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Discover – Deepen – Do: a 3D Pedagogical Approach for Developing Newly Qualified Teachers as Professional Learners

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Abstract: This article presents a strategy for teaching newly qualified teachers (NQTs) during their first year of teaching, developed by teacher educators from the University of Hertfordshire School of Education. The strategy included a new learning and teaching approach designed to enable NQTs to: develop as critically reflective teachers; build confidence in their professional 'voices'; learn collaboratively; and assess their learning. Pedagogical tools created to support the new approach included 'Discover - Deepen - Do' (3D), a model for driving change in teaching through analysing critical incidents or critical moments.

The NQTs who completed the Master's level module used the 3D model, completed critically reflective 'learning journals' and were assessed through 'learning conversations'. This article describes the learning and teaching approach and evaluation method. Findings from the evaluation provide insight into the participants' perspectives of the approach, and the NQTs' development as confident and critically reflective teachers and as professional learners.

Introduction

This article presents a strategy for teaching newly qualified teachers (NQTs) during their first year of teaching, developed by members of the Continuing Professional Development (CPD) Programme team at the University of Hertfordshire School of Education. The strategy included a new learning and teaching approach designed to enable NQTs to: develop as critically reflective teachers; build confidence in their professional 'voices'; learn collaboratively; and assess their learning. The pedagogical tools created to support the learning and teaching approach included 'Discover - Deepen - Do' (3D), a model for driving change in teaching through analysing critical incidents or critical moments. During the programme NQTs used the 3D model, completed critically reflective 'learning journals', and were assessed through 'learning conversations'.

This article briefly outlines the international context for the induction of new teachers; statutory guidance for the induction of NQTs in England; and some issues for NQTs. It then describes the new teaching approach and the method of evaluation. Some findings from the evaluation are presented and discussed in the context of the purpose of the learning and teaching approach and of developing NQTs as professional learners.

Context

Induction for Newly Qualified Teachers

The requirement for NQTs to complete a compulsory induction period as part of teacher education is standard practice in many countries, although features of the induction process vary. In 2002, the Organisation for Economic Co-operation and Development (OECD) Education Committee launched an extensive international review of teacher policy in 25 countries, which included an investigation of the approaches taken to induction (OECD, 2005). At the time of the study, ten of the countries had mandatory induction programmes for new teachers: Australia (some States), England and Wales, France, Greece, Israel, Italy, Japan, Korea, Switzerland and Northern Ireland (OECD, 2005). More recently, Conway, Murphy, Rath and Hall (2009) studied the practice in nine countries. Seven of these had a compulsory induction period (England, Ireland, New Zealand, Northern Ireland, Poland, Scotland and Singapore), Finland did not and within the USA, requirements varied between States.

In England, the NQTs' induction period is designed to ensure that they are supported in their first year of teaching after achieving qualified teacher status. The relevant Statutory Guidance (Department for Children, Schools and Families, 2008, p.1) states that: 'Statutory induction is the bridge between initial teacher training and a career in teaching. It combines a personalised programme of development, support and professional dialogue, with monitoring and an assessment of performance against the core standards...'

All NQTs must successfully complete their induction period in order to continue teaching in a maintained school or a non-maintained special school in England. Those NQTs who achieve this receive an induction certificate from the Teaching Agency. Guidance is available to support NQTs through their induction period (Department for Children, Schools and Families, 2008; Training and Development Agency for Schools, 2011).

Issues for Newly Qualified Teachers

The transition from teacher education to employment represents a significant phase in teacher development, and developing personal professional confidence among an established workforce is one issue for NQTs. The transition is followed by a process of socialisation within the school during the early years of teaching (Findlay, 2006) and the first full experience of life as a teacher. Capel (1998) reporting findings from a survey of NQTs who had completed a Post Graduate Certificate in Education (PGCE) course, acknowledged that the course could not provide students with experience of all the activities they would face as a qualified teacher. She recommended that schools therefore should provide relevant support for NQTs throughout their first year. At this stage NQTs need to be able to make sense of their previous learning rather than to learn more content. Being able to reflect, make connections and talk to others is all part of the transformation process for a teacher.

The transition from teacher education into a teaching post is also important because NQTs move from being observed as students, to leading their own practice once they are qualified. Findlay (2006), reporting findings from a case study of five NQTs completing a school-organised induction programme, noted that respondents reported that they experienced a feeling of isolation within the school, and sometimes within their own subject area. In addition, 'for four of the five respondents a lack of critical feedback and praise was a major complaint, the transition from the semi-protected environment of initial teacher training to beginning teaching [is] difficult because it involves a loss of attention and an expectation that observations of lessons four times a term will suffice' (Findlay, 2006, p. 526).

Overall, the process of 'Learning to teach' has been described as 'a complex, bewildering and sometimes painful task' (Maynard & Furlong 1995, p. 10). However, although NQTs do not have the experience of an established teacher, Furlong (2000, p. 14) notes that even as a student they do not enter 'the classroom as a complete novice. They bring with them a vast array of skills, knowledge, and understandings derived from other contexts.'

Developing and Implementing a New Strategy for Supporting Newly Qualified Teachers The Setting for this Study

This study took place within the School of Education at the University of Hertfordshire that has a student community of more than 27,500. The School comprises more than fifty members of staff who deliver a range of full and part-time courses. These include initial teacher training, courses for other professionals in various educational settings, foundation and undergraduate degrees, CPD and postgraduate and doctoral qualifications.

The Programme Module and Participants

In 2009-2010, the University of Hertfordshire School of Education CPD Programme team devised and trialled a new way of delivering the Master's level module *Supporting NQTs' Professional Development*. This module was administered at the University but some delivery took place at local authority education sites. It was designed to help NQTs consolidate, extend and sustain in their employment setting the standards reached during initial teacher education (Training and Development Agency for Schools, 2008), complementing the support they received from their school and local authority. Table 1 shows the module aims and expected learning outcomes.

<i>Aims</i>
To enable students to: ☞ identify and reflect upon their professional practice, identifying professional development needs relevant to their personal and institutional context; ☞ reflect through personal enquiry upon the nature and extent of their professional development against relevant professional standards addressing appropriate issues of ethics and diversity; ☞ develop and sustain confidence in their professional expertise and increase their autonomy in terms of their professional development.
<i>Learning outcomes</i>
Knowledge and understanding: for students to be able to: ☞ demonstrate an understanding of their personal practice informed by research and evidence derived from personal enquiry; ☞ relate their professional practice and development needs to relevant professional standards, including those which relate to ethical and diversity issues; ☞ critically reflect on their professional development, including its impact on pupils and, as appropriate, others with whom they work within the school context; ☞ identify the impact of their work on learners and, as appropriate, others with whom they work. Skills and attributes: for students to be able to: ☞ critically evaluate their practice to identify their continuing professional development needs; ☞ identify personal targets matched against relevant professional standards and sources/strategies to address these in the context of their teaching and institutional support available to them; ☞ use appropriate skills and strategies for conducting a personal enquiry.

Table 1. Supporting NQTs' Professional Development: module aims and learning outcomes

Social, intellectual and dispositional aspects of learning were planned for, as for all modules developed by the School of Education, and the teaching was underpinned by the following learning and teaching principles developed within the School (University of Hertfordshire School of Education, 2006):

- All learners can expand their knowledge and deepen their understanding.
- Learning develops through enquiry, exploration, discovery and critical reflection.
- Learners progress best in a safe, inclusive yet challenging learning environment.

In total, 121 NQTs registered for the module. The cohort included male and female participants, who had completed one of the available initial teacher education options, for example, the Bachelor of Education (BEd) or the Graduate Teacher Programme (GTP). Within their school setting, the participants were teaching one or more of the following stages: Early Years Foundation Stage (for children up to compulsory school age), National Curriculum Key Stages 1-2 (for pupils aged 5-11 years), Key Stages 3-4 (for pupils aged 11-16 years) or Key Stage 5 (for 16 to 18 year olds).

The New Strategy for Delivering the Module

The CPD Programme team leader and other team members revised the module, recognising that a new strategy was needed to support NQTs during their induction period.

Three factors influenced their decision: the focus at that time for teaching to become a Master's degree level profession (Department for Children, Schools and Families, 2007); the national completion and progression rates for NQTs; and ideas from students. Some NQTs reported that they wanted to engage in sustainable professional learning; talk to other NQTs and experienced teacher educators; and begin to make sense of their previous learning.

In response to these factors, the new strategy for delivering the module was designed to create a practice-focused professional learning opportunity. The main changes included: starting the module earlier in the academic year and completing it within a shorter time period; and creating a new learning and teaching approach and assessment process. The module teaching team (tutors) included teacher educators from the School of Education and experienced colleagues from schools and local authorities. It was therefore considered imperative to create a common learning and teaching philosophy for all tutors to use to provide consistency for the students.

The New Learning and Teaching Approach

Programme team members discussed and listened to each other's experiences of teaching NQTs as they developed the new learning and teaching approach. Following this, the team leader chose to create 'places for learning' within the module, called 'thinking spaces', designed to allow time for NQTs to make connections with their previous learning and to consider other perspectives through analysing their practice. The purpose of this new approach was to enable NQTs to:

- develop as critically reflective teachers;
- build confidence in their emerging professional 'voices';
- learn collaboratively through building supportive professional relationships; and
- assess their learning, both formatively and summatively.

Programme team members created pedagogical tools and strategies to support the NQTs' professional learning. These included the following three interconnected elements, which are described below:

- Discover – Deepen – Do (3D), a new model of critical reflection;
- learning journals; and
- learning conversations.

Discover – Deepen – Do (3D)

The Discover – Deepen – Do or 3D model was designed to drive change in teaching through analysis of critical incidents or critical moments (Figure 1). Using this model allowed NQTs to enquire into their personal professional practice as follows:

- *firstly*, to identify and represent critical moments from their practice (discover);
- *secondly*, to gain greater understanding of these issues through identifying new insights that emerge from making new associations, for example, through reading, professional dialogue or critical analysis (deepen); and
- *thirdly*, to set short-term targets to make a change to practice to embed this new practice and thinking (do).

The model was envisaged as repeated cycles of activity, each involving small targeted changes to practice.

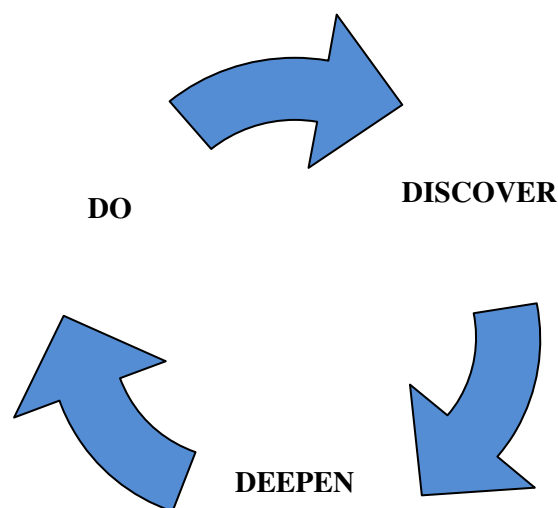


Figure 1 Discover – Deepen – Do (3D) model

The terms 'critical moment' and 'critical incident' were used to describe 'any observable experience or activity that presents itself as an important or significant personal episode, and affords analysis' (Harrison & Lee, 2011, p. 200).

The 3D model offered a shared approach to 'critical reflection'. Such reflection, recognised as important for adult learning (for example, Schön, 1983; Brookfield, 1995), and viewed as an 'active, purposeful process of exploration and discovery' (Harrison & Lee, 2011, p. 201) enables teachers' professional knowledge of practice to be valued by NQTs and teacher educators. Seeking to clarify the definition of reflection by re-visiting the work of John Dewey, Rodgers (2002, p. 844) stated that 'Dewey reminds us that reflection is a complex, rigorous, intellectual, and emotional enterprise that takes time to do well.'

Mezirow (1990, p. 1) provided the following distinction between 'reflection' and 'critical reflection': 'Reflection enables us to correct distortions in our beliefs and errors in problem-solving. Critical reflection involves a critique of the presuppositions on which our beliefs have been built.' He asserted that 'By far the most significant learning experience in adulthood involve critical self-reflection – reassessing the way we have posed problems and reassessing our own orientation to perceiving, knowing, believing, feeling and acting' and suggested '*Reflection on one's own premises can lead to transformative learning*' (Mezirow, 1990, p. 4 and 6, emphasis in original).

Loughran (2002) stressed the importance of reflection in teaching practice:

What is learned as a result of reflection is, to me, at least equally as valuable as reflection itself. It is through the development of knowledge and understanding of the practice setting and the ability to recognize and respond to such knowledge that the reflective practitioner becomes truly responsive to the needs, issues, and concerns that are so important in shaping practice. (p. 42)

The purpose of using reflection in the 3D model was to lead onto better informed action (Francis, 1995), emphasised in the third ('do') stage of the model.

Critical incidents or critical moments were used as the focus of the reflection for the model. Francis (1997, p. 169) described 'using critical incident analysis as a way of scaffolding for reflective practice and for illuminating the way that pre-service teachers come to know classrooms.' She focused on commonplace incidents in teaching, where she suggested 'we can best confront the values and beliefs that underpin our thinking, perception

and action', emphasising the importance of developing students' communication skills in order to support the 'process of collaborative critical reflection' (Francis, 1997, p. 171-172).

The following two elements were included to enable the NQTs to further develop their skills of writing and of articulating their views as they developed their professional voice. These elements supported the 'thinking spaces'.

Learning Journals

The learning (or reflective) journal was used to support the NQTs as they developed and documented their practice of critical reflection using the 3D model. It provided a place to capture and represent information about everyday issues in practice, including critical incidents and reflections on professional approach. It was anticipated that the journal would form a valuable record of the NQTs' experiences and could enhance the opportunities for professional learning.

Recording their thoughts and professional experiences in a journal, using this as a vehicle for reflection and analysing different learning and teaching approaches was designed to enable the NQTs to explore the principles underpinning their practice. It supported them as they used the 3D model to pro-actively identify and evaluate issues, seek solutions and implement them. Using these valuable skills could help prevent them from becoming overwhelmed by the new challenges they faced. This process can lead to greater clarity of the nature of teaching and more informed ways of understanding can develop.

A 'good learning journal' was described as one that would: articulate and analyse the NQT's learning and teaching approaches; celebrate what worked well as well as raise questions for future improvement; identify some of the tensions they faced as an NQT entering a new profession; show evidence of their ability to critically reflect on practice; make links to and critically analyse a range of reading, theories, perspectives and drivers; and be about 5,000 words or equivalent depending on the extent to which other forms of communication (described below) were utilised. Over the course of the module, students were encouraged to make entries in their journal as often as they could, but to record the use of a minimum of four cycles of the 3D model. Emphasis was placed upon there being no 'correct' way to complete the journal. Students were encouraged to be creative and to include text, pictures, diagrams, articles or photographs; to work in a personal style; and either to keep their journal accessible at school or to find other ways of ensuring immediate capture of ideas that might otherwise be lost.

By the end of the module the tutors expected the journals to have helped the NQTs to develop clarity of expression and their professional voice. A journal can act 'as a mirror of the mind' (Bowman, 1983, p. 25), and can help to raise tacit knowledge. Ultimately it can become a resource that can be used for longer term self-development as ideas are revisited and drawn upon at later stages (Latham, 1994; Moon, 1999).

Learning Conversations

NQTs engaged in a 'learning conversation' with one or more tutors during the assessment process. During the half hour session, students were asked to identify critical incidents they had reflected on during their induction year and to talk through some of the ways they had used this reflection to try to improve their practice. The session took the form of a dialogue, with informal feedback both during the session and afterwards. The team leader attended many of the learning conversations for the purposes of moderation.

The learning conversation was designed to demonstrate how the NQT's personal enquiry into their practice, recorded in their learning journal, had enabled them to identify key areas to develop as part of the process of developing professional confidence. The NQTs were required to acknowledge and articulate the pedagogical approaches underpinning their day-to-day classroom practice. This enabled them to demonstrate their learning, and also provided an opportunity for the tutors to give individual coaching. Engaging teachers in conversations about their practice is one way of moving them towards developing a critical reflective approach to their teaching (Senese, 2007).

A 'good learning conversation' was described as one that would: draw on the NQT's learning journal; invite them to identify strategies for effective teaching, enhanced pupil achievement and school improvement; make explicit links to transition points identified in their Career Entry and Development Profile (CEDP); consider the role of CPD in supporting them as a teacher; and demonstrate their professional skills in articulating their practice and their learning. Prior to the assessment the learning conversation was piloted during a module session as a role play activity. Working in pairs the NQTs developed questions to ask each other, so that they could gain experience of responding and taking part in this type of conversation.

The learning journal and the learning conversation were the two components of the module assignment, for which clear criteria were provided. Each of these components contributed to the assessment process, which was developed by members of the teaching team working together. This collaborative approach provided professional development for colleagues who had less experience in Master's level assessment.

Harrison and Lee (2011, p. 199), reporting the use of critical incident analysis and professional learning conversations in initial teacher education, suggest that: 'Academic discussion on reflection within early professional learning about 'how to teach' highlights the use of particular reflective skills and processes in developing practical and pedagogical understanding and self-knowledge.'

These authors also acknowledge the value of the written account, and they further emphasise the importance of the professional dialogue (Harrison & Lee, 2011):

Critical moments emerge as professional turning points for many student teachers, particularly when professional conversations with another, or within a peer group, also take place. These moments are often emotionally charged. They can be opportunities for insight and change, or not. Almost all student teachers seem concerned with finding solutions to their problems or resolving dilemmas, and they value supportive discussion, advice and solutions provided by others, including supervising teachers. (p. 211)

The Module Sessions

The four module sessions took place during the first semester of the academic year (Semester A), from October to December. Each session lasted approximately two or three hours and was spent with tutors and other NQTs, and in taking part in the learning conversation. There was some flexibility in terms of the delivery, with different scheduling and session duration if necessary to suit different settings. Group sizes varied but approximately twenty participants attended each session. In addition to the time spent with tutors and their peers, the NQTs were given guidance about the amount of additional time they were expected to spend researching, reading and writing and in other ways preparing their assignment.

The four sessions or 'thinking spaces' were led by members of the School of Education team, often supported by local authority and school consultants who made important links between different practices. A coaching and mentoring approach that was facilitative rather than a directive teaching approach was used, enabling 'a collaborative school-based teacher-directed learning experience' (Mitchell, Riley & Loughran, 2010, p. 536), designed to encourage a trusting, open space in which relationships could be built between the students and tutors and between the NQTs themselves. Chairs were placed informally in a circle to encourage an 'open' atmosphere in which the staff and students could connect with each other and talk, build trust, listen, question, explore, enquire, support, reveal their professional practice, and exchange ideas and knowledge throughout the session. During the sessions the teacher educators modelled how to critically analyse snapshots of day-to-day practice using a range of sources of information, including Teachers TV, journal articles and government reports. Loughran (2006) suggests that modelling:

...can be conceptualized as teaching in the very ways we encourage our students to teach but to do so with the intention of offering them access to the thoughts of, and knowledge about, such practice by explicating the underlying purpose of that teaching approach. (p. 95)

The following session outline is illustrative of the approach to learning and teaching. This session was carried out within the ethos of the 'thinking space', the informal, open setting described above, designed to allow NQTs to have space for thinking away from the hectic school setting. In this example, the 'deepen' phase of the 3D model, critically examining personal professional practice, was explored within the context of the complete model. Participants were encouraged to provide feedback from a directed task given in the previous session, in which they were asked to work through the 3D process and bring their learning journal with examples of what they had used to deepen their reflection. During the current session, they were invited to consider 'What else can you do to 'deepen' your critical reflection?' and 'What will you 'do' that's different?' Some examples of responses were provided. This was followed by an exploration of the concept of critical thinking, ensuring we are viewing issues from a wide range of perspectives, using Edward de Bono's Six Thinking Hats method (de Bono, 2000). The method was presented and used to analyse an example of a critical incident that was provided. The NQTs then worked in pairs to apply the different perspectives to individual issues that were identified. Finally, the participants considered why and how they could use and evaluate literature, and completed activities that were designed to strengthen and deepen the understanding through the literature, which involved studying an example of a learning journal entry, and modelling critical writing. Their personal reflection and directed task involved reading an article on reflective practice.

Evaluating the New Strategy

Aims

The main aims of the evaluation were to learn about the NQTs' experience of studying the module; the NQTs' views of the impact of the module on their practice; and the tutors' experience of teaching the module. The evaluation focused on the new pedagogical approach and the methods of assessment.

Data and Evidence

Data and evidence for the evaluation were collected using the following methods: *Documentation review*. Documents reviewed included: the programme specification and other module documents; module learning and teaching resources; and examples of assessment documents.

Survey methods - self-completion questionnaires (McColl et al, 2001). Tutors and NQTs who completed the module were invited to complete evaluation questionnaires. Most questions were open-ended, involving the collection of qualitative data and enabling the participants to share their views and experiences (Pope & Mays, 1995).

NQTs were invited to provide feedback on: highlights of the module; most challenging aspects; learning; aspects that had the greatest impact on practice in school; suggested improvements; and comments. They were also invited to document their views of the impact of the module on: their personal, professional and career development; the pupils they taught and other pupils in the school; other staff; and to consider impact beyond the school.

Tutors were invited to comment on: the strengths, challenges and achievements of the module; the aspects of the module considered to have the greatest impact on the NQTs' practice in school; suggestions for improvement; and any other comments.

Meetings and informal discussions. Information collected through discussions with the programme director and module leader, and with a small group of NQTs was used to clarify the process used to plan, implement and follow up the module.

Management and Presentation of the Findings

Some responses to the self-completion questionnaires are presented below. Many of the actual quotations are included to illustrate the 'richly descriptive' (Merriam, 2002, p. 5) nature of the findings. An overview of the tutors' responses is provided together with examples of references to elements of the new strategy. Similarly, the NQTs' feedback is included as an overview, together with excerpts that suggest some NQTs were developing as confident and critically reflective teachers; some key phrases; and extended excerpts from one respondent. The main theme used for presenting the findings from NQTs (developing as confident and critically reflective teachers) was derived from considering the purpose of the new strategy, the responses and the subject area.

Findings from the Evaluation

Twenty NQTs and three tutors completed end of module evaluation questionnaires and forty-two NQTs contributed their views of the impact it had on their practice. For each area of impact NQTs were asked to provide an example and evidence. Many responses were anonymous so the total number of NQTs contributing to the evaluation is not known.

Responses from Tutors

1. Overview

One or more of the tutors considered that the module provided opportunities for the NQTs to: discuss scenarios and find solutions with other NQTs; consolidate ideas; network; think; address and resolve significant issues; focus on issues and see them from different

viewpoints; investigate ideas; share their developing understanding of school life and the different issues they faced; and be reflective at a deeper level.

2. Examples of References to Elements of the New Strategy

Each of the three tutors referred to aspects of the new strategy in their evaluation of the module. An example from each tutor is given below.

Question: What do you consider [the module's] strengths?

'The key strength is the new format of the reflective learning journal.'

'Thinking spaces to consolidate ideas, both in journals and sessions.'

Question: What aspects of the module had the greatest impact on the students' practice in school?

'I liked the 'discover – deepen – do' model and I think the deepen part gave students the opportunity to become more resourceful.'

One tutor suggested that *'Guiding NQTs to be critically analytical rather than descriptive (especially in their conversations)'* was one of the most challenging aspects of the module.

Responses from NQTs

Overview

Ten of the twenty NQTs who completed the end of module questionnaire identified one or more aspects of meeting with other NQTs and professionals as a highlight of the module. Additional highlights included having the opportunity to reflect, noted by seven respondents, and completing the learning journal or learning conversation, reported by six. One NQT expressed it as follows:

'I enjoyed discussing my experiences with other NQT's. I also felt the journal enabled me to analyse & deepen my knowledge and understanding.'

One of the most challenging aspects was finding time, for example, time to read and research and in particular to complete the journal. One NQT commented:

'Trying to find the time to complete the journal & reading as well as teaching.'

Aspects of the new strategy featured throughout the responses. Journal writing, for example, was mentioned in response to the question 'What did you learn from studying on the module.' One NQT had considered using this approach in the classroom:

'I found the idea of journal writing itself really interesting, and from the reading we were given about this I've thought about how this could be used with my students as a technique.'

and also suggested that this was an aspect of the module that had the greatest impact on their own practice in school:

'The process of journal writing gave me space to think about issues that had been bothering me in my own practice.'

Eight NQTs referred to aspects of reflection in relation to learning from the module, and one respondent suggested that s/he had learned:

'To be a reflective learner/practitioner.'

Suggestions for improvements to the module included references to practical and administrative issues, such as changing the number and timing of sessions, and providing more information about the expectations for the assignment.

As a final comment one of the respondents reported:

'If the masters level modules had not been incorporated into the NQT course I do not think I would've undertaken the modules as the amount of work outside school is daunting. Also the nature of assessment has made this module inviting as I would have been put off by another lengthy masters level essay. The design of this course has made it easy for working practitioners to engage in.'

Excerpts That Suggest Some NQTs Were Developing as Confident and Critically Reflective Teachers

Table 2 includes excerpts from the NQTs' responses to two questions from the end of module evaluation form. These excerpts, taken from the complete set of twenty responses suggest that the respondents were developing as confident and critically reflective practitioners. Tables 3 and 4 include further examples collated from the NQTs' responses to the questionnaire about the impact of the module on their practice.

The NQTs' responses illustrate the way they were using elements of the 3D model in their practice setting and implementing change, for example, *'I have learned how to reflect on my work and take actions for improvement'* (Table 3). Whilst many of the responses suggest that the NQTs themselves were becoming more confident and reflective, these changes did not seem to be confined to the participants. When asked to identify the impact on others, some of them reported that the pupils in their class had *'Increased independence and ability to extend own learning'*; were *'...more motivated within my lessons due to the use of learning logs...much more reflective in their learning'* (Table 4); and have *'Increased self esteem'* and *'Increased confidence...'* (Table 5).

Although the NQTs refer to aspects of working alone, for example, in reflecting on their practice, they repeatedly acknowledge ways in which they were engaging with others including pupils, colleagues, parents and other NQTs. There are references to *'Being able to discuss practice with other teachers...'* (Table 2); *'...more confidence in meeting, approaching & talking to parents and other adults...'*, *'...share with other NQTs'*, *'Networking with people...Working as a team'* (Table 3); *'Encouraged discussion and reflection with LSAs [learning support assistants] and teachers'* (Table 4); and *'Professional conversations – asking for help within school and outside of school'* and *'Building relationships with out-side agencies'* (Table 5). Finding time for reflection and working together as part of a 'community of learners' were two important components to the approach to professional learning presented in this paper. These features and others highlighted above will be referred to again in the discussion section.

<p>What did you learn from studying on the module?</p> <ul style="list-style-type: none"> ☞ I have learned how to put the theory into practice in the classroom due to all the practical examples given and also how to apply different perspectives of thinking ☞ I learnt how to analyse the issues I was facing and look at them from a variety of perspectives – de Bono Hats ☞ Reflect on issues that I was coming across + ways to overcome them ☞ What I want to do next to improve wider areas within the school ☞ How reflective practice can help you stop and think about situations that occur day to day
<p>What aspects of the module had the greatest impact on your practice in school?</p> <ul style="list-style-type: none"> ☞ The 3D model outlined in this module has impacted my practice – This has given me a model to look at, reflect upon and act upon issues that arise in the classroom ☞ Understanding and seeing positives in negative situations ☞ Being able to discuss practice with other teachers, both good and bad

Table 2. Developing as confident and critically reflective teachers: extracts from NQTs' responses

<p>Foundation/Key Stage (KS) - Short-term/ longer term</p>
<p>Impact on own areas of development – personally, professionally, career</p>
<p>KS1 - Short-term Personally: I have learned how to reflect on my work and take actions for improvement Professionally: I have learned how to handle things more professionally and not personally eg Issue with parent – find out what is the best for the child Career: Made changes to my reading strategies by reflecting on my work</p>
<p>KS1 - Short-term Personally: Reflective practice, questioning the root of a problem to solve and progress Professionally: Liaising with special needs team Career: Making me more effective and professional in the workplace</p>
<p>KS1 - Short-term and longer term Personally: I feel I am less stressed on a day to day basis due to dealing with behaviour issues Professionally: I have developed more confidence in meeting, approaching & talking to parents and other adults and how to speak to them with a positive result Career: I am more motivated and confident in developing my role within teaching and feel I can approach and teach children within different year groups due to behaviour strategies I have learnt</p> <p>Personally: Overall a better NQT year stress free, more able to approach parents and overall confidence in my personal life Professionally: Improve my overall teaching skills as an NQT and meet all core standards Career: Gave me the confidence to take on more responsibility within the school</p>
<p>KS2 - Short-term Personally: I am more reflective as compared to journal entries from first half of Autumn term. I am making a conscious effort to see things from different perspectives Professionally: The main issue discussed has prompted me to seek advice, speak to</p>

<p>Foundation/Key Stage (KS) - Short-term/ longer term</p> <p><i>experienced staff confidentially and also to put into place strategies to resolve the personal issues for the child in the short term</i></p> <p>Career: <i>This incident and others discussed have made me aware of how every day is different for both the teacher and child. It has made me realise more how I am in the right profession now</i></p>
<p>KS2 - Short-term</p> <p>Personally: <i>Encouraged me to be more reflective in everything I do</i></p> <p>Professionally: <i>Encouraged/enabled me to be brave enough to make changes</i></p> <p>Career: <i>Reflective practitioner</i></p>
<p>KS2 - Short-term</p> <p>Personally: <i>Moved chn forward in guided reading by improving recording + focus of asst</i></p> <p>Professionally: <i>Thinking more widely than 'nuts & bolts' of teaching</i></p> <p>Career: <i>Wider, whole school perspective developed</i></p>
<p>KS3, 4, 5 - Short-term and longer term</p> <p>Personally: <i>Help to put my problems in a wider context and share with other NQTs Helped to reduce my stress over the issues – has been empowering</i></p> <p>Professionally: <i>Helping to develop teaching skills – especially differentiation and scaffolding pupils' learning</i></p> <p>Career: <i>My profile within my school has been raised as a result – I am seen as ambitious and wanting to improve</i></p> <p>Personally: <i>Developing a wider picture of the learning process – I now know that problems can be overcome with reflection and research</i></p> <p>Professionally: <i>Can see a longer-term development path for acquiring the skills I have identified as part of this assignment – ongoing CPD</i></p> <p>Career: <i>Most senior teachers in my school have a Masters degree or are working towards one</i></p>
<p>KS Not stated - Short-term and longer term</p> <p>Personally: - <i>Critical thinking developed</i></p> <ul style="list-style-type: none"> ☞ <i>My views changed, in particular my view of being a NQT</i> ☞ <i>Dealing with colleagues</i> <p>Professionally: - <i>Improved teaching methods</i></p> <ul style="list-style-type: none"> ☞ <i>Behaviour strategies</i> <p>Career: - <i>Confidence increased to take responsibility</i></p> <ul style="list-style-type: none"> ☞ <i>Networking with people</i> <p>Personally: - <i>Impact on decision making skills</i></p> <p>Professionally: - <i>Working as a team</i></p> <ul style="list-style-type: none"> ☞ <i>Be able to be trusted to have work delegated</i> <p>Career: - <i>Career progression through identifying strengths eg community cohesion</i></p>

Table 3. Developing as confident and critically reflective teachers: extracts from NQTs' responses about impact on their practice.

Impact on own areas of development

Foundation/Key Stage (KS) - Short-term/ longer term
Impact on pupils you teach (attainment, motivation, ways of working etc)
KS Foundation – Short-term <i>Motivation for the pupils has improved & there is a sense of community amongst the group</i>
KS Foundation - Longer term <i>Increased independence and ability to extend own learning...</i>
KS2 - Short-term and longer term <i>Awareness of their learning – self + peer assessment tactics + personalised learning techniques</i> <i>Handing control to pupils to motivate them to be a part of their learning</i>
KS3, 4, 5 - Short-term <i>Students are more motivated within my lessons due to the use of learning logs. They are more aware of the goals they [need?] to achieve to become successful learners & workers. This has therefore made them much more reflective in their learning</i>
Impact on other staff
Foundation - Short-term <i>Other staff have taken on the use of a reflective journal and are using it to improve their practice</i>
KS1 - Short-term <i>Sharing my experiences in terms of managing behaviour and strategies I have learnt with other staff and taking on what they suggest</i>
KS2 - Short-term <i>Encouraged discussion and reflection with LSAs [learning support assistants]and teachers – developed co-operative working and shared skills</i>
KS3, 4, 5 - Short-term and longer term <i>In liaising with colleagues on pupil A we have developed a supportive network. I am supporting the work of the [senior colleague] in using some of the skills I have learnt as part of the course</i> <i>I am now part of a staff focus group aimed at developing thinking skills within the school and am using the experiences of this course in this</i>
KS3, 4, 5 - Short-term <i>Discussing this with my mentor has made her question her own practice</i>
Impact beyond the school/institution
Foundation - Short-term and longer term <i>In my role...How to have learning conversations with others</i> <i>Develop thinking/reflection (of others) & disseminate good practice</i>
KS1 - Short-term <i>Discussing and sharing my behaviour and dealing with parents with other NQT friends in other schools sharing what worked and offering strategies eg how to approach parents</i>
KS2 - Longer term <i>Keeping up the contact with teachers in other schools could increase professional development as we could learn from each other</i>

Table 4. Developing as confident and critically reflective teachers: extracts from NQTs' responses about impact on their practice.

Impact on pupils, other staff and beyond the school.

Some Key Phrases

Table 5 includes some 'key phrases' collated from the end of module evaluation forms that illustrate the NQTs' views and experience. More than one phrase has been taken from some individual respondents.

<p><i>What did you learn from studying on the module?</i> <i>☞ The importance of deepening my understanding</i></p>
<p><i>What aspects of the module had the greatest impact on your practice in school?</i> <i>☞ Professional conversations – asking for help within school and outside of school</i></p>
<p><i>Impact on own areas of development</i> <i>☞ Confidence of own ability. Always look for wider opinions</i> <i>☞ Building relationships with colleagues and students</i> <i>☞ Increased motivation to investigate areas/ subjects</i> <i>☞ Strengthening own subject knowledge</i> <i>☞ Willingness to try new ideas – open to colleagues advice</i> <i>☞ Adopting open attitude to teaching + learning</i> <i>☞ Learning that being myself is important</i> <i>☞ Fulfilling & excelling in pastoral leadership</i> <i>☞ Wider range of strategies to my armoury! ...Have improved pedagogy and knowledge</i></p>
<p><i>Impact on pupils you teach</i> <i>☞ Encouraging independent learning</i> <i>☞ Constructive peer feedback</i> <i>☞ Positive relationships with other students and teachers</i> <i>☞ They learn in new ways with new strategies</i> <i>☞ Increased self esteem</i> <i>☞ Increased confidence. Positive atmosphere in class</i> <i>☞ Children willing to take risks</i> <i>☞ Learners more motivated</i> <i>☞ Successful strategies in place. All learners included</i> <i>☞ More positive teaching environment</i> <i>☞ Attainment levels increased. Children engaged. Children motivated</i></p>
<p><i>Impact on other pupils in the school</i> <i>☞ Children aware of class achievements through display (D+T)</i> <i>☞ Year 13 students → developing peer support programme</i> <i>☞ Classes sharing interventions – more children working together</i></p>
<p><i>Impact on other staff</i> <i>☞ Good working relationships</i> <i>☞ Sharing ideas. Working together/collaboration</i> <i>☞ Shared best practise</i> <i>☞ Building relationships with other staff I hadn't worked with</i></p>
<p><i>Impact beyond the school</i> <i>☞ Use shared strategies continuously</i> <i>☞ Conversing with colleagues on courses – sharing ideas</i> <i>☞ Building relationships with out-side agencies</i> <i>☞ Better relationship with parents</i></p>

Table 5. Key phrases: extracts from NQTs' responses to the evaluation

4. Example of an Individual Response

Table 6 shows excerpts from one NQT’s response about the impact of the module on their practice, illustrating the value of an individual contribution. This participant recognised ways in which their learning and teaching practice had been enhanced through reflection, supported by the journaling process, and through working with others.

Short-term	Longer term
Impact on own areas of development – professionally	
<i>I feel that whilst writing in the journal and reading related articles I have made situations/ issues in my classroom feel less alien. The reflective process has allowed me time to think of how to deal with the issue but then implement my findings into the classroom environment...</i>	<i>I feel that the process has allowed me to open up to my problems, rather than just keeping them in the back of my mind. I feel now that I could speak about an issue more openly, even within the context of a journal and this will allow me to deal with any number of issues that might arise at any point in my career (such as more expectations when taking on a new role). I will also be able to reflect back to my journal for reference if I am ever faced with a similar situation later on down the road.</i>
Impact on pupils you teach (attainment, motivation, ways of working... etc)	
<i>I feel that the process has allowed me to reflect on my practice in such a way that what I am providing for the children enhances opportunities to extend their learning, for example, by extending the provision in the role play area. As well as providing for those children who have SEN [special educational needs], such as my children with speech and language difficulties.</i>	<i>By recognising my mistakes, issues and problems through the journal process I am now able to recognise times when the children may be unmotivated, or feel that the way I am teaching is not engaging enough. As every cohort is different I will be able to use this process to always be changing and reflecting on my practice so that it has the best effect on learners.</i>
Impact on other staff	
<i>By researching some of the issues raised in my journal when I have approached the SENCO [special educational needs co-ordinator] instead of asking a question with a blank sheet I have instead been able to discuss ideas and bring these forward. This has benefited both me and the SENCO who is able to recognise the work I am doing and work from my ideas rather than it just being solely her input.</i>	<i>I feel that the knowledge that I have gained, and hope to continue to gain will help to benefit other staff if ever they are faced with a similar issue. I also feel that being aware of my issues/mistakes will help me in my performance management reviews, as well as demonstrate the progress that I have made.</i>
Impact beyond the school	
<i>I have been able to speak to other people from various Early Years settings and learn from their findings/ mistakes.</i>	<i>The process has helped me to recognise the importance of speaking to other people within the same profession but</i>

Short-term	Longer term
<i>Taking away from the sessions things that may not be valuable right at this moment in time, but may be helpful later on in my career.</i>	<i>outside of the institution, and I feel that this will have a great impact on my own personal knowledge that I can take forward in my career.</i>

Table 6. Excerpts from the response of one NQT - Early Years Foundation Stage

Discussion

Professional Learning

Mitchell et al (2010, p. 535) suggest that the increasing use of the term 'professional learning' within some research and policy documents indicates 'a shift from a training model to one that presupposes teacher autonomy and responsibility for building professional knowledge.' They use the term 'to describe both formal and structured programs to support teachers' learning in schools, as well as the more informal processes of teachers' learning associated with thinking about and reflecting on aspects of their practice' (Mitchell et al, 2010, p. 536).

The 'thinking spaces' described in this paper were designed to move the focus of the module from one of 'professional development' towards one of 'professional learning'; supporting the NQTs' development as professional learners. The thinking spaces provided the NQTs with spaces for 'being', acknowledging that they would become leaders of change within their school setting, contributing to continuous improvements in professional practice (Fullan, 1993). This necessitated a change towards a more facilitative role for members of the teaching team in order to create a trusting, open space in which professional relationships could develop. Students were encouraged to develop their own thinking, for example, through reading and reflection, and through professional dialogue involving talking, listening and questioning. The ability to engage in 'critical thinking' enables teachers to examine underlying assumptions and become more open to different ways of thinking and practising (Harrison & Lee, 2011). Support was provided through using the 3D model of critical reflection, reflective writing, and dialogue, and through collaboration with teacher educators and other NQTs.

The New Learning and Teaching Approach

Specifically, the purpose of the new learning and teaching approach was to enable the NQTs to: develop as critically reflective teachers; build confidence in their professional 'voices'; learn collaboratively; and assess their learning. The NQTs' responses to the evaluation suggest that this purpose was met for some of the students. One NQT, for example, reported that they were *'Thinking more widely than 'nuts & bolts' of teaching'* and a second reported using *'reflective practice'* characterised by *'questioning the root of a problem to solve and progress'*.

The following excerpt illustrates how one NQT felt they had developed their confidence in engaging with others and using their voice in school:

'I have developed more confidence in meeting, approaching & talking to parents and other adults and how to speak to them with a positive result.'

This NQT, and others, illustrated their developing professional confidence by reporting that they had taken on additional responsibility in school. Some respondents also provided

feedback that was relevant to learning collaboratively, and assessing their learning. For example:

'Developing a wider picture of the learning process – I now know that problems can be overcome with reflection and research.'

'Keeping up the contact with teachers in other schools could increase professional development as we could learn from each other.'

Reporting an investigation of the effect of using critical incidents to develop pre-service teachers' critical and reflective thinking skills, Griffin (2003, p. 218) noted that 'The Critical Incidents appeared to assist concrete thinkers to look beyond themselves and the immediate situation to larger, contextual issues.' There were certainly suggestions that the module had helped NQTs to develop an increasing awareness of others and of different perspectives, and of the impact of their teaching on pupils' learning. One respondent noted:

'Sharing my experiences in terms of managing behaviour and strategies I have learnt with other staff and taking on what they suggest.'

and another referred to:

'Handing control to pupils to motivate them to be a part of their learning.'

Discover – Deepen – Do (3D)

The 3D model was an essential element of the new learning and teaching approach. It was practitioner-centred, encouraging NQTs to identify an issue in their practice and to use critical reflection to move towards the underpinning theory and identify a solution. This *practice to theory to practice* model (Discover – Deepen - Do) provided a personalised, needs-led approach. In suggesting that 'Practice Drives Theory' Fullan (2011, p. 3) emphasises the importance of learning from experience and using personal practice, and the practice of others, to drive change. In this study, one of the NQTs reported that:

'The 3D model outlined in this module has impacted my practice – This has given me a model to look at, reflect upon and act upon issues that arise in the classroom.'

Other responses suggest that the NQTs were using the stages of the 3D model as they sought to resolve challenges in their practice:

'The main issue discussed has prompted me to seek advice, speak to experienced staff confidentially and also to put into place strategies to resolve the personal issues for the child in the short term.'

Several NQTs commented that their thinking and reflection had led to changes to their practice. One for example, reported *'I have learned how to reflect on my work and take actions for improvement'* suggesting a move from the 'deepen' to the 'do' stage of the model. This finding was supported by a tutor who considered the 3D model was one aspect of the module that had made the greatest impact on the students' practice in school. One of the NQTs highlighted the challenging nature of introducing change, acknowledging *'Encouraged me to be more reflective in everything I do. Encouraged/enabled me to be brave enough to make changes...'* Although it is not clear whether these changes were made to the NQT's own practice or that of others, some participants did provide more explicit examples of ways in which they were using the learning from the module. For example, two respondents reported changes in their own practice:

'I am more motivated and confident in developing my role within teaching and feel I can approach and teach children within different year groups due to behaviour strategies I have learnt.'

'I am now part of a staff focus group aimed at developing thinking skills within the school and am using the experiences of this course in this.'

and one referred to impact on the practice of colleagues:

'Other staff have taken on the use of a reflective journal and are using it to improve their practice.'

Harrison, Lawson and Wortley (2005, p. 422) argue that new teachers need support to 'apply the brakes' so that they become critical of their own practice and develop the habit of reflection, later noting that 'Reflection however is not simply, *learning in the raw*, but is a process of making *what we learn make sense*, so we better understand it' (Harrison et al, 2005, p. 422, emphasis in original). Through using the model NQTs were encouraged to reflect in this way on their experiences and take action, a feature Findlay (2006) suggested was not evident in the school-organised induction programme she reported as a small-scale case study. Taking action is important; Harrison et al (2005), for example, emphasise the importance of reflection for developing professional practice *when* it is followed by further action.

Learning Journals

Francis (1995) suggested that preservice teachers' attitudes towards reflective writing together with their writing skills need to be carefully developed. The tutors recognised this challenge for some students in the current study, guiding them to move from the descriptive journal entries they recorded early in the module towards more reflective writing. Dialogic reflection was encouraged, where reflection could increasingly become analytical, through seeing issues from a variety of viewpoints. An encounter in the classroom needed to be both written down and then interrogated through the process of writing and critical reflection. It was important that tutors explained the need for patience and realism. Reassurance was given that insights would emerge as writing gradually progressed (Ghaye, 2011). Although journal writing is often for private use, the NQTs knew that they would be sharing their entries, both for continued dialogue with tutors and peers and for assessment purposes. It was thought that this might help to ward off waning enthusiasm and ensure commitment to regular entries and reflection (Ghaye, 2011). Several of the NQTs valued the reflective writing process, sharing it with colleagues, or using it to support their own practice. As one early teacher working at Early Years Foundation Stage expressed it:

'I feel that whilst writing in the journal and reading related articles I have made situations/ issues in my classroom feel less alien. The reflective process has allowed me time to think of how to deal with the issue but then implement my findings into the classroom environment...'

Learning Conversations

The new strategy also emphasised the potential for professional learning through professional dialogue and, for example, 'everyday conversation' (Haigh, 2005) or what Senge (1994, p. 18-19) describes as 'real conversation' or "'learningful" conversations', requiring reflection. Meetings of NQTs were among the methods of support identified by NQTs in a survey carried out during their first year of teaching (Capel, 1998). In the same survey, talking to others either inside or outside school was identified as the coping mechanism used by the largest number of respondents (Capel, 1998), emphasising the perceived importance of dialogue. In a context of 'spontaneous collaboration' Williams, Prestage and Bedward (2001, p. 265) suggest that 'professional discussion is probably the most powerful development tool'. The importance of professional relationships and dialogue for the learning of beginning

teachers, elements integral to the approach described in this paper, are emphasised by Beattie (2000):

In the context of professional learning and in the processes of responding to others and developing the abilities to be more responsible, prospective teachers move beyond the limitations of their own knowing; learning to learn from and with others and engage in the co-construction of meanings...

Within collegial relationships, beginning teachers can learn about themselves, about others and about teaching and learning, as they re-focus their attention from themselves and their teaching onto students and their learning. Through honest dialogue and conversation with colleagues, they can learn to accept perspectives other than their own, transcend the limits of their own knowing, cultures and life experiences, and learn how to create classroom communities where their students also learn and enact these qualities. (p. 4)

Strengths and Challenges

The evaluation findings provide valuable insights into the views and experiences of the respondents. However, these findings should be interpreted within the context of the study and the limitations of the evaluation process, which include those common to the collection of data using self-completion questionnaires. For example, the respondents were self-selecting rather than a complete sample, and some responses were dependent on respondents' recall and might have been influenced by discussion with colleagues.

In addition to the challenges associated with implementing the new learning and teaching approach discussed earlier, the main limitations reported by the NQTs were associated with practical and administrative issues in relation to the module.

Implications for Practice

This paper provides an account of the implementation and evaluation of a new pedagogical approach developed to support NQTs during a particularly demanding stage of their professional lives, the transition from student to qualified teacher. As Kosnik (2007, p. 29) suggests: 'We need to make explicit pedagogies of teacher education that help to guide both new teachers and experienced teacher educators. Developing such pedagogies is fraught with challenges, but that is what teacher education is all about.'

The personalised approach to induction described here, provides opportunities for professional learning based on the individual (Training and Development Agency for Schools, 2007), and allows for some of 'the unique needs of each individual to be identified and addressed' (Capel, 1998, p. 410-411). It both viewed the process as an opportunity for 'professional reflection and growth' (Findlay 2006, p. 529) and provided the time required for the reflective process and action based on experience, features of the induction process recommended by Findlay (2006). In addition, the feelings of isolation recognised as an issue for new teachers (Findlay, 2006) could be reduced through interaction with members of the group. In contrast to the NQTs interviewed by Findlay (2006, p. 527), the NQTs in this present study clearly had opportunities 'to reach out to the broader educational community.'

The following excerpts from Haggarty and Postlethwaite (2009) express the underpinning principles of the learning and teaching approach described in this paper, which

included 'thinking spaces', an emphasis on practice-based professional learning, and the development of a 'community of learners':

We suggest that moving the learning of NQTs forward may require a focus not only on induction, but on schools themselves. NQTs are keen to be seen as 'proper' teachers, yet the idea of what it means to be a 'proper teacher' needs to be considered. In an expansive learning environment, being a proper teacher is one in which teachers engage in enquiry on and about their practice; where classrooms are sites for professional learning as well as pupil learning...

In order for a developing teacher to do more than fit into existing practices, a systematic examination of ideas and thinking has to take place; the possibility of different ways of understanding situations has to be valued; teachers need to be active members of a community that supports learning and enquiry; and there needs to be a pedagogy for beginning teacher learning which moves induction tutors on to an informed and sophisticated level of thinking, support and activity. (p. 20)

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