methods and strategies;
- tutors' responses on presenting a lead lecture to meet a groups particular needs;
- trainees' feelings on being separated into different groups;
- trainees' reflections on how this activity impacted on their learning;
- tutors' thoughts on how this practice might be improved for future cohorts.

Surprisingly few have reflected on differentiation, whether in the context of

schools or Higher Education (e.g. Reavey et al., 2006). In some courses it is clearly central to the successful operation of the course. For example, in some parts of dance and music degrees, students are set performance tasks that build on their prior learning; in other words, work is set to match students' abilities and needs. However, in other courses, probably the great majority, all students are treated alike, with no or little attempt made to obtain information about students' prior understanding nor to address their particular learning needs. In other courses, for example in some science disciplines, some effort is made to fill gaps in students understanding in areas like mathematics or statistics; however, the use of 'remedial' (sic) courses is differentiation in only the crudest sense.

Here we aim to promote discussion on the opportunities for - and benefits of - differentiation in university teacher training as we explore the responses to differentiated lead lectures for a cohort of 113 level-2 undergraduate trainee primary teachers.

Case study: differentiation in science for primary trainee teachers

Audit of trainees' needs

A needs analysis for each trainee is based on an audit of science knowledge and understanding carried out at the start of level-1, and a subsequent, different audit at the start of level-3. The audit requires trainees to answer 73 multiple choice questions. Trainees are scored for their knowledge and understanding in five distinct parts of the Science National Curriculum: Sc2, Sc3, Sc4:1, Sc4:2 and Sc4:3and4. Needs analysis for classroom-based skills is based on final profiling data from the most recent school experience. Trainees reflect on the results of the personal needs analyses and propose their own individual action plans for subsequent learning.

Differentiation based on tutors interpretation of audit data

Audit data lead to individual responses by trainees. However, these responses are not considered in this paper. Rather, we consider ways in which tutors use these data to meet trainees' needs. Differentiation based on these data includes the following:

- Differentiated lead lectures in which the cohort is divided in two, with each group participating in one of two lead lectures which tutors believe better meets their needs;
- More detailed evaluation of trainees work by tutors in the areas in which they have previously achieved less highly;
- Closer focus on the progress of selected individuals in a workshop as identified by their needs analysis for the theme of that workshop;
- Selection of individual trainees to complete specific intersession tasks that meet particular needs.

Here we explore responses of trainees to differentiated lead lectures.

Lead lectures before and after differentiation

Undergraduate trainee teachers at University of Chichester take a series of curriculum science modules which total 15 1-hour lead lectures and 15 2-hour workshops, as well as some additional 'environment days'. Lead lectures are delivered to the whole cohort of around 120 trainees. Workshops are delivered to small groups of around 25 trainees. At present the composition of workshop groups is more or less random.

Three lead lectures in curriculum science have been differentiated since 2006. Instead of a single lecture for the whole cohort, two lectures happen in parallel. We divided the cohort into two homogeneous groups (Stradling and Saunders, 1991) based on audit scores. These assume different prior knowledge and understanding among the

trainees; they have different intended learning outcomes and adopt different learning approaches. For this case study, no information was given to trainees about how the cohort was differentiated.

Lead lectures were differentiated as follows:

- The lead lecture on the science of light for level-3 trainees was based on trainees' audit scores for Sc4:3 and 4. The 20 trainees with lowest scores were placed in one group, the remaining 80 were in other group;
- The lead lecture on energy for level-3 trainees was based on trainees audit scores for Sc4 in general. The 15 trainees with highest scores were placed in one group, the remaining 85 were in the other group;
- The lead lecture on monitoring and assessment in science for level-2 trainees was based on trainees' most recent final profiles from level-1 school experience, specifically each trainee's score for monitoring and assessment. The 46 trainees with score 3 were placed in one group, the remaining 67 with score 1 or 2 were in other group.

In this study we focus only on the lead lecture on monitoring and assessment for higher achievers (HA) and lower achievers (LA). Three intended learning outcomes (ILOs) were identical for both HAs and LAs. These were that, by the end of the session and follow up study, trainees will:

- understand principles of assessment;
- identify assessment criteria from ILOs;
- consider a range of assessment techniques.

However, the HA group had an additional ILO that trainees will:

- write a short mock report on a piece of science work.

While this last ILO was not addressed for the LAs, we planned that it would be covered in a subsequent session in the trainees following year after they had had more time in school and had received specific support on monitoring and assessment from school-based mentors and link tutors.

The lead lectures were given in parallel by two different tutors who followed the same general plan. The main differences were that the lecture for HAs moved forward at a faster pace to ensure all ILOs were covered. The tutor for the LAs moved more slowly, without feeling the need to achieve even the three first ILOs but rather to ensure all had understood. An inevitable consequence of dividing the cohort was that group sizes were more or less half the usual size.

Trainees' views

We received written feedback from 66 trainees of the 113 in the cohort (43% response for LA, 67% for HA) in response to open questions in an anonymous questionnaire administered 2-3 weeks after the differentiated lead lecture. In the introduction to the questionnaire, trainees were told of the basis for the differentiation. As the responses are based on experiences of just one differentiated lead lecture, we use them simply as a starting point for discussion.

Feelings about being separated from peers were mixed, though HAs in the HA lecture tended to be more positive than LAs in the LA lecture (figure 1; table 1). One HA trainee wrote lucidly:

> *'concerned – I'm not achieving as well as my peers*
> *confused – how groups split*
> *curious – about other groups content'.*

Table 1. Selection of trainees' responses to the question: What were your feelings about being separated from others, knowing the class was differentiated?

Lower achievers	Higher achievers
I found it degrading	Apprehensive
Missing out on other group's learning	Don't mind, but would be good to know which group
Unsure	No problem
Am I in the lower group?	Hopeful it would help
Confident – I'll understand better	Great idea – proper teaching skills being used!

Figure 1. Trainees' responses to the question: What were your feelings about being separated from others, knowing the class was differentiated?

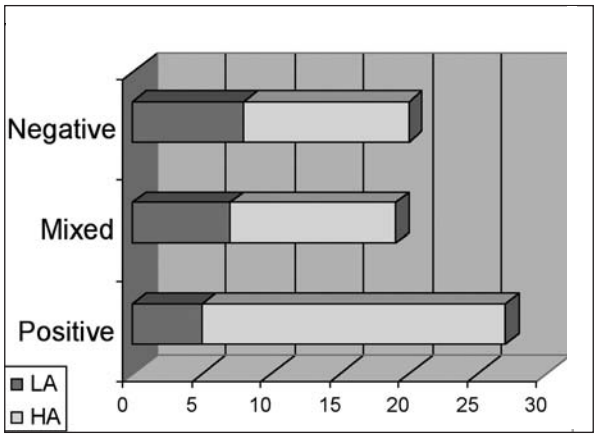


Figure 2. Trainees' responses to the question: Should we have told you in advance the criterion on which we based our differentiation?

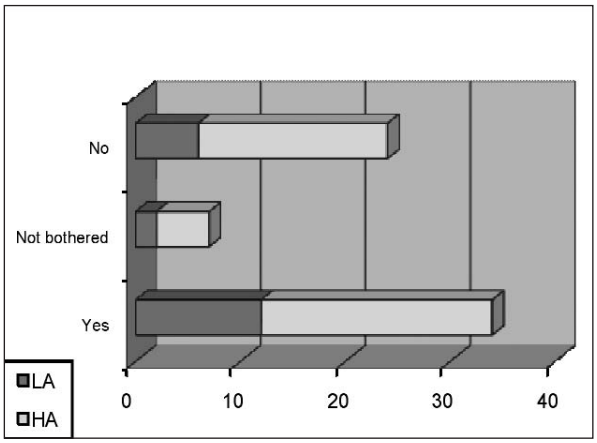


Table 2. Selection of trainees' responses to the question: Should we have told you in advance the criterion on which we based our differentiation?

Lower achievers	Higher achievers
No, I don't want to feel stupid	There was too much speculation
Be up front with us	Didn't bother me but others worried
Not fair if you have based it on the subjectivity of ESE result	No, I trust your judgement

Similarly, trainees had mixed feelings about whether they should have been told in advance of the criterion used when we divided the cohort, with once again the HAs a little less concerned (figure 2, table 2).

The great majority of trainees felt that the smaller group size in each lecture improved their learning (figure 3). It is difficult to know whether this is simply a consequence of group size or a consequence of perhaps a more interactive approach that was open to each tutor given the smaller group size. Certainly trainees in both LA and HA groups felt more comfortable contributing (figure 4) though some individual responses are an interesting reminder of trainees attitudes to large group lecture format (table 3).

Figure 3. Trainees' responses to the question: Did the smaller group size improve your learning?

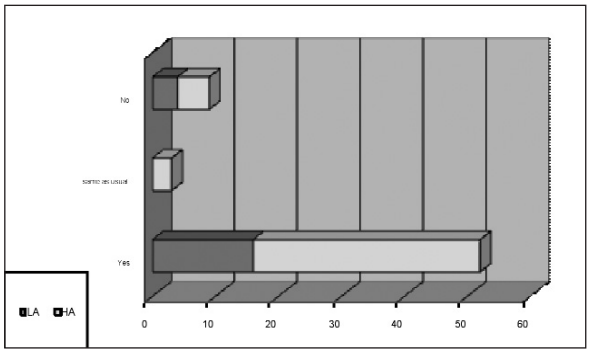


Figure 4. Trainees' responses to the question: Were you more comfortable contributing?

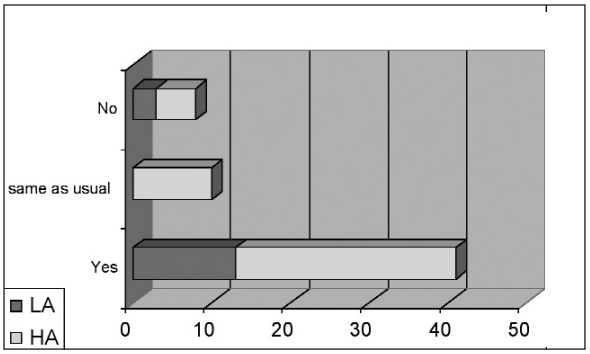


Table 3. Selection of trainees' responses to the question: Were you more comfortable contributing?

Lower achievers	Higher achievers
A little	Easier atmosphere to work - I could discuss and join in
I was more nervous about being picked on	I found the interaction and discussion much more beneficial
Made me pay attention more	Group still large enough to be intimidating
More people spoke up than in usual lectures.	Maybe important for those who don't like contributing
	If I've got something to say I'll say it anyway!

Table 4. Selection of trainees' responses to the question: Should differentiated teaching happen more frequently in science?

Lower achievers	Higher achievers
Yes, model the type of teachers you want us to be	Mix it – let less able share experiences of others
Yes, set different tasks, not lectures	Only if the lectures are very different from each other
No, just provide extra support sessions for those who need them	

Figure 5. Trainees' responses to the question: Should differentiated teaching happen more frequently in science?

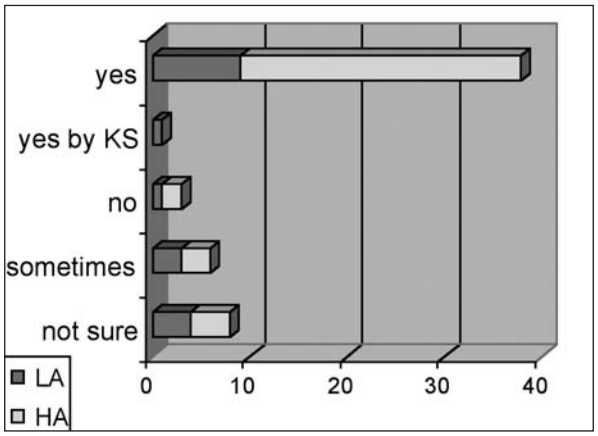
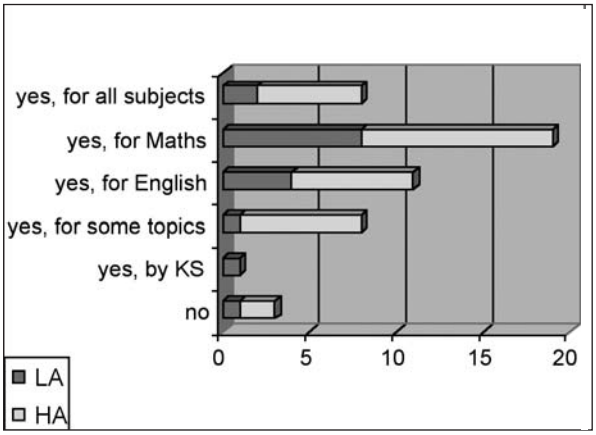


Figure 6. Trainees' responses to the question: Should differentiated teaching happen more frequently in other modules?



A considerable majority of trainees felt that differentiated teaching should happen more frequently in science (figure 5). They will have been aware that differentiation can take many forms and made a variety of suggestions of ways forward (for examples, see table 4). This view was echoed for Maths (particularly), English and other parts of the teacher training curriculum (figure 6).

Trainees were divided on whether they or their tutors should decide which lecture the trainees attended (figure 7) for a variety of reasons (for some examples, see table 5). When pushed to specify the most important influence on their choice of which lecture to attend, if they had the choice, it was intriguing to see that main influences would be the choice made by their friends and the identity of the tutors. The choices of a notable number would be influenced by their embarrassment at giving themselves an LA label (figure 8). While other answers to this open question were diverse, not a single trainee stated that their own academic needs would influence their choice! (table 6).

Figure 7. Trainees' responses to the question: Should we let you decide for yourself which group to join?

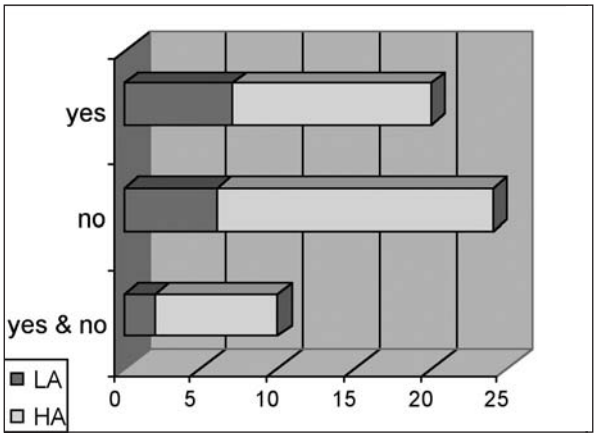


Figure 8. Trainees' responses to the question: What would affect your decision if you could choose?

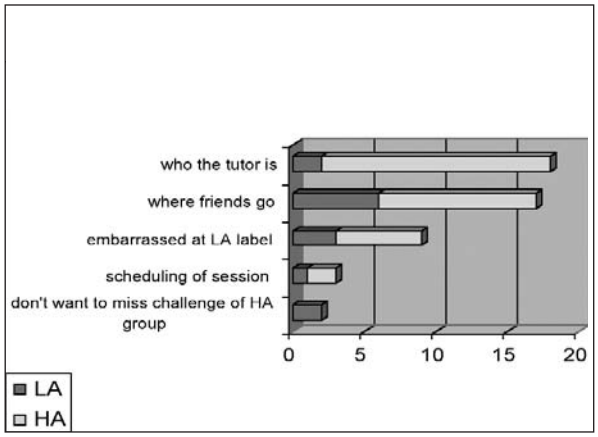


Table 5. Selection of trainees' responses to the question: Should we let you decide for yourself which group to join?

Lower achievers	Higher achievers
Definitely. It's not the kind of course in which people will feel vulnerable	Yes. This might help people feel more comfortable
No. Some won't think about their educational needs, just their friends	Yes, with detailed information about content we could make informed decision
No. I am confident you know best, so long as data relevant and up to date	No, as some afraid of being placed in LA group and would not have gone there if they had a choice
	"Ownership" of decision could increase motivation

Table 6. Selection of trainees' responses to the question: What would affect your decision if you could choose?

Lower achievers	Higher achievers
I am confident enough not to be embarrassed (1)	I would opt for LA group as I don't want to go in above my ability (1)
	Smaller group (1)
	Knowledge of learning styles being addressed (1)
	Use of case studies (1)
	Nicer room (2)
	Time of lecture (1)

Tutors' views

The three tutors involved in differentiated lead lectures provided their own feedback on the process. It was clear that the smaller group size affected the dynamics – and from the tutors' viewpoints increased the success – of the lectures. For example, one reported, 'I think they worked well and enabled dialogue between tutor and students. It helps to clear up queries in a smaller group.' Another alluded to the fact that it is easier 'to produce a worthwhile learning experience when you have a narrower target'. Another was impressed with the interaction and the quality of the discussion. Working with a smaller group enabled them to make the necessary links between the theory and the trainees' own experiences from school practice.

A careful reflection on differentiation in our teacher training programmes, including differentiated lead lectures, is continuing. A checklist for tutors to assist in their

Table 7. Checklist for tutors (after Reavey et al., 2006)

- Do I recognise a need to differentiate?
- Do I identify the differing needs of students?
- Do I identify differentiated learning outcomes?
- Do I share differentiated learning outcomes with my students?
- Do I meet student needs by providing differentiated activities, resources and strategies?
- Is my assessment of student needs frequent, appropriate and accurate?
- Do students use the needs assessment to help them reflect and plan?

reflections has proved useful (table 7). One question of particular interest is whether it is more appropriate for trainees or for tutors to make decisions on which inputs are most likely to meet individual trainees' needs. We will begin to be able to answer this when we have developed a deeper understanding of what motivates trainees to make decisions about learning choices.

Biographies

Jayne May has worked at University of Chichester for three years as a tutor in the primary science team coordinating under and post graduate modules. Previously she worked as a primary class teacher working in KS1 and KS2 and had science coordinator responsibilities.

Duncan Reavey is Principal Lecturer for Learning and Teaching in the School of Teacher Education and in the Centre for Learning and Teaching at the University of Chichester. This followed time lecturing at University of York and University of KwaZulu-Natal.

References

Bearne, E. (1996) Differentiation and diversity in the primary school (London, Routledge).

Reavey, D., Thompson, D., De Mellow, J., Spafford, J., Verrill, P. (2006) Does undergraduate teaching differentiate according to student needs? Presented at 1st Pedagogical Conference on Research in Higher Education, Liverpool, 2006.

Stradling, R., Saunders, L. with Weston, P. (1991) Differentiation in action: a whole school approach for raising achievement (London, HMSO).

Tomlinson, C. (2003) Fulfilling the promise of the differentiated classroom: tools and strategies to responsive teaching (Alexandria VA, Association for Supervision and Curriculum Development).

Tomlinson, C. (2005) Grading and differentiation: paradox or good practice? Theory into practice, 44(3), 262-269.

Glossary

APDL	Accreditation of Professional Development Learning
APEL	Accreditation of Prior and Experiential Learning
BEd	Bachelor of Education
DRB	Designated Recommending Body
EMAC	East Midlands Assessment Consortium
EBR	Employment-based Route
GCSE	General Certificate of Education
GRTP	Graduate and Registered Teacher Programme
GTP	Graduate Teacher Programme
HA	High Achiever
HEI	Higher Education Institution
IT	Information Technology
ICT	Information and Communications Technology
ILO	Intended Learning Outcome
ITP	Individual Training Plan
ITT	Initial Teacher Training
ITTE	Initial Teacher Training Education
KS1, 2, etc.	Key Stage
LA	Local Authority
LA	Lower Achievers (in article 13 only)
LJ	Learning Journal
NQT	Newly Qualified Teacher
Ofsted	Office for Standards in Education
PANDA	Performance and Assessment Report (Ofsted)
PC	Personal Computer
PDP	Professional Development Portfolio
PE	Physical Education
PGCE	Either: Professional Graduate Certificate in Education or Postgraduate Certificate in Education, depending on context.[1]
PLE	Personal Learning Environment
PMP	Professional Masters Programme
RAISE	Reporting and Analysis for Improvement through School Evaluation
QtT	Qualifying to Teach
SBT	School Based Tutor
SENCO	Special Educational Needs Co-ordinator
SM	Subject Mentors
SPSS	Statistical Package for the Social Sciences
TDA	Training and Development Agency for Schools
UEL	University of East London
VLE	Virtual Learning Environment

[1] For further information about 'PGCE' nomenclature, go to www.escalate.ac.uk/3168 Accessed 8.10.07.

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