



# Teachers and Teaching

Theory and Practice

ISSN: 1354-0602 (Print) 1470-1278 (Online) Journal homepage: <https://www.tandfonline.com/loi/ctat20>

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**To cite this article:** Trevor Mutton , Hazel Hagger & Katharine Burn (2011) Learning to plan, planning to learn: the developing expertise of beginning teachers, *Teachers and Teaching*, 17:4, 399-416, DOI: [10.1080/13540602.2011.580516](https://doi.org/10.1080/13540602.2011.580516)

**To link to this article:** <https://doi.org/10.1080/13540602.2011.580516>



Published online: 24 Jun 2011.



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## Learning to plan, planning to learn: the developing expertise of beginning teachers

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(Received 11 September 2009; final version received 29 October 2010)

Learning how to plan is recognised as a key skill that beginning teachers have to develop but there has been little research examining *how* they may actually learn to plan. This paper, based on the analysis of 10 post-lesson interviews with 17 secondary school teachers across three years (the PGCE year and the first two years in teaching) focuses on: what these beginning teachers learned about planning; the nature of that planning; and the development of their awareness as to what planning could and could not achieve. The findings demonstrate that learning how to plan is a feature of beginning teachers' learning well beyond the PGCE year, indicating that it is through planning that teachers are able to learn about teaching and through teaching that they are able to learn about planning. We discuss the implications for teacher educators and others involved in the professional learning of beginning teachers.

**Keywords:** teacher education; beginning teachers; teacher induction; lesson planning

### Introduction

Few would question Westerman's assertion that 'teaching is a complex and cognitively demanding' activity (1991, p. 292) and this claim is exemplified through her analysis of the decision-making processes that both 'expert teachers' and 'novice teachers' are engaged in, particularly in regard to the planning of lessons. Planning, defined by Sardo-Brown as 'the instructional decisions made prior to the execution of plans during teaching' (1996, p. 519), has long been seen as the context in which teachers make a range of important decisions (Clark & Peterson, 1986); there has, however, been little research focusing on how beginning teachers actually learn to plan and, in mastering the process, see the curriculum being 'transformed and adapted' (Clark & Lampert, 1986) through a complex process of decision-making.

This complexity is in danger of being masked, however, if planning is seen merely as being one of a number of teaching competences required for qualification as a teacher. In England, for example, in order to meet the Professional Standards for Qualified Teacher Status (2007), beginning teachers must be able to:

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Plan for progression across the age and ability range for which they are trained, designing effective learning sequences within lessons and across series of lessons and demonstrating secure subject/curriculum knowledge. (TDA, 2007, paragraph Q22)

Similar requirements exist in a number of European countries (Eurydice, 2002), indicating that planning is seen by a range of international regulatory bodies as being of fundamental importance in the formation of beginning teachers. Of the 13 tasks identified as having to be performed competently by teachers across Europe in the final qualifying phase (which in the United Kingdom is seen as the induction year) only 'organisation and preparation of lessons in accordance with the requirements of pupils for whom teachers are responsible' was required in all 10 countries surveyed (Eurydice, 2002, p. 82). However, the language of 'organisation and preparation' offers no suggestion of the complex nature of the thinking that Clark and Yinger (1979) have identified as taking place during this pre-active phase of teaching.

Acknowledging the potential tensions between a research perspective that sees planning as a complex process, and performance indicators that appear to present planning as an important yet nevertheless straightforward professional skill to be acquired, our purpose here is to explore how these tensions play out in relation to the development of beginning teachers, and how their learning about planning contributes to their overall developing expertise. As part of a wider study (tracing the development of student teachers through their training year and on into the first two years in a teaching post) we were keen to examine what exactly was being learned in relation to planning and whether the nature of this learning changed, if at all, over the course of the three years. Using Calderhead's (1996) analytical framework we explore some key aspects of the literature on planning. We draw further on this framework in the analysis of the research findings.

In his review of research on the thinking of experienced teachers while planning, Calderhead (1996, p. 713) concludes that, notwithstanding the variety of methodological approaches employed, 'six key characteristics can be identified: planning occurs at different levels; is mostly informal; is creative; is knowledge-based; must allow flexibility; and occurs within a practical and ideological context'. But to what extent does such a framework reflect the way in which *beginning* teachers plan their lessons?

### ***Planning occurs at different levels***

Firstly, we may question whether or not it is possible for beginning teachers, and in particular student teachers, to plan at different levels; that is to say, carry out what might be called long-term and medium-term planning as well as planning on a weekly, daily and lesson by lesson basis. While there may be the requirement for them to be able to plan at these various levels by the end of their period of initial training (Training and Development Agency for Schools (TDA), 2007) the starting point for their planning is likely to be at the level of the individual lesson. While they still have to develop plans 'in the context of diverse planning decisions that may have been made some time previously' (Calderhead, 1996, p. 714), they themselves will not have played any part in those earlier decisions.

### ***Planning is mostly informal***

Secondly, although Calderhead identifies the planning of experienced teachers as being largely informal, with lesson plans only being written 'to satisfy administra-

tive requirements' (1996, p. 713), the planning of beginning teachers (and in particular student teachers) often entails a very formal process. Written lesson plans are frequently produced according to particular models or standardised formats (John, 2006), which serve as a means of ensuring that the student teacher has taken into account a number of factors in the planning of the lesson itself. In his critique of such models John concludes that 'the creative, problem-solving, "intelligent" aspects of planning and teaching become lost as students are encouraged to conform to rigid templates' (2006, p. 495).

### ***Planning is creative***

Given the requirement for beginning teachers to follow prescriptive models it is not difficult to see how their scope for creativity may be limited. Rather than reflecting the range of approaches to planning, many of which use organic metaphors to capture the nature of the process (John, 2006) and which challenge the 'objectives model' (Elliott, 2001), the lesson plan itself becomes a tool that is used to influence the way they do certain things. Teacher educators, for example, may promote a particular planning format in order to provide some guarantee that a range of issues have been considered in the planning of the individual lesson, as well as to ensure that there is an appropriate regard for legislative requirements or national priorities. Calderhead, like Clark and Peterson (1986) before him, argues that experienced teachers rarely follow a rational model but tend to look for good ideas and then for ways of translating these ideas into workable classroom activities. If planning is regarded as a psychological process of envisioning the future, and of considering goals and ways of achieving them (Clark & Dunn, 1991), it follows that beginning teachers (with their limited knowledge and experience) will have less scope to plan their lessons in as creative a way as their more experienced colleagues.

### ***Planning is knowledge-based***

Calderhead acknowledges that planning is difficult for beginning teachers because 'they lack the extensive knowledge base that is required' (1996, p. 714). In contrast to experienced teachers who, when planning, often draw on knowledge rooted in their experience, beginning teachers have very limited experience on which to draw and may depend too heavily in their planning on subject-content knowledge. Furthermore, while such dependence can serve as a personal 'safety net' (Koeppen, 1998, p. 405) with which to enter the classroom, it does not necessarily help beginning teachers (and student teachers in particular) to develop their understanding of what planning can and cannot achieve. By capturing representations of the 'structural knowledge' that student teachers draw on when planning, Beyerbach (1988) demonstrated how student teachers' perceptions of teaching had changed during a term and how much they had learned about planning, leading him to conclude that learning about planning is essentially learning about teaching.

### ***Planning must allow flexibility***

Prescription in terms of the format or content of lesson plans expected of beginning teachers, as described above, inevitably cannot allow for the flexibility that experienced teachers demonstrate in their planning. Furthermore, while

experienced teachers draw on a ‘large repertoire of plans in memory’ (Calderhead, 1996, p. 714) it is precisely such a repertoire that beginning teachers lack. It may, however, only be possible for them to build this repertoire and to acquire such flexibility by working through a series of approaches to planning that differ from those used by experienced teachers. In England the extent to which flexibility and creativity have recently been a feature of even experienced teachers’ planning is open to question, given the range of national strategies operating (such as (Department for Education and Employment (DfEE), 1998b; 1999) which have brought with them specific expectations of how ‘effective’ lessons should be planned (for example, (Department for Education and Skills (DfES), 2002a). Student teachers working within these contexts have also been obliged to produce increasingly formal evidence of their ability to plan in order to meet successive sets of standards (DfEE, 1998a; 1998b; DfES, 2002b; TDA, 2007). Furthermore, beginning teachers may not have anticipated the ‘hours of planning and thinking about teaching that are required to make interactive teaching possible’ (Rust, 1994, 216).

The level of prescription included in the pro formas that beginning teachers are offered within the national strategies in England has also tended to impose rigid frameworks on the nature of their plans, with many of the models fitting John’s (2006) critical description of a ‘system’ approach where ‘all the steps in the model lead to or emerge from the aims and objectives in a linear, rational ends-means sequence’ (2006, p. 486).

### ***Planning occurs within a practical and ideological context***

In their planning all teachers have to take account of a range of contextual factors such as the nature of particular classes and of individual pupils within these classes, as well as the ethos of the school in general. For student teachers there is the additional difficulty of working with other teachers’ classes. Koeppen’s (1998) case study alerts us to the constraints that may be faced if experienced teachers unintentionally impose their own curriculum interpretations on the beginning teachers with whom they are working:

When student teachers want to try something different, cooperating teachers may experience an increased level of discomfort which manifests itself as resistance. Thus, even in the best of classroom situations, student teachers may not feel encouraged to plan for and explore a variety of teaching strategies as they seek to define themselves as teachers. (1998, p. 403)

Beginning teachers are unlikely, therefore, to be able to plan in the same way as experienced teachers and we should, therefore, not be surprised that ‘novice teachers are often involved in planning and evaluation activities for survival’ (Dunn & Shriner, 1999, p. 638). Learning how to plan does, however, make a critical contribution to the development of teaching expertise and we would, therefore, argue that it is vital to pay attention to what beginning teachers are learning both about planning itself and about what it can and cannot achieve.

The process by which this learning takes place is equally important but there is little research that reports specifically on the way in which beginning teachers are supported in the development of their planning skills, despite the extensive research into the context of school-based mentoring itself. While Hobson, Ashby, Malderez,

and Tomlinson (2009) cite ‘a wide range of influential perspectives on professional knowledge and its acquisition’ (2009, p. 208) it is the notion of inexperienced teachers’ learning from experienced colleagues in a ‘community of practice’ (Lave & Wenger, 1991) that is a recurrent model within the mentoring literature. Harrison, Lawson, and Wortley’s (2005) assertion that ‘situated learning theory provides a powerful model of how professionals learn to apply technical knowledge within ever-changing social contexts’ (2005, p. 421) is by no means unusual, but its value as a model of the way that mentors work with beginning teachers in relation to the development of their planning needs further exploration.

### The study

The data drawn on in this paper were collected as part of a three year longitudinal study of beginning teachers in England, following them as student teachers on one-year secondary Postgraduate Certificate of Education (PGCE)<sup>1</sup> course and subsequently through the first and second years of their teaching career. Thirty-six student teachers were initially recruited to the project from two well-established school/university courses, 12 from each of three core subjects within the National Curriculum for maintained schools in England, namely English, mathematics and science.

Each of the beginning teachers was observed teaching on four occasions during the PGCE year (interviews 1–4) and once a term during the subsequent two years (interviews 5–7 and 8–10, respectively). Each observation was followed by a semi-structured interview in which the teacher’s thinking about the planning, teaching and evaluation of the particular lesson was explored. The interviewer was a member of the project team and was not connected to the interviewee in any other way and not involved in either tutoring or assessing the teacher in question. The data presented in this paper relate to all three years of the study and thus cover 10 interviews in total with each teacher. The interview schedule itself was modelled on that used by Brown and McIntyre (1993) to enable experienced teachers to articulate their ‘craft knowledge’, but was modified to include a specific focus on the thinking behind the teachers’ planning of the lesson. As beginning teachers this pre-active phase was likely to be more important for their practice than it is for experienced teachers (Clark & Yinger, 1979), so we asked them quite deliberately to explain the decisions and choices they had made at the planning stage. We also asked them to reflect on possible changes to their teaching they might make in light of their evaluation of the lesson. The focus of the final part of the interview was placed explicitly on their learning – asking both what they had learned from the lesson itself and secondly, what they were learning more generally at this particular stage in their development.

The findings discussed in this paper<sup>2</sup> relate to the analysis of 170 post-lesson interviews carried out with the 17 beginning teachers for whom complete data sets were available across all three years of the study. Of the 17 teachers in the sample five were English teachers, four mathematics teachers and eight science teachers (Table 1).

### Data analysis procedures

From the beginning teachers’ accounts of their practice all *specific* references to aspects of teaching about which they claimed to be learning were identified and

Table 1. Participants by gender and teaching subject.

Name	Age at beginning of PGCE year	Gender	Teaching subject
Adam	21–25	Male	Maths
Anita	31+	Female	English
Brian	31+	Male	Science
Bridget	21–25	Female	English
Gill	26–30	Female	Science
Hanif	21–25	Male	Maths
Hannah	21–25	Female	Science
Jane	21–25	Female	English
Jim	21–25	Male	Maths
Katherine	21–25	Female	English
Lindsay	26–30	Female	Science
Liz	21–25	Female	Science
Matt	21–25	Male	English
Rhiannon	21–25	Female	Maths
Rob	26–30	Male	Science
Stewart	21–25	Male	Science
Sunil	21–25	Male	Science

analysed, as well as any more *general* reflections on the processes by which they were learning or their role as learners (see Burn, Hagger, & Mutton, 2007; Hagger, Burn, Mutton, & Brindley, 2008; Mutton, Burn, & Hagger, 2010). Using a grounded approach (Glaser & Strauss, 1967) analytical categories, relating to the substantive focus of their learning and the processes by which they believed it was happening, were developed through an iterative, inductive process using the transcribed data, with responses coded and grouped within specific categories in order to allow patterns and relationships to emerge (Miles & Huberman, 1994). Care was taken to avoid bias in the analysis of the data by discussing fully within the research team any categorisation or interpretation made by an individual researcher.

This paper draws on the analysis relating to one specific substantive focus of their learning – learning about planning – to answer the following question: in each of the three years what do the beginning teachers claim they are learning in relation to planning and how do these claims change, if at all, over the course of the three years?

### Findings and discussion

While the list of categories shown in Table 2 reveals the wide ranging nature of the beginning teachers' learning, planning clearly emerges as the most prominent category in the PGCE year. It remains a strong category in the newly qualified teacher (NQT) year and although the number of instances was reduced by half in the second year of teaching 15 of the 17 teachers nevertheless continued to identify planning as a focus for their learning. Initial consideration of the data explored the value of comparing the student teachers across different subject areas. In spite of the fact that these teachers might be expected to have different conceptualisations of planning (given that they were from a range of different subject disciplines and had at their disposal a greater or lesser number of pre-existing lesson plans or schemes of work) there were no significant differences between subject groups as to what and how they were learning about planning.

Table 2. The number of instances of each focus of the beginning teachers' learning. Figures in brackets refer to the number of beginning teachers making reference to a particular focus ( $n = 17$ ).

	PGCE year	NQT year	Second year of teaching
Planning	88 (17)	70 (17)	40 (15)
Interactive teaching skills (ITS)	72 (15)	39 (15)	30 (13)
Management of lessons	61 (15)	62 (15)	40 (15)
Behaviour management	38 (14)	61 (15)	35 (13)
Teaching strategies	34 (13)	106 (17)	76 (17)
Management of resources	22 (11)	18 (7)	13 (8)
Contextual knowledge	34 (12)	66 (15)	47 (15)
Self	22 (11)	45 (16)	57 (16)
Subject knowledge	6 (4)	10 (5)	0 (0)
Specific aspects of teaching the subject	6 (6)	13 (8)	10 (6)
Assessment and monitoring	5 (3)	10 (7)	12 (6)
Relationships	None coded	27 (11)	32 (13)

Closer analysis of the 'planning' category resulted in the identification of further sub-categories which were grouped together under three broad headings, namely the 'process of planning', 'planning in outline' and 'planning in detail'. From this closer analysis some patterns of development across the three years emerge (see Table 3).

In the PGCE year much of what was learned about planning was, unsurprisingly, related to the *process of planning* and recognition of the role that planning had to play in the success of their teaching. There was a developing awareness of how to plan for specific contexts (for example, how to plan for a class of post-16 students as opposed to a class of younger learners) as well as planning for the use of different teaching strategies. In addition, there was an awareness that planning had to be flexible enough to take account of the classroom responses of the pupils

Table 3. The number of instances of each sub-category of planning as the focus of the beginning teachers' learning. Figures in brackets refer to the number of beginning teachers making reference to a particular focus ( $n = 17$ ).

	PGCE year	NQT year	2nd year of teaching
Planning	88 (17)	71 (17)	40 (15)
Process of planning	35 (12)	44 (17)	26 (13)
Role of planning	19 (12)	7 (4)	1 (1)
How to plan	8 (5)	35 (14)	22 (11)
Contingencies	7 (7)	2 (2)	3 (3)
Format of plan	1 (1)	0 (0)	0 (0)
Planning in outline	30 (10)	16 (8)	7 (6)
Overall coherence	21 (8)	3 (3)	1 (1)
Variety of strategies	7 (4)	9 (5)	4 (4)
Extended sequence	2 (2)	4 (2)	2 (2)
Planning in detail	23 (11)	11 (6)	7 (5)
Pitching	15 (9)	6 (4)	7 (5)
Explanations	6 (4)	3 (3)	0 (0)
Instructions 1	2 (2)	2 (2)	0 (0)

and the related need to learn how to plan for a variety of contingencies. The student teachers also gave accounts of what they were learning about planning for the overall coherence of a lesson, for example, learning how to cover the appropriate amount of curriculum content effectively within the time available and ensuring that there was a logical progression in the lesson that would be apparent to the pupils. Planning across an extended sequence of lessons was not a strong focus of their learning in any of the three years of the study, but this may be explained by the fact that the data collected related specifically to their thinking in relation to individual lessons. As they took on an increasing level of responsibility for the classes they were teaching, the student teachers were learning how to take pre-existing schemes of work and other teachers' suggestions and ideas and make them their own, something that had not been possible earlier on:

In January . . .the drama lesson in particular was one which was given to me by my drama mentor and not something that I had actually been able to focus on and make my own in my own mind, so I had literally been following through someone else's instructions which didn't, in my mind, make sense. I wasn't entirely clear what I was doing. So I think, even though in this instance (she)had given me the material, well not the material but the ideas, that I had to make those ideas my own and do it in my own way. (Jane, English student teacher, interview 4)

However, those teachers who became more proficient at adapting other teacher's plans in the PGCE year were not necessarily able to do so easily in the following two years since the nature of their situation changed. As a student teacher it was very much a question of adapting the lesson plans of other teachers in order to teach *other teachers'* classes. In subsequent years many found that they still needed to learn how to adapt existing lesson plans and schemes of work for what were then *their own* classes.

In the PGCE year, there was also a focus on learning about detailed planning in order to meet the needs of the range of learners. This was often expressed as a need to 'pitch' things appropriately both in relation to the level of the class as a whole and in relation to individuals or groups of individuals within that class.

By the end of the PGCE some aspects of planning (such as planning for the overall coherence of a lesson and 'pitching' the content of the lesson at the right level for the learners) appeared to have been dealt with relatively effectively. However, what remained a focus for the beginning teachers in both the first and second year of teaching was learning *how to plan*. Initially this might seem somewhat surprising but their concern was not that they did not know how to plan but that they needed to learn how to plan within the context of their new role as NQTs and beyond. The main issue here was how to plan for the range of lessons which they were required to teach within particular time constraints:

Certainly this term I've relied quite heavily on the books and the schemes of work. Only when I think it's particularly poor do I actually move away from that and do something different. I think most of the NQTs agree that during the first half term we didn't think our lessons were up to what they were last year, simply because we didn't have the time to put into them. (Rob, Science teacher, interview 5)

Furthermore, as in the PGCE year, the beginning teachers, particularly as NQTs, were also learning how to plan for the specific needs of the learners they were now

teaching and in ways that would allow them to react flexibly and to respond to the class as appropriate. In the PGCE year many of the student teachers had learned how to plan for contingencies and to anticipate potential problems or unforeseen events, but the teachers in their first and second year of teaching were talking not about responding to situations such as these but primarily about being able to respond to the interests and enthusiasm of the pupils themselves. They wanted to be able to improvise within the classroom in order to build on the pupils' learning as it was taking place.

By the second year of teaching planning was clearly a less dominant focus of the teachers' learning but this diminished focus should not be taken as evidence that these teachers were now confident about their ability to plan effectively since 15 of the 17 claimed that they were learning about it in some form or another. What stands out in the second year of teaching, however, is the number claiming that they were still learning *how* to plan and this ongoing focus can be attributed to the fact that both their understanding of the nature of planning and their expectations of it were changing. Furthermore these changes were taking place within the context of time constraints as the 50–60% teaching timetable of their PGCE year was replaced by a 90% timetable in the NQT year and a full-teaching load in the second year of teaching. As a way of addressing the issue several of the teachers looked to adapting existing resources. This in turn led to the identification of a further learning need, since they found that such adaptation was not a straightforward process and that specific thought needed to be given as to how to take the ideas of others and make them their own, or even to adapt their own plans for a different group of pupils. Whereas some learned how to do this relatively easily, others continued to mention it as a focus for their learning about planning. The dilemmas they encountered in this process included trying to implement teaching strategies that were not felt to be appropriate for the pupils in question, trying to cover prescribed content too quickly at the expense of effective learning and trying to adapt the level of difficulty of the tasks to make them appropriate for the pupils concerned.

The findings overall suggest that it might be useful to think about the role of planning in beginning teachers' learning in three different ways.

### ***Planning as visualisation***

Perhaps the most striking finding to emerge is the high proportion of instances mentioned in the NQT year and the second year of teaching in relation to the sub-category 'how to plan'. In both cases this represents approximately 50% of the instances across the whole planning category, compared to 10% in the PGCE year. The beginning teachers were clearly learning how to plan not only in the PGCE year but also in each subsequent year as they began to understand the relationship between planning and learning. In the PGCE year planning was important as a means of enabling student teachers to learn about the processes of teaching and learning, rather than for what they could learn about planning per se. In the NQT and second year of teaching what they learned about teaching and learning could then, in turn, be integrated into their planning. We would suggest that this is the reason why their learning about planning changed. What they continued to learn about planning was not about choosing the content, selecting the activities or getting the sequence right within the lesson. Planning for the overall coherence of the lesson was something which could be mastered, more or less, during the PGCE

year (see Table 3). The bigger focus on learning how to plan, following the PGCE year, was rather about developing the capacity to visualise, to anticipate the response of the pupils and to be flexible enough to accommodate such responses.

In the early stages of the PGCE year planning for such responsiveness was simply not possible, working, as the student teachers often were, on single, isolated lessons; and without the most crucial element of a teacher's knowledge – detailed knowledge of the pupils themselves. It was only with increased familiarity with particular classes that these beginning teachers could begin to accommodate in their planning the unpredictability of living classrooms and by so doing plan flexibly enough to respond to classroom events appropriately. Thus the increase in the instances of what the teachers claimed to be learning about how to plan in the NQT and second year of teaching reflected a developing understanding of the relationship between the pre-active and the interactive phases of teaching. Many of them came to realise that planning was the anticipation of what *might* happen rather than their determination of what *would* happen: this was planning as visualisation, rather than planning as a template. The beginning teachers here thus developed the capacity to engage increasingly effectively in what Schön (1987) has termed 'reflection in action', allowing them to plan with the scope for greater flexibility and increased confidence that they could make appropriate decisions in the moment.

### ***The nature and role of the plan***

In the PGCE year the emphasis was primarily on the plan as a 'script' which represented the knowledge and content that needed to be covered in the lesson. As time went on it was not that these teachers became less dependent on the plan, it was just that the nature of the plan changed. The 'script' stage appeared to be a necessary one at a time when beginning teachers had neither a detailed knowledge of the pupils nor a wide repertoire of appropriate teaching strategies and for many it offered a much needed security blanket or the 'safety net' (Koeppen, 1998, p. 405) referred to above. The limited number of sources on which they could draw also tended to produce, as Calderhead (1996) had identified, a greater dependence on what was available, such as course books, schemes of work, tutor pro formas or checklists, as well as precise details of the knowledge to be covered with the pupils. Many of the beginning teachers at this stage had yet to develop an understanding of what planning could and could not achieve for them. They needed to appreciate that the detailed 'script' would not enable them to develop an appropriate level of responsiveness. It is difficult to find an apt metaphor to describe the nature of planning as it developed to take account of that responsiveness. Notions such as template, sketch, framework, projection, mapping, etc. do not adequately describe the product of the pre-active phase since in teaching there is always the element of unpredictability. Even Alexander's (2000) analogy with musical performance, cited in John (2006), where the score is interpreted or changed as the music is improvised, does not fully capture the relationship between the planning stage and the nature of the classroom interaction itself. Beginning teachers, therefore, have to learn about the unique relationship between the pre-active and the interactive phases and plan accordingly, which is not without its difficulties.

There are in effect two separate pressures driving the need to move away from the 'script' stage. As well as an increased understanding of the need to be responsive, teachers are also faced with an acute shortage of time. The need to plan effec-

tively for the learning of a range of different classes within the limited amount of time available is a key challenge facing teachers in their first few years of teaching. For many of these teachers there was clearly never enough time so the challenge became how to plan more quickly and how to avoid having to start each plan from scratch. The time it took to plan lessons was an issue for more than half of the teachers in the sample during their NQT year and for more than a third during their second year of teaching. It was clearly not something that could easily be resolved. Such detailed planning took time and while they might then look to ‘cut corners’ where possible, there were inevitable pressures. By the second year of teaching Bridget, for example, was planning in less detail and was aware that this was linked to her confidence in the classroom:

I do plan my lessons, but I don’t necessarily plan the minutiae of each lesson. I plan what I’m doing and what I should have done by the end of it, so I don’t have reams and reams of lesson plans like I did last year or the year before. That does link in with the confidence thing. (Interview 8)

Bridget represents one of the most extreme examples of a beginning teacher who focuses primarily on what she needs to do as a teacher in order to cut down on the time required for planning, at the expense of focussing on the ways in which her planning might become more responsive to the needs of the learners. The danger of such an approach is that the drive to be efficient (i.e. spend less time planning lessons) overrides the need to become more effective (i.e. more responsive to these learning needs).

At the beginning of the PGCE year one of the teachers (Liz) identified what she saw as the ‘compromise’ between her highest aspirations for her lessons and what was feasible in terms of the time available to prepare for those lessons. Her early conclusion was to experiment with carrying out less detailed planning:

So in a way, it was a conscious thing – not to not plan it, because I think it was still very clearly planned, and it wasn’t like, ‘I’ll go in and coast it and see if I can survive’ but it was a bit of a controlled experiment of like, ‘Let’s see what issues arise if I don’t do quite as much on this side of planning or this side’. (Interview 1)

This strategy did not, however, enable her to plan effectively and by the end of the NQT year she was still trying to deal with the same tension, now highlighting the contrast with her PGCE course when she felt that she could *‘actually spend time thinking about all the different possible ways you could do it’*. By the end of the second year of teaching there was no real evidence that Liz had resolved the tensions and she continued to invest a great deal of time in her planning in order to try and create the type of learning environment for her pupils to which she aspired. Liz had never, in effect, found a rationale for reducing the detail of the lesson plan other than the need to manage her time more effectively. Teachers such as Liz, who *only* reduce the detail of their planning because of the time constraints and consequently see this as a problem, have not learned to see that the reduction in detail is in fact necessary in order for them to become more responsive.

One way that many of these beginning teachers approached the challenges of planning effectively within the time available was to take pre-existing plans and adapt them for their own classes. This was not a straightforward process and many had to learn how to do it effectively. An important step in the PGCE year was the

realisation that existing plans (such as those provided by teachers, textbooks or schemes of work, etc.) often did not translate into effective lessons because they did not take into account the specific context of the classes in question. It was particularly difficult for student teachers to make use of these existing plans when what they lacked, as mentioned above, was any detailed knowledge of the pupils themselves. This continued to be an issue in the NQT year (and even in the second year of teaching) when they once again began with lack of knowledge of the pupils and yet needed to be able to use existing resources to cut down on planning time. They were by then also able to draw on their own previous lesson plans, but came to learn that these too needed adapting for the specific pupils with whom they were now working. This raises the question as to whether student teachers are given adequate support during their pre-service year in terms of creating plans that draw on the existing plans of others. Too often perhaps we work from the assumption that planning is always something that individual student teachers must do for themselves. Student teachers are required to plan since it is through the process of planning that they learn about teaching and learning, but it might be argued that they also need to learn more directly about the processes of planning itself.

### ***A broad trajectory***

While the overall data (presented above) do indicate certain trends and suggest that some aspects of planning (such as pitching of work at an appropriate level and ensuring overall coherence) had been effectively mastered by the end of the PGCE year, the nature of the changes that occurred in the beginning teachers' understanding of planning can perhaps best be illustrated through a brief example.

Hanif's trajectory was typical of many of the beginning teachers in the sample. He moved from an initial view of planning as a fairly straightforward, albeit time-consuming process (the product of which ought to guarantee an effective lesson) to an understanding that teaching was far more than the implementation of a plan and had to take into account the unpredictable nature of classroom interaction. Initially he relied heavily on the detail of his planning (I like the detail, it's helping me be more confident) but as he became more experienced in the classroom he realised that his planning needed to anticipate what might happen and, furthermore, that he needed to develop flexibility in order to be able to cope effectively when things did not follow the 'script'. This led to a position where he was able to continue to plan his lessons in some detail but nevertheless feel confident about following alternative approaches during the lesson in response to the pupils' reactions on any given occasion. He was not only more confident about appropriate digressions from the plan to respond to issues raised during the lesson, but had also learned that the inclusion within his plans of more opportunity for discussion in the lessons encouraged learning to take place in a more spontaneous way:

They are very responsive normally to discussion. Sometimes we will spend a whole period discussing things, as I like to keep things very open-ended with top sets and they respond magnificently to that. (Interview 9)

Thus Hanif developed a different sense of what the plan itself was – not a script for the lesson to which he had to adhere but rather a plan which allowed him to discover and respond to the needs of the pupils.

Both here and in other similar cases the initial feeling that planning could *determine exactly* what would take place in the classroom gradually gave way to a sense that the role of planning was to anticipate what *might* happen. It was not easy, however, for many of the teachers, such as Hanif, who found a security in a detailed plan to give this up in order to allow themselves to become more responsive in the classroom. The awareness that flexibility was needed to allow for effective responses to any potential classroom occurrences did, however, generally lead to further learning about *how* to plan and in particular a greater understanding of the relationship between the pre-active and interactive phases of teaching. The gradual increase in experience, bringing with it a broader range of teaching strategies and a better knowledge of the pupils themselves, led in turn to a greater confidence among the teachers in terms of being able to think 'on their feet'. Hanif also recognised the value of collaborative planning with an experienced teacher as part of this process:

We have a new Head of Department and he was working with a kind of parallel set. We worked together on creating non-calculator work, and I was always asking him what he was doing in his lesson . . . it meant there was a feeling of security so I could try something without feeling that I was going to fall too far. (Interview 7)

While many of the teachers followed a similar trajectory they did so in different ways, with different starting points and different rates of progression. There were, however, some exceptions, such as Gill, who did not appear to develop any great awareness during the three years of what planning could and could not do for her and spoke of what she was learning solely in terms of adjusting the content of lesson plans in a minor way for future. She claimed to be learning how to interact effectively with a range of different classes but none of these was related to her planning, which appeared to have been reduced significantly:

I think a lot of the time I seem to go along in automatic pilot. I know what I'm doing now, so I don't think enough about what I'm doing. There might be opportunities that I miss where I could be trying out new things. I know I learn all the time, because I do things and I try them and they don't work, but I don't put that much effort in beforehand to think what is the best way of doing it, I just go into it because I know how to do it. (Interview 10)

Whereas Hanif was increasingly able to focus on what the learners themselves required, which meant that he had to be responsive in his planning to take account of such needs, Gill appeared not to be focussing very much on her learners and, therefore, had not been able to identify the need to be similarly responsive. From her point of view she had mastered the skill of producing a plan (I know how to do it); a plan that could be stored away for use with a similar class in future. Although Gill was an exception, in many ways her case highlights the importance of appropriate support for newly qualified teachers' continued learning (Burn, Mutton, & Hagger, 2010) since in the particular context of the school in which she obtained her first teaching post there was a general assumption that a newly qualified teacher needed to be, in many respects, the finished product.

Learning about planning is clearly an important ongoing focus of the learning of these beginning teachers. In relation to Calderhead's (1996) analysis of the features of planning it is clear, firstly, that planning does appear to take place at different

levels as individuals come to understand what it is that planning can and cannot achieve. For some it is a relatively straightforward process moving from planning the content of the lesson in great detail to adopting an approach that allows for more responsiveness in the classroom; whereas for others the detailed planning is a stage that they find almost impossible to move beyond, since it represents for them security and the necessary ‘safety net’ (Koeppen, 1998). In relation to planning being a creative process, some of the teachers in this study, such as Anita, tended to avoid any linear model since she believed that her initial ideas for a lesson were enough to be able to ‘make a bridge’ between her and the pupils. Many, however, continued to plan within a relatively structured model but developed the ability to be flexible and anticipate the way which the plan might need to take into account the unpredictability of the classroom itself. They appeared able to address the ‘creative, problem-solving, “intelligent” aspects of planning and teaching’ advocated by John (2006, p. 495).

### **Conclusions**

Two key features emerge strongly here in relation to beginning teachers, namely that planning is essentially knowledge-based, and that it must allow for flexibility (Calderhead, 1996). Clearly student teachers lack the highly contextualised knowledge, including detailed knowledge of their pupils that experienced teachers draw on in their daily practice. Without this knowledge, and without the notion of planning as visualisation, it is difficult to anticipate the ways in which what has been planned may unfold in the classroom, which explains why the lesson plan as ‘script’ is so dominant in the early stages of the development of many teachers. Many beginning teachers may look at the way in which experienced teachers appear to plan and may see only brief notes or an outline of the lesson in question and perhaps do not understand that such plans belie the amount of accumulated professional knowledge and understanding that has gone into preparation of that lesson. As Leinhardt (1988) reminds us:

Teachers are precise, flexible and parsimonious planners. That is, they plan what they need to but not what they already know and do automatically. (1988, p. 47)

Knowledge of planning, and of the nature and role of the lesson plan itself, is something that needs to develop as beginning teachers become more familiar with the contexts in which they are working and are better able to build into their planning the opportunities to be responsive as described above, moving perhaps more towards ‘reactive teaching’ (Cooper & McIntyre, 1995) which is ‘characterised by the teacher’s willingness to adjust learning objectives in order to accommodate student interests and intentions’ (1995, 203). It is clearly unreasonable to assume that any beginning teacher, be it a student teacher or even a newly qualified teacher, will be able to plan appropriately for the kind of lessons to which they aspire. The expectation that student teachers will arrive in school having been taught how to plan at the university is clearly a fallacious one since the evidence of this study is that beginning teachers learn most about *how to plan* once they gain much greater knowledge of what it can and cannot achieve. As Guillame and Rudney (1993) conclude when commenting on their own research into student teachers’ planning:

student teachers in this study did not so much think about different things as they grew; they thought about things differently. (1993, p. 79)

Furthermore, ongoing learning about planning can be a powerful vehicle for ongoing learning about teaching as a whole. Dunn and Shriner's (1999) research into experienced teachers' planning and evaluation activities explores the ways in which such activities might constitute what they refer to as 'deliberate practice', that is to say a conscious effort to explore the complexity of what might otherwise be considered routine aspects of teaching in order to develop professional knowledge and improve teaching performance. They conclude that participation in planning and evaluation activities:

... has the potential to provide a teacher with opportunities to acquire new knowledge of teaching. Learning from these activities is possible, but not automatic. (1999, p. 644)

Although our research design (with its focus on single lessons rather than lesson sequences) has not really allowed us to look at the role of evaluation as part of the planning cycle, we would strongly argue that it is through planning that teachers are able to learn about teaching and through teaching that they are able to learn about planning. In the process of becoming more experienced they get to know specific pupils in specific classes and as their store of specific knowledge builds, so they are able to abstract ideas about typical pupils, typical activities and typical behaviour. They are then able to use such typifications in their planning (typifications which in turn change as they acquire more experience). At the beginning, not only do they have no specific knowledge but they have no typifications either.

However, the process of acquiring this new knowledge, or these typifications, may not generally be acknowledged. In England, the Professional Standards for Qualified Teacher Status (TDA, 2007) suggest that planning is not an important focus for development for NQTs nor for those in the early years of their teaching career. Rather it is not until the 'post threshold'<sup>3</sup> level (TDA, 2007) is attained that teachers are expected to have developed their planning in order to:

be flexible, creative and adept at designing learning sequences within lessons and across lessons that are effective and consistently well-matched to learning objectives and the needs of learners ... (2007, p. 24)

Therefore, we should not assume that beginning teachers' learning about planning is something that precedes their learning how to teach. It is not the case that student teachers have learned all they need to know about planning by the time the practicum begins. Neither is it the case that NQTs have completed all their learning about planning by the time they enter their first post.

The question then is how we can best support beginning teachers in both their initial and ongoing learning about planning. We would suggest that teacher educators, in seeing planning primarily as a means of getting student teachers to learn about the complexity of teaching may neglect to explore with their students the relationship between planning and teaching. It is not uncommon to find student teachers being asked to look at checklists when planning as this is an effective way of making them aware of the range and complexity of the factors that have to be

taken into account in the classroom. They may not, however, be encouraged to consider what they are actually learning about the role and process of planning itself, and how to plan for flexibility, both of which are necessary if they are to follow the broad trajectory outlined above. This also raises questions as to how much feedback student teachers receive specifically in relation to their planning rather than their classroom outcomes.

Furthermore we should perhaps question the extent to which we encourage student teachers to believe that they can plan their way through all possible difficulties, since it is clear from the findings of this study that an over-reliance on detailed planning as the only answer becomes a problem for these teachers when faced with the demands of their first full-time teaching post. Not only do they lack the time to plan in such detail but adherence to such detail makes it more difficult for them both to recognise and respond to the unpredictable nature of classroom events and the nuances of pupils' learning. Consequently if the key motivation when planning is primarily to reduce the amount of time that the planning itself takes, as was the case with Bridget, then it is far more likely that the emphasis will remain on the teacher and teaching and not become more focussed on the learners and their learning.

In relation to Calderhead's (1996) final feature of planning, namely that it occurs within a practical and ideological context, it is clear that student teachers in particular, and to some extent NQTs, have the additional dimension of working with an experienced colleague acting as mentor or induction tutor. This may clearly have an effect on the approaches used to enable the less experienced teacher to learn about planning. One approach that we would suggest might facilitate this process is to provide them with opportunities to engage in collaborative planning (and teaching) with experienced teachers so that through this process they may gain access to the developed thinking of those teachers and thus draw on their professional knowledge and understanding (Burn, 1997). Although it might appear somewhat surprising that the student teachers' experience of such collaborative planning was not more widespread, Burn's research has highlighted the demands (particularly in terms of time) that joint planning makes on mentors. This disincentive is often compounded by an assumption, shared by many school-based mentors, that student teachers should arrive in school having already been taught – in the university – how to plan. Where such assumptions persist collaborative planning can easily be interpreted as 'spoon-feeding' and thus not fully employed as a pedagogic strategy. Its value, therefore, needs to be much more clearly explained and actively promoted within school-based partnerships.

Given the way in which student teachers' learning about planning changes during the course of the year and beyond, further research is also needed into the value of collaborative planning at different stages of beginning teachers' learning. Burn's (1997) study, for example, which examines the different kinds of things that can be learned from the process, draws on data that relate only to the first term of the PGCE year. Analysis of the kind of collaborative planning in which Hanif was engaged with his head of department during his NQT year, are needed to determine whether this is a fruitful way of helping new teachers to plan for more responsive teaching. Such studies of planning over time would also make it possible to examine the role of evaluation within the planning cycle.

An approach that we see as being less helpful is the requirement (often imposed on student teachers) to submit lesson plans for scrutiny up to a week before the les-

son is due to be taught. We fully understand experienced teachers' concern that their pupils should not suffer at the hands of inexperienced novices but instead of being 'assessors' or 'markers' of a completed lesson plan we would suggest that the best way forward is for school-based teacher educators to engage with student teachers in the process of its creation; feedback would thus be focused more on what was being learnt about planning and less on the lesson plans themselves. In this way not only will pupils' learning be safeguarded but the beginning teacher will also develop an understanding of the planning process itself and of what it can and cannot achieve.

## Notes

1. The PGCE is a one year postgraduate teacher training course in England. Each university must work in 'partnership with schools' and those training for the secondary phase (i.e. schools which cover the 11–18 age range) must spend at least two thirds of their time in schools (or similar settings). Successful completion of the PGCE course would normally lead to recommendation for Qualified Teacher Status (QTS). The Professional Standards for QTS are determined by the Training and Development Agency for Schools (TDA), the government agency in England, which is responsible for the training and development of the school workforce.
2. An earlier version of this paper was presented at the European Conference of Educational Research, University of Vienna, September 2008.
3. After four years, teachers in England are eligible to apply to be put on the upper pay scale. In order to move to this pay scale they are required to have met the Post Threshold standards.

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