



Centre for Special and Inclusive Education, University of Exeter

Lesson planning for diversity

Examining lesson planning and reviewing processes in relation to teachers' understandings of learner difference and diversity

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June 2015

This project was funded by the Society for Education Studies.

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Introduction

This paper reports on a small study funded by the Society for Education Studies, which examined how lesson planning takes account of learner differences with a focus on pupils with special educational needs/disabilities. Lesson planning is seen as good practice by policy makers in England and is a key component of most initial teacher training. The enactment of plans that take account of learner differences continues to be very important in contemporary school teaching, touching on questions of personalisation and inclusion of pupils with additional needs, including those with special educational needs (SEN) (Patterson, 2007; Booth & Ainscow, 2011). The process of lesson planning reflects continuing challenges and dilemmas in teaching that have been recognised for decades (Berlack and Berlack, 1981). Despite its importance, recent research on this topic has been sporadic (Hughes, 2005).

The study explored the following objectives: how teachers' understandings and knowledge around learner diversity influence their lesson planning, how planning, in relation to areas of learner diversity, becomes enacted and to what extent. There was a particular focus on diversity related to special educational needs.

Four case studies of secondary school teachers and their lesson planning have been developed. Participants taught in the subject area of English, Maths or Design and Technology. A total of three schools were visited, each school was classified by school regulators OfSTED as 'good' or 'outstanding'. The teachers were nominated by senior teachers for their competence and 'good practice' in the area of general lesson planning. We observed lessons in classes where there were at least one pupil with special educational needs, including at least one pupil with a low incidence difficulty e.g. severe learning difficulties, visual impairment.

Stimulated recall methods and post-lesson interview questions were used to explore the 'in-flight' thinking of teachers (Paterson, 2007), that is, thinking that teachers engage in whilst delivering a lesson, triangulating findings through planning documents, lesson observations, semi structured interviews and research field notes.

From these data we have developed four case studies exploring the relationship between the participating teachers' understandings of diversity and their lesson planning practices. These case studies are used to construct a model of lesson planning for including pupils with SEN.

Although we had focused on diversity in terms of learner difference relating to SEN it emerged that these teachers' understandings of diversity, and the diversity they planned for, went beyond SEN. Wedell (2005) argues that "the concerns which are very familiar within special needs education are now being regarded as crucial within the wider sphere of education" (p. 31); thus any findings on effective planning practices that cater for students with SEN could begin to be applied to the wide range of learner diversity schools will encounter.

The grant for this project was awarded in March 2014. The amount awarded was just under \pounds 7000. The project was to last 6 months, commencing in April and finishing in October. An extension was requested in July 2014, this was granted by SES. The new end date for the project was December 2014, and the resulting report published in June 2015.

Review of the literature

The aim of this study was to investigate how teachers' understandings of learner difference and diversity influenced their lesson planning and the subsequent lesson review process. Sullivan and Noyes (2013) assert that the "notion of diversity is linked to the idea of equity in education" (p. 255) and that this equity should be sought whatever the gender, ethnicity, class and disability of those in education. It is this identification of at risk groups that distinguishes the concept of diversity from the concept of equity (Black, 2013).

Skrtic (1991) argues that pupil diversity should not be seen as a liability, but rather "it is an asset, an enduring source of uncertainty and thus the driving force for innovation, growth of knowledge and progress" (p. 36). This study focuses on one specific area of learner diversity, special educational needs. Wedell (2005) suggests that "effective teaching for those with special needs has direct relevance to effective teaching in general" (p. 7) and Hughes (2005) argues that the success of particular diverse sub-groups becomes an indicator for the state of the education system as a whole. They become the equivalent of the miners' canary. He demonstrated how a state-based database of lesson plans in the USA failed to provide sufficient differentiation to meet the individual needs of the diverse population. His research highlights the necessity and importance of lesson planning for individual needs - a crucial element of this study.

Within the field of SEN, there is a literature and debate about the existence and nature of specialised pedagogies for pupils with SEN and disabilities (Lewis and Norwich, 2004) as well as a growing literature about what is involved in inclusive pedagogy (Florian and Black Hawkins, 2011; Booth and Ainscow, 2011). The former literature is about whether there is a distinctive kind of pedagogy for children identified as having different kinds of SEN e.g. autistic spectrum disorder (ASD). This has led to some theoretical analysis of the nature of difference in pedagogic planning - whether to think about teaching in terms of individual or general differences. The latter literature is about how teachers can plan for diversity in their classes without pre-deciding how to allocate different tasks to different (groups of) children. Booth and Ainscow (2011) suggest that in an inclusive school learning should be 'orchestrated' so that "learning activities are planned with all children in mind" (p. 159). This should involve consideration of a range of learning activities and a range of grouping strategies, using materials which reflect the backgrounds, experiences and interests of all learners. This is echoed in Florian and Black Hawkins' (2011) principles of inclusive pedagogy: "creating learning opportunities that are sufficiently made available for everyone; extending what is ordinarily available for all learners rather than using teaching and learning strategies that are suitable for most alongside something 'additional' or 'different' for some who experience difficulties; and focusing on what is to be taught (and how) rather than who is to learn it" (p.818). These literatures raise questions about how teachers think about pupil differences when lesson planning – for example, whether they consider particular tasks for specific children related to specific needs or abilities.

It is widely recognised that lesson planning is an important part of the teaching process (Bassett, Bowler and Newton, 2013; EADSNE, 2012) and it is a requirement under Teachers' Standards (DfE, 2013) that teachers "plan and teach well-structured lessons" (p. 11). Teachers in England, regardless of what stage they have achieved in their career, are expected to "adapt teaching to respond to the strengths and needs of all pupils" (DfE, 2013, p.11). This means that they are expected: to know when and how to use differentiation; to know and understand factors that can inhibit pupils' ability to learn; and to know how to adapt teaching to support pupils' education at the different stages of children's physical, social and intellectual development. They are also expected "to understand the needs of all pupils including those with special educational needs; those of high ability; those with English as an additional language and those with disabilities"

(DfE, 2013, p. 12). Planning for diversity is also seen internationally as an important part of the inclusive teachers' repertoire; for example, the European Agency for Development in Special Needs Education (EADSNE) state that teachers have a responsibility to support all learners, and to promote the "academic, practical, social and emotional learning of all learners" (2012, p. 13). Lesson planning has had prominence in UK policy-led curriculum and pedagogical reform since the 1960s (John, 2006). According to Hughes (2005), however, there is a paucity of research about lesson planning for diversity.

Despite the recognition in the Teachers' Standards that planning is an important teaching skill, the inspectorate Ofsted "<u>does not</u> require schools to provide individual lesson plans to inspectors and <u>does not</u> specify how planning should be set out" (OfSTED, 2015, p. 1, Ofsted's emphasis). They nevertheless go on to state that "inspectors are interested in the effectiveness of planning rather than the form it takes" (p.1). These statements need careful analysis and have led to the misconception that lesson plans are not necessary although lesson planning is obviously still prized. What this confusion over the need (or not) for a lesson plan highlights is an inherent dichotomy in the teacher preparation for creating lessons for their individual learners. Is it the product, the concrete lesson plan, or the imaginative planning process itself most significant to lesson preparation and effectiveness?

Both John (2006) and Zazkis, Liljedahl and Sinclair (2009) cite the work of Ralph Tyler (1949) as an early contribution to the development of lesson planning, particularly in its most instructional form. Fundamental to this model is the specification of specific observable objectives, the selection and organization of learning experiences for the attainment of the objectives followed by the evaluation of the learning experiences (Zazkis et al, 2009). The model is "pervasive" (John, 2006, p.484) and the basis of most lesson plans (Capel et al, 2013; John, 2006). Frequently included, along with the objectives and outcomes to be achieved, are a list of materials to be used, timings and other necessary *aide memoires* for the teacher. John (2006) suggests its continued success lies in its "elegant simplicity" (p. 485), that is, based on a "rational cycle of formulating objectives, deciding on strategies, selecting resources, organizing activities, implementing delivery, and evaluating the results" (p. 486).

John (2006) argues that the basis for this approach to lesson planning is functionalist and highlights a sequential systems-based approach to teaching and learning. This 'rational model' features a four-step process. Step One incorporates the selection of the subject matter taking into consideration the age and ability range of the pupils. This decision making process is usually influenced by curriculum demands and existing schemes of work. The focus of Step Two is on the formation of more specific learning objectives or goals with which to operationalise pupil learning. Step Three is centred on content driven planning of the subject matter to meet the aims and objectives. Resources and materials are prepared as the lesson is chunked into segments around the tasks designed to exploit the materials to enhance learning. The final step – Step Four - is the evaluation sequence so that learning can be assessed against the set objectives.

Zazkis et al (2009) suggest that "almost everyone who has undergone a formal teacher education program has had to devise a lesson plan according to some prescribed format" (p. 40), usually on a given template. They argue there are inherent dangers to this approach i/ the template can act as a "proxy for preparation", and ii/ the trainees do not receive "the full benefit of the work that went into creating it, but rather an empty shell that stands in the place of grounded theories of teaching practice" (p.40).

Another danger, that John (2006) suggests, is caused by the characteristics of its linearity - "all the steps in the model lead to or emerge from the aims and objectives in a linear, rational ends-

means sequence" (p. 486) while not taking into account the contingencies of teaching. The extent to which the lesson planning process can be fitted to a linear model is also questioned by Calderhead (1995), who states that "teaching is a complex process" and the "classroom environment is equally complex" and "very often lessons do not go as expected" (p.135). John (2006) elaborates: "time-pressures, organisational issues, attitudes, moods, emotions, and serendipity all impinge on the closed structures implied in the model" (p. 487). This means that the processes involved with teaching, including planning, "can be conceptualised in many different ways, using alternative models, metaphors and analogies" (Calderhead, 1995, p. 134). It is this very unpredictability which gives rise to the alternative models that John (2006) highlights, as discussed below.

Alternative approaches to lesson planning include the <u>naturalistic/organic model</u> which is based on the work of Stenhouse (1975) and Egan (1992, 1997), the <u>interactional method</u> and <u>the</u> <u>dialogic model</u>. Each stance finds its basis in Calderhead's (1995) observation of the complexity of classrooms and offers an alternative 'emergent' model that allows lesson plans to be more responsive to the pupils' needs rather than an imposition of a rigidly constructed rational model for lesson planning. Objectives under the naturalistic/organic model are meant to flow from the activities themselves and planning becomes a cyclical process. It is suggested that teachers will be able to pursue goals that emerge rather than stick to a pre-determined plan (John, 2006). The focus should be less "on content delivery and more on the deployment of developmentally appropriate cognitive tools that foster the imaginative engagement of learners" (Zazkis et al 2009, p. 43). Zazkis et al note that even this approach often still results in filling out templates of a pre-determined rubric.

John (2006) espouses the dialogic model where constructing a product (the plan) is seen as secondary to the representation of the planning and teaching process itself. He emphasises that the process of planning is dialogical – "a thought experiment tied to the specifics of the discourse-community in which it is embedded" (p. 494). Lampert (2001) describes how her planning and preparation for teaching a lesson involves thinking not only about content and structure, but also the appropriateness of tasks for the different learners in the classroom. She begins by designing mathematical tasks with her knowledge of the students, but acknowledges that the implementation of these tasks often shifts in accordance with students' responses.

John (2006) expands on this concept of lesson planning taking place in a complex environment by capturing the considerations that need to be taken into account when planning in a diagram (Figure 1). The diagram, taken as a whole "attempts to mimic the natural decision-making of the experienced practitioner" (p. 491), which is informed by: pupil characteristics (such as age, ability, behaviour); curriculum requirements (such as subject content, schemes of work); and resources. He argues that trainee teachers should be introduced to planning in a step by step manner, privileging different aspects at different times, and that his model could be used as a dialogic tool with trainees to get them to see the complexities of planning.

Zazkis et al (2009) critique John's (2006) use of this approach and argue that he puts the objective and outcomes in the centre and through a gradual process simply enacts and adds layers to the Tylerian model. The dialogic model, however, may be more complex and multi-layered than Zazkis et al (2009) consider. John (2006) argues that the Tylerian model is a "point for departure" rather than a fixed entity (p.496).

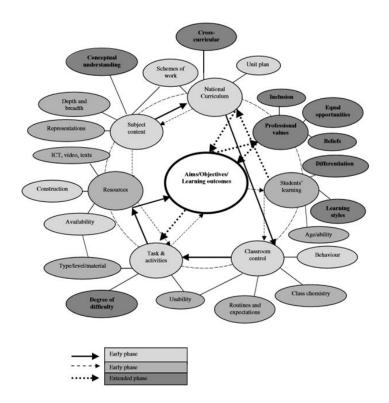


Figure 1: The planning process, John, 2006, p. 491.

Unlike the 'naturalistic/organic' and 'dialogic' models, which are based on philosophical stances – one as a reaction to and yet still situated within the dominant, functionalist viewpoint, the other firmly embedded in a social-constructivist perspective - the interactional 'alternative' is a method. In a sense the lesson plan is still presented as if it were a functionalist artefact but the manner in which the lesson is conducted, the way in which it is enacted is based in interaction. In other words, as Alexander (2000) suggests, like a performance, preceded by composition (the lesson planning) but affected by interpretation and improvisation.

Zazkis et al (2009) consider lesson planning that is tied in any way to the Tylerian model as 'prescriptive', focused on what must and should happen in a lesson. They offer an alternative to lesson planning which incorporates the notion of a 'lesson play'. They suggest that a lesson play may outline what **might** and **could** occur, allowing for a degree of uncertainty. They also focus specifically on the potential interaction between teacher and pupil. They plan for what **might** be said and in this way they are producing lesson plans that are performances – based in dialogue that allows and carries the learning objectives in layers. They consider that "at the pedagogical level, the imagined exchange suggests something about the very nature of learning" (p. 44). It replicates and "allows the portrayal of the messy sometimes repetitive interaction of a classroom" (p. 44). It is this process that they think offers far more potential to teachers than the static pre-determined Tylerian product.

John (2006) suggests that the ability to access the in-flight thinking of experienced teachers as they operate in the classroom could act as an heuristic, guiding trainee teachers to thinking of the experienced teacher as the lesson structure emerges. Paterson (2007) conducted a study based on this assumption investigating five teachers' in-flight thinking in inclusive classrooms. He found that teachers' in flight thoughts revealed attention to pupils on the basis of those pupils' individual characteristics (Paterson, 2007). He goes on to say that the knowledge of the pupils in context reflected a holistic sensitivity to their academic characteristics. Fundamentally he argues that teachers who think of their class in a more personal manner rather than exhibiting a 'them and us' attitude are better placed to include students with learning difficulties and students with other diverse learning needs. Paterson (2007) concludes by suggesting "that where professional learning for teachers builds on their existing knowledge of students, it is more likely that educational programmes will be developed that are designed to meet the unique needs of all students" (p. 433).

From the literature on diversity, lesson planning and experienced teachers' in-flight thinking the following research questions emerged:

- How do teachers' understandings and knowledge around learner diversity influence their lesson planning?
- How do teachers, whose teaching is nominated as high quality, conceive and cater for diversity in their lesson plans?
- How does the planning, in relation to areas of learner diversity, become enacted and to what extent?

Where diversity and difference is mentioned in this study this is specifically in relation to SEN.

Methods

The research involves the development of four case studies of teachers and their lesson planning. The case studies have been developed from data gathered through interviews, observations and the collection of lesson planning artefacts. Participants were secondary school teachers in the subject areas of English, Maths and Design and Technology.

The participants

We invited schools in the South West that were rated as good or outstanding by OFSTED to take part in the project. The University of Exeter partnership office contacted named members of staff in 17 secondary schools. Senior teachers in interested schools were asked to nominate potential participating teachers based on their competence and 'good practice' in the area of general lesson planning. As the project focused on diversity of learning needs we stipulated that we would like to observe lessons in classes where there are at least 1-2 pupils with special educational needs, including at least one pupil with a low incidence difficulty e.g. severe learning difficulties, physical disabilities or sensory disabilities.

We set out to engage with:

- two schools
- six secondary school teachers (three from each school) two each in the subject areas of English, Maths and Design and Technology

Achieving this sample proved to be difficult. Of the 17 schools contacted 6 responded. In the summer term 2014 all but one stated they would not be able to take part (in some cases this was after further information was provided by the research team). Two of the schools that declined because of the busy time of year were happy to be contacted in the new academic year with regards to participation. Both these schools agreed to participate further in the autumn term 2014, hence the need to extend the project time frame.

The reasons for non-participation were related to:

Lack of time/general busy-ness (4 schools) - "I am afraid as a head of faculty with lots of my staff off ill at the moment for one thing or another and a great deal going on with curriculum changes and timetabling, I am just not in a position to help" (*Head of DT, 8/7/14*).

No classes that match project requirements (2 schools) - all the school's SEN students go to the SEN department during English curriculum time; the few high attainers with SEN have exactly the same lesson/curriculum as everyone else, the teacher might adopt behaviour/response but nothing in lesson plans; teachers in the English department are expected to follow a set of detailed plans provided by the department and not deviate from them. (*Points made during a telephone conversation with researcher and head of department. Recorded in researcher's field notes 2/7/14*)

Reluctance of teachers (1 school) - "[the teachers I approached] expressed concern re: being able to 'plan for diversity' as we do not have a very diverse school population! As your email suggests we have some excellent staff who are very skilled at planning and delivery but sometimes they stop seeing it! So, at this stage in the year I will struggle to convince people that a) they are good/outstanding and b) our circumstances require planning for diversity." *(email from deputy head, 20/6/14).*

	School A	School B	School C
ENG Teacher	Research cycle complete July 2014	No link	Not available
MATHS teacher	Research cycle complete October 2014	Not available	Research cycle complete December 2014
DT teacher	Not available	Research cycle complete October 2014	No link

Table 1: Number of participating teachers/schools

Table 1 demonstrates that we were able to develop 4 case studies in 3 schools. The case studies involve one English teacher, one Design and Technology teacher and two Maths teachers.

Table 2 gives contextual details on the schools and teachers involved. Each individual case study gives more background detail of each of the participating teachers.

School	Name (pseudonym)	Subject area	School details	School OfSTED grading
A	Jen	Maths	South West community secondary school, with approximately 1300 pupils aged between 11- 18, 8% with a statement or on SA+, 9% FSM Location: Town and Fringe	Outstanding
A	Rebecca	English	As above	As above
В	Peter	Design Technology	South West Academy Convertor, with approximately 1000 pupils, aged between 11- 18, 3% with a statement or on SA+, 11% FSM Location: - Urban (more than 10,000 people)	Good
С	Matthew	Maths	South West Foundation secondary school, with approximately 1100 pupils aged between 11- 18, 9% with a statement or on SA+, 5% FSM Location: Town and Fringe	Outstanding

Table 2: School and teacher details

Data collection

After an initial meeting with the participating teachers, two 'planning-enactment-review cycles' were identified. In each case the cycles of interviews and observations were held in the order as shown in table 3.

	Planning	Enactment	Review - Planning	Enactment	Review
	Interview 1	Observation of lesson 1	Interview 2a and 2b	Observation of lesson 2	Interview 3
Table 3: Order of interviews and observations.					

Each interview was semi-structured in that the researcher had a list of topics to explore, but questions were also informed by examination of lesson planning artefacts (lesson plan, class lists etc). The teachers were provided with a list of possible questions in advance of interview 1 and 2. Tools such as stimulated recall methods were used to explore the 'in-flight' thinking of teachers (Paterson, 2007), that is, thinking that teachers engage in whilst delivering a lesson. The stimulated recall interview procedure involved participants commenting on their thinking/decision making during a lesson, informed by the provision of cues based on notes made by the researcher during lesson observations. This involved the researcher highlighting an incident she had witnessed, and asked the teacher to comment/elaborate on/explain the incident. An example is given in figure 2.

Researcher: So, at one point you stopped the activity and said 'I sense you're getting frustrated with the counting.' What gave you that sense?

Jen: I think it was because I'd been going round the class and seeing that some of them had got the wrong results and trying to get, to have some way of marking the lines as they counted them and then some of them were kind of double marking them because they were split up again, so they were getting a little bit confused, one or two, with what counted, (a) as a whole line and whether they'd already marked them.

Researcher: Did you notice that, was that with all children, or particular children?

Jen: No, that was definitely with particular children I think, yeah. Those that hadn't really adopted a strategy of going out from one point at a time found it much more difficult. Which is why I tried to reinforce that several times, that it's easier if you start from one point (laughter) but inevitably the excitement of doing it takes over, doesn't it?

Figure 2: Example of stimulated recall, Jen, lesson 2

The pre-lesson interview (1) was focused on planning in advance of the lessons, as well as explorations of the participating teachers' understandings of special educational needs, diversity and inclusion. It also sought to identify school expectations regarding planning and inclusion of children with special educational needs. Interview 2 was split into two parts, one part immediately following the first observed lesson, with a focus on asking the teachers to review and reflect on their lessons in relation to their earlier planning, and clarifying in-flight thinking. The second part of interview 2 was held before the observation of lesson 2 and focused on the plan for that lesson, how their review of the first lesson has led to planning for the next lesson, as well as further questioning based on the researcher listening to and reflecting on previous interview recordings. The final interview (3) was a reflection on lesson 2 and the planning, with the inclusion of stimulated recall questions. Some summary questions were also asked such as "why do you plan lessons?"

The observations set out to investigate how and how much pre-planning was enacted in practice. Observations were non-participatory, the researcher sat in an area of the room out of the way of

pupils. Some of the teachers introduced the researcher to the class, but some did not. The researcher made notes including incidents to reflect on and questions to ask the teacher at a later point. An example from field notes made by the researcher is given in figure 3.

Used questioning a lot. How did you decide what children you called on to answer questions? Have grouping as a differentiation strategy –what do you mean by <u>weak</u>, <u>stronger</u>? (on lesson plan) Is technology a choice at Yr 9? Few girls. -A3 help sheet -Checked task understanding with Charlie -Charlie had done more work by 10 am than majority of others.

Figure 3: extract from researcher field notes, observation of lesson 1, Peter

Other artefacts were gathered. These included:

- lesson plans (and associated worksheets)
- class lists (including information on pupil SEN status and pupil premium (PP) and Free School Meal (FSM) status)
- seating plan
- SEN register for year group
- student profile

Each teacher gave the researcher a copy of their lesson plans, and some included worksheets/resources used. Two teachers provided a seating plan, and three a class list. In one of these cases I was given access to a photographic class register (which included notes on SEN status, PP, FSM), but I was not permitted to have a copy of this as it is considered confidential. Two teachers provided me with the school's SEN register for the cohort, and another teacher gave detailed information about a specific student with SEN in the form of a student profile.

Data analysis

Case studies for each teacher were produced based on triangulating findings from planning documents, lesson observations, semi structured interviews and research field notes. In summary, data from interview transcripts was analysed using thematic qualitative analysis. A process of open, then thematic, coding was used, with a focus on reading the data in relation to the research questions. Lesson planning artefacts and researcher field notes were referred to for amplification.

Each interview was recorded using a voice-recording application on a tablet device. A separate recording was produced for each interview. These were saved to the file-sharing platform Dropbox, then deleted from the recording device. The Dropbox folder was shared with a transcriber, who transcribed each interview.

The project researcher (researcher 1) carried out open coding on Rebecca's first two interviews. This, in tandem with pre-set codes from the literature/research questions, generated a list of codes exemplified by extracts from the text. This list and examples was shared with the research associate (researcher 2). The project researcher and research associate separately analysed Interview 1 from Peter. A meeting was held between the researchers to discuss their findings and the emerging codes. Several codes were selected, defined and agreed on and these were then applied to the remaining interviews with each researcher analysing a different set of interviews. (Researcher 1 analysed interviews from Matthew and Rebecca, researcher 2 analysed interviews

from Peter and Jen). In some case additional codes were generated specific to the case study teacher. Examples of the pre-set and emerging codes are given in table 4.

Type of code	Code	Example from interviews	
Pre-set	Define special	"They need, special educational needs children need	
	educational needs	extra help. They need, they need more guidance."	
	How plan/process of	"primarily though I'll make brief notes in my planner,	
	planning	this one here. I'll scribble in the activity that I'm going to	
		do, the objective, and how we're going to end the	
		lesson"	
Emerging	Union	"Some schools, as I say, though, because I'm a Union	
		activist, I know some schools that are told to do this.	
		And there's nowhere in the Ofsted rules or your contract	
		that you are to produce lessons plans.	
	Adaptation	"I just generalise it, generalise the plan and then adapt	
		as we go."	

Table 4: examples of pre-set and emerging codes.

The sets of codes and related extracts from each case teacher were read by researcher 1, who used them to find citations to evidence and exemplify each research question. For research question 2 (How teachers conceive and cater for diversity in their lesson plans) common themes emerged to help structure each case. These were:

- The formal written lesson plan
- The personal lesson plan
- Understanding of differentiation
- Specific planning for diversity
- Support for planning
- Expanded planning.

The case studies have been laid out using the research questions as headings and, where applicable, themes as sub-headings.

Ethics

In accordance with the University of Exeter's Ethics policy, the research team took every step to ensure informed consent was obtained from all participants, and that all researchers acted with sensitivity when working at each school site. Ethical approval was gained from the Graduate School of Education Ethics Committee. Every effort has been made to guarantee anonymity and confidentiality, and participants were made aware that their data would be stored in such a way as to ensure untraceability, including the use of pseudonyms. All participants were made aware of their right to withdraw for any (and no) reason. An information sheet was provided for all participating schools and staff, and a consent form laying out participating teachers' rights was provided and signed by the participants before data collection commenced.

As indicated above, across the whole study schools, participating teachers, any other adults and pupils have been given pseudonyms to protect identity.

Findings

In this section we present our findings in a number of ways. Firstly cross-case analysis is presented where we compare planning components across the four teachers. This is followed by the individual case studies.

Different layers of <u>pre-lesson</u> planning were evident. The four teachers all used school determined *formal lesson plans* for performance management and inspection purposes and if their lessons were observed for any other reason (as in this study). They also all formulated and recorded *personal lesson plans*, for example, written in their planner (diary). A further layer of pre-lesson planning was, what we have called, *expanded planning* which was often 'in-mind', but sometimes included written artefacts, for example, seating plans. Table 5 shows the different elements of planning included in formal lesson plans and personal lesson plans. The elements are based on headings used on the formal written planning format each teacher provided. Some elements were unique to one teacher's plan (aim, resources) others were not organised under set headings, yet were mentioned. An example of this is reference to extension activities which appeared under resources in one of Jen's plans; in a list of activities in her other plan; and under the starter for Matthew.

		FORMAL LESSON	Total in	PERSONAL	Total in
		PLANS	formal	LESSON PLANS	personal
General	Class/group/year	R,P,J,M	4	These may have been evid	
information	Period/time of school day	М	1	the planner, but were not mentioned in interviews.	
	Date	M,P	2		
	Teacher name	Р	1		
	Title of lesson	R	1		
Aims/objective	Aim	J	1		0
s/outcomes	Objectives/Learning objectives	R, M	2	Р	1
	"What new learning will students gain in lesson?"	М	1		0
	"How will this be shared with students as a learning objective?	М	1		0
	"By end of lesson what will students have achieved?"	М	1		0
	Resources	J	1	М	1
	Differentiation	R,P,J,M	4		0
	Challenge	M	1		0
	Links to previous learning	R,M,P	3		0
Asses	sment for learning opportunities	Р	1		0
	Grouping	R,P	2		0
	Literacy/Numeracy/Oracy links	P,M	2		0
Lesson	Starter activity	R,M,J	3	J	1
structure	Introduction	R	1		0
	Activities/main episodes/development	R,P,J,M	4	J,P	2
	Plenary	R,M,P,J	4	J,P	2
	"What I want to do"	R	1	R	1
	Order	R,P,J,M	4	R	1
	Timings	R,P,J	3		0
	Homework	M,P	2		0
"Implications	of today's student outcomes for next lesson"	М	1		0
Additional	Questions	R, M,J,	3	M	1
elements evident , not given a	Reference to learning styles	R	1		0
heading	Extension	M,J	2	J	1

Table 5: cross case analysis of elements in formal written lesson plans and personal lesson plans.

J= Jen, R= Rebecca, P= Peter, M = Matthew

Common elements across all of the formal plans were class, differentiation, activities, plenary and order. Three of the four teachers also included links to previous learning, starter, timings and questions. There were no common elements that everyone used in the personal lesson plans. (It should be noted that no examples of the personal learning plans were seen, they were just described by each teacher.)

There was similarity in what the teachers considered in their expanded planning, as shown in Table 6, with awareness of pupil characteristics, identification of pupils with subject specific needs and seating arrangements being mentioned by each teacher as something they considered when planning lessons.

Element	Teacher	Total
Seating arrangements	J, R, P, M	4
Identification of students who have	J, P, M, R	4
subject specific needs		
Peer tutoring	J, R	2
"touching base" with particular students	J, M, R	3
Awareness of pupil characteristics	J, M, P, R	4
Provision for particular students	P, M, R	3
Awareness of possible need to adapt mid-	J, P, R	3
lesson		
Awareness of characteristics of class as a	R	1
whole		
Planning for use of Learning support	R	1
assistant.		

Table 6: cross case analysis of elements in expanded planning.

J= Jen, R= Rebecca, P= Peter, M = Matthew

Case studies

Jen

Jen is a Maths teacher in a large community secondary school in the South West based on the outskirts of a market town. The school has approximately 1300 pupils aged between 11-18, 8% with a statement or on School Action+ (SA+), 9% FSM. Jen has been teaching 'on and off' for 34 years. She did a PGCE specialising in Maths with the subsidiary subject of history. She has taught at the school in question for 18 years.

The researcher observed two lessons with the Maths teacher teaching the same mixed-ability year 7 class (the school has mixed-ability Maths classes in year 7 until after the first half term, when pupils are put into sets following end of half term assessments). The lessons focused on 'investigating number patterns'.

Within the class was one pupil with Developmental Coordination Disorder and a further 7 who were identified as having weak literacy skills/Specific Learning Difficulties (SpLD).

How Jen's understandings and knowledge around learner diversity influences her lesson planning

Jen's notion of who the pupils with SEN are is based on lists she receives at the start of the year. This is a SEN register, and a class list which identifies the pupils' status on a range of indicators, including FSM status, SEN status, pupil premium status. The SEN status is recorded as a SIMs code – K/A. It gives each pupil's KS2 SATs scores. The scores of a recent Maths exam the pupils sat in the school are also listed.

The SEN register is a printed bound document which lists all pupils who have SEN in each year group. Their tutor group is recorded, along with SEN status and SEN type. All students on the register have their SEN status marked as "monitor". SEN type seems to refer to category of need, for example SLCN (Speech Language and Communication Needs), SpLD, SEMHD (Social Emotional and Mental Health Difficutlies). For each child there is a 1-2 sentence summary of need, followed in most cases by a sentence which says "please make classroom adjustments". Jen has highlighted the students on the register who are in the class I am observing. Jen defines SEN in the school as:

"special educational needs means here that they have been identified first of all, that you've got a piece of information about them, and that within your lesson you need to follow some strategies in order for them to access what you're doing."

Jen appears to equate the list to an indication that action needs to take place in her lessons to allow those students to access what is being taught. Those strategies are varied. Jen sees them in terms of i "deciding on the seating plan, where you're going to sit those students [on the SEN register], deciding what their particular need is and how it's going to affect them in your subject and then making sure that those students are catered for within the lesson and just trying to keep up-to-date with their needs all along".

The idea of needs seems to be more universal for Jen than relating simply to children who have been identified as having SEN. When asked to define inclusion she says it is:

"being aware of each individual student's needs and making sure that you cover their needs and in some way make the work accessible, given that they've all got completely different needs and wants, and amounts of time you give to them, the kind of work you give to them, to make it inclusive. I would say it's often about starting with the topic as a whole class but then being really aware that you have to adjust it for certain students to access it."

This idea is reiterated when she reflects on the values that under-pin her teaching she refers to encouraging all students to enjoy the Maths lessons and to help every student make progress in each and every lesson.

How Jen conceives and caters for diversity in her lesson plans

The written formal lesson plan

Jen produced a formal plan for both lessons, hand written on an official school format – "It's a school format that we use for performance management." The formal plan is an A4 page split into 5 boxes: aim; resources/differentiation; starter activity; activities; plenary. On the right of the activity/plenary boxes there is space to record the time. (Here Jen ascribes a block of time to each activity, i.e. plenary – 10 mins.) The second box – resources/differentiation has the label 'resources' on the left, 'differentiation' on the right.

A single aim recorded on the formal plan for each lesson. In the first lesson sheet the resources box makes reference to is an extension sheet. This is not referred to in the activities section. The second plan has "stick in sheet of results" written under resources, with an arrow to the heading differentiation. In the activities box an extension activity has been written.

The personal lesson plan

This is different from Jen's usual approach to planning which is "usually just something written in my planner" (her personal lesson plan). When asked if she followed a similar format in her planner she replied "Yes, the same kind of thing. A starter, a main part and a plenary bit, and a kind of extension if I can".

Understanding of differentiation

As differentiation is mentioned specifically on the plans it is appropriate to describe what Jen understands about this term. When asked directly what differentiation means to her she stated "differentiation means slightly altering a task or chopping up a task in order to make it accessible to all the students. So, yeah, just really trying to make the same task accessible for everybody. Or maybe even making the task shorter but taking account of, you know, what the students can do and can't do."

Differentiation for Jen is a way of allowing pupils to access learning without a learning support assistant (LSA): "There is no support in the class so it is down to me to have an activity that I think can be differentiated for the students but that I can also offer support to those that need it, which can be quite a challenge."

The class observed was a mixed ability class, the students are 'set' later in the year. I wondered if Jen still found herself differentiating when she had a class that was set: "you would still need to do that [...] often at the top end of the group you do have children who, you know, need the challenges all the time in order to keep their interest up, whereas you get some children who really need the reassurance of lots of continual repetitious practice".

I enquired whether this level of differentiation was planned for, or happened naturally. The response was both – sometimes differentiation is planned, sometimes it just happens. She also acknowledged that sometimes both can happen in one lesson: "I might plan something in but actually, you know, as you're working through the lesson you can see that some students are really racing through the work and finding it much, much easier than others so then you might add more than you originally intended or you might add a further extension, you know, an extra part to the topic that you weren't perhaps going to include".

A particular example of how she differentiated a task in the planning of the observed second lesson follows. She had noted on the planning sheet under differentiation that some students would "stick in sheet of results". She explained: "when I've done it previously and I've done this for the start of the next lesson, (laughter) is that I've given them a table to fill in. Whereas previously I've actually made them draw the table themselves. At the start of this lesson you'll see I'm going to give some of them a stick in sheet, whereas others can draw the tables themselves, start it off." When asked how she identified the students she would give the sheet to she explained "just me seeing how they got on in Maths lessons up to now and how fast they work in some cases. Not necessarily ability but the speed as well. If they're quite slow or if their table drawing skills would hold them up in the lesson. I don't want that to be the focus of the lesson, the table drawing".

Specific planning for diversity

When asked about planning for diversity, Jen was focused on diversity of learning styles: "I do it [plan for diversity] more as a, 'how can I make this more visual, how can I make it more, kinaesthetic',...more that kind of thing that fits for the whole class". She also described how she

was more likely to think about pupils' maths ability than their SEN when planning – "I think more of their Maths ability I think, rather than their special needs. Yes, more about, are they going to be able to cope with the Maths?"

She said that she occasionally wrote the name of a pupil in the differentiation section of her plan – "I have done that before. Yeah, I would do that. If I thought that there was something specific that needed doing for that particular child I might put it on the plan". Whether this would be a child with a special educational need or not was not discussed.

Some elements of planning for students with special educational needs came up when discussing the writing of plans. When asked if she had ever planned a completely separate task or completely separate activity for a specific child Jen gave two examples - one for a child "who was completely blind", and on other occasions when she has had a LSA supporting a group of pupils with SEN/supervising the separate activity. She did not feel it was possible to plan a completely different activity for a child/group of children, but saw differentiation as a key tool: "even with the best will in the world you can't always be doing two activities at the same time. So, much more likely to differentiate the activity so everybody is doing the same activity but it's differentiated rather than two different activities". When probed further she did see the possibility of designing a separate activity for students "with literacy problems but reasonable Maths skills" - "I suppose it's easier in a way, Maths, because you can take out some of the literacy which often is a stumbling block for a lot of children. So I could see it, yeah, maybe in that situation I could see that I could plan something completely separate for children with literacy problems but reasonable Maths skills". She added the proviso that "with most of the children on that particular list [the SEN register for that class], their Maths skills are weak and their literacy skills are quite weak as well".

Support for planning

The Maths department Jen works in has a scheme of work for each year group. It is expected that lessons will cover what is in that scheme of work. Jen develops a topic plan based on the scheme of work. Lesson plans are individual, and whilst some resources are shared between staff lesson plans/ideas are not – "we've tried several times to do it but it is quite a personal thing, lesson planning. It's surprisingly personal, how you like to do something".

I asked if Jen planned with LSAs who supported pupils in her lessons. This was done in the sense of using the LSA's knowledge of the pupil, as Jen explained "it is very much talking about the student individually because they do tend to know the students because they follow them round all the time. And, you know, quite often it's about what my approach should be, based on their knowledge of the student". She "would expect the learning support system to know that child, to know what they needed in terms of things". Jen would ask LSAs to photocopy special resources if required for students, an example she gave was enlarging textbooks for pupils with visual impairments. Jen supported LSAs in her planning by providing them with word lists so they can support pupils with various topic vocabulary.

Expanded planning

Planning for Jen went beyond the elements she wrote on the formal lesson plan and her personal lesson plan. It included thinking about seating arrangements, and the identification of students who had particular needs in Maths. When discussing her first lesson she made particular reference to peer-tutoring facilitated by students sitting in particular positions – "with this sort of work I also use a lot of sitting students next to another student that they can share their work and

ideas with and look to some peer tutoring as well. I think that's quite good in Maths always, so that they can look over and see,' oh how has that person drawn it'". She saw this as another type of differentiation.

An additional planning artefact which Jen provided me with was a photocopy of a seating plan for the class. This was very much a working document; names had been scribbled out and swapped. Tables were clustered into 5 groups with 5/6pupils in each group. 9 of the pupils had a dot by their name, this corresponded with pupils on the SEN register (8) and/or the pupil premium register (4). (Three of the nine were on both lists.) These pupils were placed on each group of tables. Jen explains - "in my seating plans I tend to put a dot by anybody that I think I need to keep a little eye on in every lesson and touch base with frequently because they're on the special needs register". She acknowledges that pupils' SEN status and pupil premium status will impact where she sits them. Jen describes how she developed the current seating plan: "I've kind of spread out the students so that there's only one to two special needs [or pupil premium] students on each table because I find that helps, if they're in with their peer group and mixing in that way. And I chose students that I thought would work well with them." This wasn't the way she had also grouped the pupils with SEN – "At one stage we started off with [..] three special needs and then three on another table but I decided that wasn't working. They, basically behaviour wise they weren't concentrating as much and we were finding it difficult to move along". This was an ongoing process; she commented that if she was to continue teaching the same group after half term she would make further changes to the seating plan.

This notion of "touching base" with particular students was exemplified in another artefact Jen produced. During the first interview Jen provided me with a handwritten list of 9 pupils. They were split into 3 groups: no action needed (with 3 pupils); moderate action (with 2 pupils named) and high action (with 4 pupils named). These levels of action where developed by Jen herself, as she explains:

"Yes, that's what I've come up with after knowing them for a couple of weeks and looking at the results of their tests. Each class I have I tend to do the same for. So it's kind of a portrait of the class just to keep them in mind in each lesson so that I kind of, I'm aware of who the pupil premium and who the special needs children are. And then I do devise this category based on how I find them in Maths. So, because the information you get is generic to all subjects, I would rather say, after a few weeks, well I know these people are on the list but actually in Maths they don't need any action, they're perfectly capable of, you know, getting self-starting, very motivated, not going to need much intervention. And then the moderate action, just those two. And they are very moderate action, both of them. And then the high action, which are the students I would check on regularly throughout the lesson, that they're still engaged and still doing something."

This demonstrates the interface between SEN and abilities in a specific subject. Jen recognises that just because a pupil has SEN does not necessarily mean they will find Maths difficult. This is shown in the fact that of the 8 pupils with SEN on her list 5 had the comment "weak literacy skills-please make classroom adjustments" as advice on the SEN register, 2 of whom were in Jen's moderate action list, 3 in the high action list. It also shows that a key way Jen caters for diversity is by checking in on identified students during a lesson.

Another aspect of this additional planning is an awareness of what she could be asked if a formal lesson observation was taking place. In addition to the provision of a formal lesson plan on a sheet similar to those Jen had completed for me there would be an expectation of a class list with the pupil premium and special needs pupils marked on it. It went beyond that however; Jen stated that the member of the senior management team responsible for internal INSET and Continuing Professional Development would "expect you to know various children and what their needs were". This went beyond knowledge of SEN/PP status – "if you think there's something particular to your subject... And also gifted and talented of course, and things like that... We have to be expected to show that we were catering for all those different students".

This knowledge impacted Jen's planning – when asked what ideas influenced her planning she mentioned how in addition to the scheme of work she would take into account "the skill level of the class and individuals[...]taking note of their various ways of learning, taking note of all their various special needs, or their, the fact that some children need greater challenges".

How Jen's planning, in relation to areas of learner diversity, becomes enacted and to what extent;

Enactment of the formal written lesson plan

The two elements relating to diversity that were noted in the formal written lesson plan were extension activities, and a pre-drawn table. Jen made use of both of these in her lessons. In my observation I noted that she offered a range of children the choice of using it or not. She replied "It was interesting nobody else answered that one wasn't it? That I'd given it to some children, obviously that I'd decided who probably would benefit, and they all said yes, all the four children I offered it to specifically said yes and stuck it in, but nobody else asked for it".

In a similar way she gave the opportunity for all pupils who had finished the set tasks to move on to the extension task - "I would have let everybody have the extension if they had wanted to but it's kind of self-differentiating in a way because the speed that some students work at. So, yeah, I, but no, they could have all had it. I was quite prepared for everybody to try it if they wanted to".

In-flight thinking had an impact on enacting the formal plan. Jen had highlighted the importance of adaptability on the part of the teacher: "So I think you have to be quite adaptable in a Maths classroom because you actually don't know really where the student's going to find a topic universally easy, or some find it easy, some find it more difficult. [...] you do have to be, you know, just prepared to adapt, I think is the main thing." This came through in the lesson discussions following the observation of the second lesson – "I had hoped they would be able to start the work sheet activity themselves after doing the mystic rose introduction but as soon as we started it, I could see there were lots of puzzled glances and I was going to have to do a little bit more directed work with them, before they could get going".

This adaptation of lesson was required for the whole class – "it wasn't just the students with special needs. It was a range of students[...]It was quite across the board that kids were looking a bit puzzled about what I wanted them to do". If it had been just the pupils who had SEN who were puzzled different steps would have been taken – "If it had been just the students with special needs I might have decided to rearrange the seating a little bit and group them together and work with them as a group".

We discussed what differentiation had been used in the first lesson. Jen stated that it was mainly "by outcome ... in terms of how much they managed to do[...] It was a lot by outcome and how far they managed to get in terms of drawing and recording". The type of Maths skill which was being practised also varied – "there's a huge difference between the students who are just

basically just drawing lines and counting, to the students who are doing their own mystic roses with a protractor and spacing out the points and so on, but that's the nice thing about the investigation. I think that everybody got something out of it. Even just motor skills of drawing lines in a circle is, you know, worthwhile doing".

Enactment of the 'complementary' planning

Jen's knowledge of particular students which forms part of her complementary planning was used at different points in the observations. A key example is when in the plenary, which involved calculating the next numbers in a sequence one student who was on her "high action" list got a calculator out to use. "I'm happy with that. He started the sequence, I could see he was trying to work it out, was counting on his fingers. He's one of the students that struggles with addition and number work in particular, so I was quite happy for him to do that as well as he could and then get his calculator.[...] I'm quite happy for him to take that strategy when he's reached the point where he can't add the numbers." She did note that she was selective "If some of the others had got it out I'd have said no, no calculator. But for *Max*, I was perfectly happy because I know that, you know, his ability to add numbers in that way is quite limited".

Another aspect of the expanded planning, that of 'checking in' on specific students was also evidenced in the lessons. At various points Jen would check sequences that had been drawn in pupils' books – she checked all pupils' work during the lesson. However, when looking at the book of her "high action" students she spoke to these students. In one case she set one pupil a different task so that he explored another number to sequence as he had originally chosen a very high number.

The idea of Literacy skills having an impact on pupils' Maths was reflected in Jen's evaluation of why the class found the second lesson so puzzling – "It was quite across the board that kids were looking a bit puzzled about what I wanted them to do. Now whether that was a language thing because I thought part way through the lesson, as you do, the literacy level was quite hard, the questions I was asking. Or whether it was just, it was quite confusing".

Rebecca

Rebecca is an English teacher in the same school as Jen. It is a large community secondary school in the South West based on the outskirts of a market town. The school has approximately 1300 pupils aged between 11-18, 8% with a statement or on SA+, 9% FSM. Rebecca has been a teacher in School A for 4 years, starting there as a Newly Qualified Teacher after completing a PGCE.

The researcher observed 2 lessons on consecutive days with Rebecca teaching the same mixed ability Year 8 class on 'discussing and writing about our opinions/comparisons'.

There were 24 pupils in the class, 11 boys and 13 girls. 1 pupil had a statement of special educational needs, 2 were on School Action Plus, and 4 on School Action, meaning that 7 were on the SEN register. 10 of the pupils were in receipt of pupil premium (2 of whom were also on the SEN register), and 3 were in receipt of FSM (one of whom is also on the SEN register). 2 pupils had a diagnosis of Asperger's syndrome, one of whom also had dyspraxia, 2 had dyslexia or "dyslexic tendencies", 1 pupil had a hearing impairment and wore hearing aids, another had "developmental coordination type difficulties", and one had numeracy difficulties.

How Rebecca's understandings and knowledge around learner diversity influences her lesson planning

Rebecca's notion of who the pupils with SEN are is based on lists she receives at the start of the year. This is a SEN register, and a class list which identifies the pupils' status on a range of indicators, including FSM status, SEN status, pupil premium status. The SEN status is recorded as a SIMs code – K/A. It gives each pupil's KS2 SATs scores.

The SEN register is the same as the one Jen receives as they are in the same school. It is a printed bound document which lists all pupils who have SEN in each year group. Their tutor group is recorded, along with SEN status and SEN type. As in Jen's case for each child there is a 1-2 sentence summary of need, followed in most cases by a sentence which says "please make classroom adjustments". Rebecca acknowledges that some of the points are generic and may not be applicable in her subject: "[it's] a generic list for all subjects, which is helpful, but for example Hannah on here, it says that she has some difficulties particularly in maths, it doesn't affect me in any way in English because her needs don't affect her learning in English".

Rebecca describes what how and when they receive this list and supplementary information:

"we always get our SEN register at the start of every year and it's updated termly so that's obviously our first port of call. Obviously our SENCO will highlight any sort of students that need extra, you know, special case kind of students at the start of the academic year. And we also have SIMS as well which tells us all the students' information that we would need to know, so there's loads of places you can find out."

Part of this information includes targets for pupils with SEN which are reviewed termly. Examples of targets Rebecca gave were "to be more organised, or to put their hand up". Rebecca reports how these are sent to teachers every term and the teachers "tick off how they're doing against those targets".

She describes how she would refer to the register at the start of the year to inform her planning: "at the start of year, especially before you've met them as a class you would have that in front of you and you would think about it every time you're planning a lesson". There would be a point where she no longer would refer to it – "as you go through the year you get to know your classes so you don't really need it in front of you".

Interestingly in one of the interviews Rebecca realised a pupil was not on the SEN register who she thought had been:

Researcher: And both those pupils, are they special needs? Rebecca: Yes they are.

Researcher: And what are their needs again?

Rebecca: Alan has, he's one of the Aspergers boys, and Saul I think is a global learning delay or whatever they call it. Oh, no, he's not on my register, that's strange, I never... Yeah he should be, he should be! He just is one of the less able students. I think it's probably just English, I think he has, struggles with his literacy so yeah, for me, he's in my radar.

She was able to explain why she thought the pupil may have SEN, providing the example of a recent end of year exam where "he didn't really write very much, but what he did write was really, really good. But because he works quite slowly, obviously things like that don't really show off his

skills". She recognised it was not due to a lack of ability, but rather "he's very slow at processing information and I think it's not necessarily that he can't do it, it just takes him a really long time". She claimed to have raised the issue "I actually went to see our SENCO the other day about him to say that I was a bit concerned. Because he has a lot of the LSA's attention but isn't actually on the register". By approaching the SENCo she hoped he would now get some support "which he needs".

Rebecca defined SEN as "anything that is going to affect the way somebody learns in my classroom. So anything, if it's medical or, you know, some sort of mental issue. I don't know, anything at all that is going to stand in their way" of "what we want them to have achieved at the end of [the] lesson". This she conceptualised as "barriers". She gave examples of the barriers that pupils might face.

- "maybe they have problems with their memory and that will stop them remembering what their task was so that will make it more difficult for them to complete it, and then that would be a barrier that is in their way"
- "maybe they have social interaction problems and they've been asked to have a group discussion and then that would put a barrier in the way to that"

In her definition of SEN she mentioned the she might have a role "to help them overcome [the barrier]". This is further evidenced in her response to the question "How important do you think it is catering for pupils with SEN?": "I think it's probably one of the most important things that we do... obviously those students who don't have special educational needs, they're much easier to plan for and they just get on with it and do their own thing. Whereas I think our job is to help those students that don't find things as easy, so really they become your focus[...]that's what we're here for, we're here to help people overcome things and achieve their goals".

Rebecca was able to give the researcher a concrete example of when a pupil's SEN had impacted her planning, she had planned in light of barriers two particular pupils who had autistic spectrum disorders faced:

"we did a poetry unit before this where they had to write their own poems, and I know John and Alan both find it really hard to describe and be creative and picture things that aren't necessarily real, so dealing with things like the idea of a metaphor can be really tricky for them so we did plan in extra lessons to explore that concept and try and make it a bit more concrete to them".

Interestingly the impact of this was not just on the two students who it was designed for "but also helping the whole class, I think it helped everyone in the end, trying to be a bit more creative and open minded and just getting your ideas down and not worrying too much about what you're writing. [...] I think it helped everyone with their work".

Rebecca's idea of learner diversity went beyond children who have been identified as having SEN. Other diversities she mentioned include: abilities in English; pupil background ("you have students from very privileged backgrounds sat next to students who have really tough backgrounds and really unstable home lives"); pupil premium status; where they live; learning style; gender; maturity levels; willingness to ask for help. When asked to described her class, she discussed them in terms of abilities "they're a really mixed class, there's a huge difference between the lowest ability student and the highest ability student. I've got some of the top achievers from the year in that class, but also some of the weakest students from the year as

well in the same room". Abilities in English could be further diversified into: those that have "rounded ability", that is "are good writers, good readers, and can express themselves nicely"; those who "are good at writing but not so good at reading"; and those who "are really good readers but their writing is a bit poor".

This is shown in her definition of inclusion which also reflects back to her notion of barriers:

"different students have different barriers in their learning, whether that's a medical condition or something from their home life, or, I don't know, loads of different barriers. And I think if your classroom is inclusive or your school is inclusive, it's helping students not be held back by those barriers. So everyone has the same opportunities no matter what is standing in their way".

How Rebecca conceives and caters for diversity in her lesson plans

The written formal lesson plan

Rebecca produced a typed formal plan for both lessons, which she said was similar to the "school lesson plan" used for "senior management observations, team review observations". When asked if her plans were similar to this school format she said yes, she just changed the format as she did not like how the school format looked.

The formal plan is an A4 page with space to record the year group; title of the lesson; objectives; and previous learning. Then a three column table appears, split from left to right into timings (a small column about 2 cm long); lesson (longer column, 7 cm long) and differentiation (6cm long). resources/differentiation; starter activity; activities; plenary.

The title on the formal plan is the same for each lesson. A single objective is recorded for each lesson. The lesson column is structured by four headings – Starter; introduction; development; and plenary. The column contains questions ("what makes a good discussion"); tasks ("Paired discussion", "sort into order"); grouping ("paired discussion"; "feedback to class") and teacher memos ("Circulate and assess them"). There is also reference to resources in this column ("share ideas on board", "using their assessment cards"). The differentiation section has comments explaining the differentiation tools used for the tasks listed in the lesson column. For example, beside the task "read the next scene" Rebecca has written "selected readers", for the plenary "write a comparison pair of paragraphs with different layers of scaffolding (sheet)" she has written "scaffold task". There is also reference in the differentiation column to learning styles – "kinaesthetic activity", "verbal, "visual sorting".

The four part structure of the lesson column is something encouraged by the school "they tend to encourage us to have four part lessons that are very structured and always look the same". She explains what occurs in the four sections "a starter, an introduction where you obviously give whatever knowledge you're trying to give, a development, which is where they'll do sort of the main activity, and then a plenary at the end".

Rebecca says there is no expectation that plans are produced or shown to anyone, but "if someone was coming to observe you, you'd have a lesson plan for them". Even in the context of an observation there is "no set rule as to how you do it". She commented that having a school plan to complete for observations is a good thing, so teachers are not "creating something new every time, you know that you've got something to fill in and that's what everyone will expect to see in whatever lesson they go to".

The personal lesson plan

Rebecca distinguishes between official lesson plans and "the real lesson plans [which] are the ones that we do on a day to day basis". When asked if she always had a lesson plan in front of her when she was delivering a lesson she said she always writes something in her planner, but that "it's just sort of brief notes about what I want to do and which order I want to do it in". She would have her planner in front of her during a lesson as a prompt to remind her what she was going to do. She would outline her plan in her planner "quite a few days in advance" of the lesson, but indicates it is a working document – "often it's changed and crossed out, and that's where my sort of thinking happens". Without her planner she feels "she would be lost".

When asks why she plans she says that she thinks "it is something we do because we have to", but goes on to explain that she views it as a journey – "knowing where you're going and how you're going to get there", "have[ing] the end in mind all the time cause we're trying to get students to an end point". She sees her lesson planning as "your steps to help the students get to that point".

Understanding of differentiation

Differentiation is mentioned specifically on the plan as a column on the three-columned table, Rebecca explains "mostly that's for me to make sure I'm doing things, because if I put it on the plan then I'll make sure I do it, so that's partly why it's there". She gives three examples of differentiation – by outcome, through grouping, and by activity type. The activity type was related to learning styles, kinaesthetic, visual. When asked directly what differentiation means to her she stated "an activity will appear different to different students, so they may all in fact be doing the same actual task, but different students will have a different idea of what they're supposed to be doing. Whether that's, you know, their outcome is different, or the actual task in front of them is different". It is related to her sense of the lesson plan laying out a journey – "on the face of it they're all going in the same direction and they've all got the same end, but the tasks they do along the way may be slightly different".

Differentiation for Rebecca "usually [relates to] ability in English". A concrete example appeared in Rebecca's second lesson plan which stated that differentiation would occur through a scaffolded task. The plan described the task as "write a comparison pair of paragraphs with different levels of scaffolding (sheet)". She described the scaffolded sheets as "personalised worksheets", four different sheets with pupils' names on. When asked how she selected which students were to do which sheet she replied "Based on their targets and the levels that they're working at at the moment. So I looked at the levels from their last assessment [...] And which level they're aiming towards and that's how I worked out who was going to do what".

Another example of differentiation is through grouping, and selecting who goes in particular groups for particular tasks – "I've picked the groups so that there's a mixture of outgoing students and the quieter, more nervous students mixed together, so hopefully that will help them draw out what they're doing". She also plans who she will call on to do a particular demonstration – "I've picked them quite carefully so that students who are really good at speaking are going to be our sort of test group and they're going to show us how it's done. So they're some of the more able speakers in the room".

She also discussed how she would have "different goals" for "the gifted and talented students". This might include advising them to "aim to write a bit more", or "use two quotes instead of one". However, says she would single those pupils out, but open it to the whole class "So rather than saying like 'Claire and Leanna, you're going to sit there and add this.' I think if you say to the whole class 'If you want an extra challenge then why don't you try doing this?' and then it's there for everyone if they want to try it".

In terms of differentiation by activity type she describes how she records if an activity is visual, or verbal with the goal of covering lots of different types in a lesson "rather than just doing the same thing all the time". She argues this is "a form of differentiation because you're thinking about those students and what helps them learn and what helps it stick in their mind".

Specific planning for diversity

When asked if her understanding of diversity as her "belief that everyone is different and an individual" impacted her planning she replied that it did, but in the sense of planning for a particular class: "you cannot look at every class in the same way because each time there's a mix of different individuals in a room, and whenever that happens different people react to each other in different ways and to what they're doing. So I think you'll always have different needs to cater for and different people will react in different ways to what you're doing".

She discussed a number of examples of planning for diversity, the first being the scaffolded task referred to above: "it's scaffolded a lot for those students who are at the bottom end of the ability scale, but lots of those are those ones with special needs as well. And I think it helps them because it's quite logical and they've got all these ideas and they don't have to worry about how to put them down because the scaffold will help them. But then at the same time for the gifted and talented, the most able students, they've not got that scaffold to stand in their way and make sure that they're, you know, exploring things that they want to talk about."

When asked if her differentiation for different learning styles was ever related to specific students she says that sometimes she has a group of students in mind when she decides on an activity. An example she gave was in relation to the kinaesthetic activity she had planned for lesson 1 – "I know there are a group of boys in that class who respond better to getting up out of their seat and moving around the room". Another example is her planning of verbal activities for pupils "who have problems with their written work". "I think the verbal work is really important to help them express themselves because I know they struggle a lot with spelling and grammar and punctuation and it kind of gets in the way of them putting their ideas down. So I think if they can explore that verbally first then it allows them to have those ideas without feeling worried".

Occasionally Rebecca would note in her planning the names of particular students she would "want to check up on", or question. An example related to learner diversity is that in one of her classes she has a pupil who needs enlarged work so she would always put "enlarge stuff for Adam next to my plan so I don't forget to do it".

Support for planning

Long and medium term planning is done as a department, and can be accessed on the computer. They set out what needs to be done, and teachers "can just adapt them to what we need". Resources and ideas are shared between teachers in the department. Other ideas for planning come from on-line sources, such as blogs or Twitter – "you get some really good ideas, people sharing good practice and new ideas and showing you how things work".

Specific support for planning for diversity may come from the special needs department: through whole school training - "We have loads of training as well which is really nice. So we've had training for teaching visually impaired students, we've had autism training"; and through

responding to staff requests for support - "Last year I had a student [with autism] who had the same sort of difficulties with creativity so I went over to the [on-site autism] Centre and spoke to some of the people there and they gave me some advice". She describes the SEN department as approachable, and that a lot of people choose to seek out their advice, but, again, this is not an expectation on staff.

When asked if she ever planned in conjunction with an LSA she said she would often sit down with them at the start of a unit of work and discuss "if there's anything, any problems we can see arising or if there's anything we need to change". She came up with a detailed example of how this worked regarding a specific pupil with a visual impairment:

"I taught a boy who was completely blind and he had a one to one LSA, and with her we designed a whole new set of lessons for him because it was very hard to teach him things like poetry because obviously he can't visualise things the way that we would. So we had to come up with a whole new way of teaching these strategies, which we did together, we worked together and with the, a lady who came in from one of the agencies. So yeah we worked together and came up with a whole new strategy for him which was completely individual to him".

Expanded planning

Planning for Rebecca went beyond the elements she wrote on the formal lesson plan and her personal lesson plan. It included thinking about seating arrangements, awareness of the characteristics of the class as a whole, and individuals within it, peer teaching and the use of LSAs.

Rebecca provided me with a copy of her seating plan for this class. She developed this using a number of principles: the school policy of seating pupils boy/girl; grouping students who need LSA support in one area; the pupil premium pupils in the middle of the room "because they are the ones that we're supposed to be checking up on the most, so it reminds me to make sure I'm asking them lots of questions"; and top achieving students in each corner of the room. The reasoning behind the last point is that she had read a teacher's blog that suggested this approach as it makes a difference to the whole class. Rebecca trialled it and found it worked.

In terms of seating the pupils the LSA will work with this is created in dialogue with the LSA – "I've always talked to the LSA about where in the room she feels best to put them, and (...) she'd like them nearer the front of the classroom and to the side so that she doesn't need to be in my way whilst she's helping them, so they're all in a group together".

Her knowledge of pupils has also had an impact on her seating plan. She is aware the pupil with hearing impairment has to sit at the front of the class, but has placed a specific student beside her as "I know that he gets on really well with Elizabeth, and he can get quite anxious about new things and talking to new people, I thought I'd keep him next to someone who he's quite friendly with anyway, it would help him, you know, not be so nervous about where he was sat". She also felt it would help this particular pupil focus, to not be distracted. This growing awareness of particular pupils has helped Rebecca deal with misconceptions she had about pupils and their needs "at the start of the year I was probably more concerned than I am now because I've got to know them and I know how good they can be at adapting to different situations".

There are some practices that she is aware will help particular pupils that she tries to do every lesson, in the following example she is referring to the pupils in her class that have a diagnosis of

dyslexia – "Reading things out to them I think is really important, so I always make sure that I read out the aim of the lesson so that they've at least heard it rather than saying 'Copy it off the board.'"

She is aware of the needs of the class as a whole, and describes how this has an impact on her planning "I think this class have really taken to it, which I wasn't necessarily expecting, perhaps better than other classes have before, so I think that's been really useful to change in this lesson [from what would normally happen]". One of the ways this class is different is they are less independent, and more reliant on teacher support. In response to this Rebecca has found herself creating more resources to support them.

She has changed other generic resources to give pupils a more positive experience, as she outlines in the example below:

"I changed the way that they were written so I took what was on our standard department level descriptor and I changed it to make it a bit more positive cause I think the level three and four was kind of things like 'they don't do this' and 'they don't do that' so I changed it so it was a bit more positive. So rather than 'Oh this student at level three is not contributing.' I changed it so it's sort of 'They contribute sometimes.' so I think if you make it a positive rather than a negative, so there's always something that you can achieve, so there's like boxes for them to tick so they've achieved something. Even if it's only the level three boxes they've ticked, they've done something that they can say is a success for them."

Providing opportunities for peer tutoring is another element of expanded planning for Rebecca. She does this as it helps extended and embedded the knowledge of the more able student, which is " a really powerful way of learning something...if you can explain it to someone else it shows that you really know it".

Although in the second lesson the LSA the was not present, Rebecca was able to explain how the support would have been used. She would have listened to some of the discussions; sat with specific pupils in the group work (particularly two pupils with SEN) to help them "focus on the discussion"; and supporting Rebecca by answering questions that pupils had in the written task.

How Rebecca's planning, in relation to areas of learner diversity, becomes enacted and to what extent;

Enactment of the formal written lesson plan

The main provision for learner diversity in Rebeca's plan related to the variety of activities, each of which were enacted. Rebecca felt the final scaffolded task provided for the pupils at the end of lesson 2 demonstrated the success of this approach:

"the end of the lesson where they were all sat there nice and quietly scribbling away furiously with loads of ideas showed that it worked, which I think is always nice, when you get to the end and they've got loads of ideas because the discussion has helped them. I think that was probably the best thing about it, that they'd got to that end point and managed to put down some really fantastic ideas that otherwise they probably would have just got a bit stumped".

In-flight thinking had an impact on enacting the formal plan. Rebecca had highlighted the importance of adaptability on the part of the teacher: "as a teacher that's what you need to do, you need to be flexible [...] I think if a class aren't getting it or if they're really in to an activity and you want to stretch it out for a little bit longer or you want to explore something different that comes along then I think that it's really important that you do that." This came through in the discussion following the first lesson when she explained why she added a whole class activity – "during the debate we needed to come back and I felt it was getting a bit like we may forget where we were going so I think it was important to change it round and have that moment where we had them do their final statements, which I wasn't originally planning on doing, but I think that was actually quite nice for them to sort of gather the thoughts and then put it in to one statement at the end".

Enactment of the expanded planning

Rebecca's knowledge of particular students which forms part of her complementary planning was evidenced at different points in the observations. When asked if she was aware of how a pupil with Aspergers whose entry in the SEN register noted he found unstructured times quite difficult she responded "I think he did really well today actually, I was actually really impressed. It's Alan, he's actually got a lot better this year at things like that. I mean we've tried to just get him to have a go at these things and actually during the debate he was really good, he was getting involved".

Questioning particular pupils and seeking elaboration was another aspect of expanded planning she used. She gave two examples:

- "Stretching" more able pupils as they have "more than that to give"
- Helping pupils who "have an idea but maybe can't quite get it out".

She reflected after the second lesson that she may have rearranged groups - "Alan, he was in quite a big group and he might have benefited from being in one of the groups that had a few more people away as he's quite good at talking to smaller groups". However, her in-flight decision making was based on her being "very aware that we were running out of time and I wanted them to get on to the writing part so I stuck with it". This sense of having to coordinate groups was something she had thought about during the first lesson, saying that she would have got the pupils with SEN to work with each other in a group "because it's just easier for them to have someone to bounce ideas off" but those particular pupils "did sit together anyway...which was nice because the LSA could then sit with them".

Peter

Peter, a Design and Technology teacher, had been teaching in the same school for 16 years. Peter's teacher training was a 2 year BEd in Design and Technology. Prior to undertaking this degree he had had a career in the armed forces.

This school is a secondary Academy Convertor with approximately 1000 pupils aged between 11-18. It is in the centre of a market town in the South West. 3% of pupils in the school have a statement or are on SA+, 11% are eligible for FSM. The school was rated good in its last OfSTED. Peter was observed teaching the same year 9 class. Pupils in this class had opted to study Resistant Materials for GCSE, and they had just begun their GCSE course. The lessons were on two different topics. The first lesson focused on sustainability, while the second one looked at sketching a simple drawing.

Within the class was one pupil with a statement for two areas of need – Speech, language and Communication needs and Cognition and learning. No official information was given on the SEN status of other children in the class, but Peter said he was aware there were "a couple of action pluses" in the class, but he was not sure what support they needed. When asked if he considered anyone else had SEN he replied "I think there are several with attention deficiency disorder".

How Peter's understandings and knowledge around learner diversity influences his lesson planning

Peter's notion of who the pupils with SEN are is based on data that they receive on the attendance register – "There's a little note in the register or a letter. Like, Charlie is S. Any children who aren't, are N. [...] And then you've got the A's which I think is action plus, which is like, they're not completely statemented but they have some form of extra help". SEN colleagues send out student profiles regarding the pupils who are statemented. In addition to this there is a filing system on the staff shared area of the computer network "where we can access and look at their reports or their profiles". Peter showed me a profile for the statemented student in his class, Peter explains "this gives us an idea of where his difficulties are", "We can have a look and get a general idea of why they are statemented or action plus, action".

The Student Profile is a document created by the SEND team. The top 4 boxes contain the pupil's name, their tutor group, the date the profile was written and the name of the pupil's tutor. The next box is entitled "category of SEN". This lists the pupil's SEN status, the category of SEN and the area of need. In the example I was given the content of this box was "Statement -SLCN/CL - Speech & Language/Learning Difficulties. The next box contained the name of the author of the report, in this case it was by the Head of Learning Support/Assistant SENCO. The next two boxes are larger and contain paragraphs and bullet points of information. The first, "Main areas of concern" consist of two short paragraphs. The first describes the pupil's difficulties; how this is manifest and the impact it may have on learning. The second paragraph gives contextual information about this particular pupil's home life/background. The next box -"strategies for support" lists three bullet points outlining practical steps to support the pupil. For example "He benefits from additional processing time in class to answer any questions" and "simplified step by step instructions [...] support his comprehension difficulties". The first bullet point in the list states that the pupil "receives a high level of support to access the curriculum". The final box is for further information, in this case it says to contact the SEND team for further information.

When asked to describe what he understood the' strategies for support' meant for this particular pupil Peter replied that he "needs a high level of support to access the curriculum, needs constant supervision as far as I can see. He doesn't get any external support in Resistant Materials, benefits from additional processing time in class answering questions, so he needs time to think about his answers. And he needs to be given that opportunity to... he needs more time basically to produce or to understand what the outcome's going to be. So I need to be aware of that, maybe when I'm setting a test for him. [...]Simplify step by step instructions helping to work towards independent support, his comprehension difficulties".

Peter acknowledged that he does not always get a chance to look up this information ("it's finding the time to do that") especially as in year 7 and 8 he has a new class every 8 weeks. He explains "with a big turnaround in technology it sometimes does get overlooked, I must be honest. Because 'oh changing next week, yeah, I've got a new group here, okay I'll have a look at that in a moment'. By the time you know it, you have a lesson- 'Ah, right okay, I've got a couple of SEN students here'". He goes on to say that usually the first indication of having a pupil with SEN in a class, if you haven't looked at the register, is "when they turn up with a support assistant".

Peter seemed fully aware of the support that Charlie, the statemented pupil, would need in his lesson (this is reflected throughout this case study). However, he was aware there were some students who were classified as School Action +, but he was not sure what support those students required: "to tell you the truth I'm not too sure what level of need is required for action plus. Whether they.. I think it's, they have, maybe, difficulties with their numeracy or they might be dyslexic or, you know, reading ability is low".

Peter demonstrates a number of conceptualisations of special educational needs, as well as school's role in providing for those needs. "Special educational needs children need extra help. They need... more guidance". This guidance and help was related to life, and life's rules – "they need guiding through these life rules and that's where I see special needs children". There was a sense, through all his interviews, of pupils with SEN not "fit[ting] in to the school system", due in a large part to the rigidity of the school system – "There's one size fits all". Peter himself had personal experience of his child not fitting into the education system, and after a number of exclusions and managed moves, his son now coped in a mainstream school that "realised that he needed extra help and that he wasn't, you know, he wasn't this square peg who couldn't fit into a square hole". He sees that schools need to adapt to pupils with SEN, but often don't, or "we try but it's extremely difficult and, you know, with so many, we'd need a huge increase in finance and support to do that".

Throughout his interviews he makes reference to his ideas about the characteristics of pupils with SEN:

- a lot of recording of information which, they find it difficult, you know;
- they find it hard to focus;
- they need a lot of time and guidance;
- know special needs children can be quite moody and stubborn;
- if they don't want to particularly do something then you need to adapt;
- I think some special needs kids see life a lot differently to how mainstream students see life;
- I think that's on the Asperger's range, is it not, where he really needs specific black and white tasks?

Peter had a clear belief in his role to support all students, regardless of ability or SEN status – "The idea is that we, you know, we try to get the best out of each student whether they've got a statement or not. And they work to their full potential and best ability. So yeah I think the teacher's role is crucial, whether they're SEN or able students". This is echoed in his description of inclusion "Inclusive means to me the involvement of every student in every activity. Whether it's in a lesson, whether it's in college life. We try to make [the DT classroom] as inclusive as we can, yes. And I always do my best to include all the children whatever special needs they have"

Learner diversity for Peter extends beyond pupils with SEN. This includes ideas about pupils' learning styles, speed at which they learn and, levels of motivation, creative thinking, ability to

work as a team, gifted and talented, ability to maintain interest in the topic as well as abilities in DT. Another aspect of learner diversity relates back to his ideas about the suitability of mainstream – "not all students are suited to the standard educational environment of the so called, the normal type college". Again, he sees that teachers have a role in challenging this notion of trying to fit square pegs into round holes, but points out that schools' "hands are tied by government, by policies. We haven't got a free rein. We're tied to exam timetable, exam tables, league tables. Which is a major factor, I think, in holding teachers back from being creative. Because they're scared they're not going to get the grade and, you know, grades are all, the percentages of A to Cs and A to Bs and A stars, that's what we're looking [for]".

How Peter conceives and caters for diversity in his lesson plans

The formal written lesson plan

Peter produced a formal plan for both lessons, hand written on an official school format – "We have a formatted sheet and we put our own information onto it...a standardised format". Peter acknowledges the format is quite detailed – "we've got prior learning, learning objectives there, so we work from a set point and then we go upwards ... So the type of activity, whether it be peer assessed or dialogic, individual activities or paired, there'll be group work activity". The school format was created about a year ago, and had been developed by one of the school's senior managers to match the planning to OfSTED guidelines regarding what makes an outstanding lesson. "It's been through various stages of morphing itself... It's been simplified, it's been tweaked over a number of years but this has been in place for about a year. It used to be called a lesson plan, now it's a learning plan. Little tweaks like prior learning here. That, there's some confusion as to what, it was meant for prior learning so they simplified it on the sheet." Staff have received training in using the plan.

The adaptable part of the formal plan (called a learning plan) is two pages long. There are two and a half additional pages of guidance with the statement "this sheet is designed to guide you through the process of writing the learning plan and should be used as a check list/reminder of the strategies that are the features of outstanding lessons". The formal plan is a combination of boxes with space for content to be added, lists with tick boxes and spaces to record key information. At the top of the page there is space for the group, teacher and date to be recorded. This is followed by a box entitled "prior learning". The next box is entitled "learning objectives". At this point a third of the page is taken up with tick boxes under various headings.

- AfL opportunities: dialogic talk; peer assessment; self-assessment; feedback; reviewing and reflection
- Activity type: individual; paired; small group; whole group; student led.
- Differentiation: teacher support; outcome; questioning; grouping; equipment/resource; learning style
- Other: Literacy; oracy; numeracy; Personal Learning and Thinking Skills (PLTS)
- Success criteria linked to levels and grades (3 tick boxes followed).

The final box was entitled "planning for learning". This spread over the remaining third of the first page and two thirds of the second page.

In the prior learning box in both lessons Peter had written two/three statements about what previous knowledge the pupils may have. There is a statement about knowledge of most students, but also one/two statements about knowledge or lack thereof, of some students. There is one general learning objective recorded for each lesson.

In both lessons some of the boxes in the differentiation list have been ticked – teacher support and grouping in both lessons, outcome in the first lesson and questioning in the second. The planning for learning made reference to seating weak students with strong. There was no further reference to specific students/groups of students in the plan.

There is no expectation from the school that lesson plans are produced. Peter would produce them for performance management observations, but adds "at the moment we're on an action, short of strike action so we don't tend to and I encourage my colleagues not to. But if they want to it's up to them". He comments that teachers are not obliged to produce lesson plans for OfSTED inspections as they do not request them, nor are teachers contractually obliged to produce them.

The personal lesson plan

Peter does however undertake regular personal lesson planning which he records as brief notes in his planner: "I'll scribble in the activity that I'm going to do, the objective, and how we're going to end the lesson". His experience with the curriculum makes this process easier, but he still likes to record reminders in his planner – "I've been doing lessons a long time now and I can usually think, 'oh yeah year nine, I've got, yeah we've done that before, I know exactly what I'm doing', a couple of quick notes in my planner there, just to jog the memory. Get the material out the night before". His reasons for planning are to give a sense of order "If I didn't plan I'd just be lost. I wouldn't know where I was going, no direction, I wouldn't know where I was on the scheme of work." This order is important to ensure student progress and to help with the range of teaching he does.

Understanding of differentiation

Differentiation is mentioned specifically on the plans in the form of a tick-list of types of differentiation (teacher support; outcome; questioning; grouping; equipment/resource; learning style). The guidelines for differentiation outlined on the plan are one sentence long "Plan what activities you will provide for gifted and talented students; students with SEN/D and EAL". Peter had ticked some of the boxes in his plans (as described above). When asked to talk through the differentiation he had marked on his plan Peter's response highlighted a focus on a specific pupil, a focus on ability/peer-tutoring and a focus on pedagogical questioning. "I've marked, the areas would be teacher support so more focus on Charlie[...] Because I thought he might not understand exactly what was going[...]The questioning, [...]high end questioning, trying to get the students to dig out the information themselves by saying what, if and why?[...] Group working. [...]a high attainment student in with that group to drive them, maybe, or to set an example".

Peter described differentiation as a tool to ensure inclusion "I believe my lessons are inclusive with varying degrees of differentiation. I try to adapt the pace complexity to the student's ability and hope to arrive [...] at the same goal but with various levels of outcome". When planning he might "prepare differentiated help sheets on occasions when necessary". For example "if there's a particular project to be done there may be certain elements that have been drawn or written in to help or guide a student who needs that assistance". Other ways he differentiates would be through where he sits students, and planning to "spend an extra five minutes with them, talking them through it, which I will need to do with Charlie".

While there was no differentiation of resources in the lessons I observed Peter did outline a particular example of how he may differentiate a task by producing a scaffoloded resource when planning for a particular student:

"Charlie, I would give him a guide sheet. I would give him an example. 'This is what's been produced, you need to produce something that is your work but in the same format.' Whereas the rest of them... I can say, 'right, okay, sketch as many ideas as possible relating to the product you've chosen'.... Charlie wouldn't probably grasp that so I'd have to set him a picture, I would imagine, of something similar. You know, a selection of sketched CD holders. 'Alright, these are some ideas that the past students have come up with, I want you to put down something similar or something from your imagination. How you see a CD holder?'"

Specific planning for diversity

Peter remarked throughout the interviews that he tended to plan "for the majority", that the majority of his lessons are "mainly tailored to the mainstream". A generalised plan is created where he tries to "integrate them all [the pupils] and start for the same level and then adapt as I go". He states "I don't particularly spend a lot of time planning for special needs children in particular". His reason for this is time related "I just haven't got the time. I'll be spending all night planning, you know". This is exemplified in the discussion of the plans he produced for the research project – "with the only one special needs student in the group, as I say, it's planned for the majority and then I differentiate as I see fit to aid his learning".

Support for planning

Peter makes brief reference to schemes of work and subject specific school improvement plans. They are "usually written by the subject leader. As a team we all have an input. And some elements may be delegated to myself or Michelle who's my colleague next door, or Laura, another colleague". They are reviewed in the summer term by all department staff. When asked if these plans take account of diversity of need he replied "Not really. No, we just, we plan for the mainstream".

Occasionally ideas about lessons are passed between the department "There's a group on Facebook, a Design and Technology forum and I'm linked in to it. I don't use it as much as Miss Silverman does, but they share ideas and she got it off somebody from another school and we just share ideas".

The main support for planning for student diversity came from learning support assistants. Peter gave a number of examples, one where adaptation of resources had been required by a learning support assistant – "there's only one student who I'm aware needs special blown up sheets and that's the child in year seven Resistant Materials.[...] Which I've been specifically asked to do by his learning assistant". Another area is where extended homework tasks are redesigned by LSAs for particular pupils – "the [extended homeworks] are sometimes specially prepared to help certain students [...]they rewrite some of the assignments so that they're manageable by our most severe cases [of SEN]". This support also extends to the creation of marking criteria "when it comes in to marking...we go by their criteria and not our more challenging criteria".

Peter recognises the learning support assistants that support some children with SEN are "invaluable" because "they know the child. They know how they work and they pass on that information to us and we can if necessary adapt the teaching to suit".

Expanded planning

Planning for Peter went beyond the elements he recorded on the formal and personal lesson plans. It included thinking about seating arrangements, and the provision for some specific students. This planning is informed by getting to know students – "You think, 'hang on a second, yeah I've got so and so in, ok they might need a little bit more attention'". With Charlie, the statemented pupil, his knowledge was a mix of his observation alongside what he had read on Charlie's support plan:

"Charlie needs a high level of support to access the curriculum, needs constant supervision as far as I can see. He doesn't get any external support in Resistant Materials, benefits from additional processing time in class answering questions, so he needs time to think about his answers. And he needs to be given that opportunity to.. he needs more time basically to produce or to understand what the outcome's going to be. So I need to be aware of that, maybe when I'm setting a test for him. So he might need half an hour, where the rest have twenty minutes."

His experience enables him to be aware of the need to adapt in the middle of a lesson – "the majority is from experience, looking at their progress, monitoring their progress, then I can quickly adapt...I don't stick to a regime. If the guys are struggling, then obviously, ok there's something wrong here, perhaps we'll take it down a few notches". (This is reinforced in the planning document which in the guidelines section says at the very end "Most important! This is a plan; you do not have to stick to it!")

Needs and abilities gradual become more apparent as Peter gets to know a class – "Within my eight week cycles and a little pre-group information, it's not until I'm a week or two into the new group that the needs become apparent". The knowledge of students he gains during lessons impacts his awareness of the class and their levels. Another aspect of this expanded planning is in the area of seating plans and behaviour management.

How Peter's planning, in relation to areas of learner diversity, becomes enacted and to what extent:

Enactment of the formal written lesson plan

Peter had marked various types of differentiation on his learning plan, and had stated this would include a focus on a specific pupil, a focus on ability/peer-tutoring and a focus on pedagogical questioning. He had not used grouping in the first lesson as he had outlined he would (placing weaker students with stronger students). This was an oversight – "when these students sat down in their groups, in hindsight I should have separated maybe the better ability students and put them with a low ability student. Instead of letting them sit in their friendship groups. That's probably where I made a mistake with the two groups in the front who were rather more talkative than the two groups at the back".

Teacher support for the statemented student was enacted, but, in the first lesson, was not required to the extent he thought it would be – "I've marked [on the differentiation section of the plan]...teacher support so more focus on Charlie. And he needed less attention than I thought he would because he really had a good grasp of what I was asking him." This is further demonstrated in the dialogue below:

Peter: I thought he might not understand exactly what was going on but he did. And he got on with it.

Researcher: Because in his profile it says that he needs the steps broken down. And you came and checked his understanding and he seemed to be able to get on with it.

Peter: He coped really well, yeah.

However, the next lesson showed a case where Charlie did need instructions simplified/reexplained as per his student profile – "I made a general assumption that he understood what the task was. But he misinterpreted what I said, when he started actually drawing what he saw on the object, onto the paper. Whereas he needed to put that object onto the paper then extend around it. So that needed simplifying for him and re-explaining". This was recognised and acted on by the teacher during the session:

Researcher: I saw that again you checked the understanding of the learning task with Charlie.

Peter: Charlie. And I'm glad I did because he was, he thought he had to identify an object from the popcorn, and draw it...So he didn't realise that he needed to put the object on to the sheet and draw round it and extend the image. So that had to be clarified.[....]The rest of them got it straight away, whereas he didn't. [...] Basically you have to demonstrate it to him.

In-flight thinking had an impact on the plan in the first lesson as the teacher was able to "free up my time and keep an eye on the able students who were not able to focus".

Questioning, which he had also highlighted as a differentiation tool was also used. The school has a no-hands up rule, Peter explains how that is enacted in his class "The children who put their hands up, they usually know the answer. But I want to know who doesn't know the answer or who's hiding behind, you know, a mask. So I usually tend to pick on the quietest ones, the ones who are slunk in their chairs". Peter comments that the school encourages "high level questioning and to push, and tease the information out of the students by asking deeper, meaningful questions". This was enacted in his first lesson: "at the beginning, I tried to keep enforcing the question, and digging a bit deeper. So high end questioning, trying to get the students to dig out the information themselves by saying what, if and why? And just throwing it back at them, rather than me giving them the answer, and hoping that somebody else would interject as well".

Enactment of the expanded planning

Peter described how during the lesson he was able to gain additional knowledge about all pupils – "Walking round, as I said, this is a new group for me. I've had them seven weeks now and this is the first Idea generation lesson that they've done, so I hadn't, I didn't really know their ability as regards ideas and sketching". He is now aware of pupils' levels of motivation as a result of the lessons: "There was two, three, possibly four identified as, I would say, engaged, totally motivated, talented, lots of ideas, good quality sketching. Majority of them middle of the road, quite a bit of a mixture, and then there's a couple of them who were slow to grasp the concept or were not motivated by the idea. And so, yeah, I've got a better understanding of their general levels in this area". His developing knowledge of the class has highlighted students who may need more attention in future – "I think those, I think he, Neil, took more of my time than the other chap, than Charlie. And now he's meant to be, you know, non-statemented".

He has also thought about the seating plan "Jordan had to be moved so, he needs close monitoring. From previous, that's why I sat him in the front. I would never sit him at the back". This will inform future planning: "the two guys at the back, they were both good at sketching and generating ideas, sat together. Perhaps I should have split them with somebody who was less motivated, like Hugo who ended up smashing up Twiglets and throwing stuff around. so that's a learning curve and now I've got an idea who are the less motivated students so we need to focus a little bit more on them."

Matthew

Matthew was a Maths teacher in a Foundation secondary school on the edge of a coastal town in the South West. The school has approximately 1100 pupils aged between 11-18 on roll. 9% of these pupils have a statement or are on SA+, and 5% are eligible for FSM. The school was rated outstanding in its last OfSTED. Matthew had been teaching Maths in this school for 5 years after completing a PGCE.

I observed the Maths teacher teach 2 lessons with the same top set year 7 class. The lessons were on two separate topics - multiplying decimals and sequencing. However, the starter of the second lesson recapped on the previous day.

Within the class were 5 pupils categorised as SEN support. One pupil had a visual impairment, three pupils were listed as having cognition and learning needs, 2 of whom were recorded as having moderate learning difficulties, and one with a specific learning difficulty. One pupil had a medical need – a peanut allergy.

How Matthew's understandings and knowledge around learner diversity influences his lesson planning

Matthew's notion of who the pupils with SEN are is based on data that teachers are given at the start of an academic year – "we have a system in the school which is brilliant [...], we get a print out of the photos of everybody in the class with a, a bit, almost like a tick box so you know that if there is something that you need to look up on the system". This print out had a photograph of each child and their name. Underneath their name was a list of headings: PP; SEN; FFT [Fisher Family Trust] estimate; latest TA (teacher assessment); and progress. SEN data listed the category of need (cognition and learning, medical, visual impairment). This was a working document, Matthew had noted on his version what the need was (so, peanut allergy for the student with a medical need, MLD for 2 of the pupils with cognition needs).

Matthew made it clear that he would look details up on "the system" if the pupil information print-out had shown a pupil had a particular need. It is an active process – "it's not a passive thing when we, every so often if you remember, go and see it. They [the SEN department] do send updates to us. So we know if it's been updated. Either because the file is sent to us or because we just get an email saying, 'you really need to go and look at this because we've updated it'". The files contain information on individual's special educational needs, including copies of their Individual Support Plans.

When I asked what was meant by moderate learning difficulty, Matthew replied that it was a category the school uses. He continued "If I wanted to know more information, which is my want, I can, and the information is on the system, then there are two or three members of staff that I can go and speak to, who I have spoken to about them."

Matthew defined SEN as "everything from behaviour issues[...]through to specific physical needs or, sort of, the whole emotional, the way you have to react to some people because of any attachment type issues they might have and so on, so quite a broad spectrum of things." He sees pupils' SEN as part of a holistic understanding of pupils: "I treat their special educational need as part of their requirements and part of their needs and part of their learning style. Rather than, 'here is a person with this, I need to treat them like that'. So I read the plans [Individual Support Plan] in detail and the risk assessments[medical procedure] in detail rather than seeing them as a syndrome".

Learner diversity for Matthew included diversity of need, but went beyond this "anything from the different models they have in their heads of how Maths works, all the way through to somebody who is visually impaired". This is exemplified in his definition of inclusion: "Inclusive would include everything from people with special educational needs; ... for me a big issue is money, that somebody shouldn't have a better education in a comprehensive school because of a financial situation; and minority ethnic groups and everything, that you get a fair shout in my lesson". He has a belief that everyone has as much of a right to the education as anybody else. This belief leads to him trying to ensure "not that there's no difference in the way that I would teach you, but that there is no difference in the possible outcomes from having been in my classroom". He strives to see and treat all his pupils "as individuals". When asked if level of Maths ability was affected by SEN he responded "No, there's no reason it should be. In the same way as it's not affected by gender or EAL or anything else".

How Matthew conceives and caters for diversity in his lesson plans;

The formal written lesson plan

Matthew produced a formal plan for both lessons, typed on an official school format, the format that would be used if being observed by management or OfSTED. In these situations he "would always have it sat there so I could explain why I did something, if I was asked".

The plan is a grid on one A4 sheet. There are a total of 11 sections on the grid, with headings in bold and space for content to be added. The first three rows are split into two columns. At the top of the page there is space for the class, period and date to be recorded. This is followed by a box with two questions in bold "What new learning will students gain in the lesson?" and "How will this be shared as a learning objective?" The next row also has 2 columns, one with the heading "By the end of the lesson what will students have achieved?", the second "links to previous learning". The third row also has two boxes, one labelled "differentiation and challenge" the next "literacy links". At this point (halfway down the page) the two columns reduce to one for 3 rows. The first row is headed "starter", the next "main episode (this is the largest box on the plan) and the final "plenary". The last row is split again into two columns – one which says "implications of today's student outcomes for next lesson" the final "homework".

In each lesson under the new learning heading Matthew has written one bullet, for example "Formal methods for multiplying decimals by changing place value". In one lesson the box headed "By the end of the lesson what will students have achieved" is broken down into "all"; "most" and "some". The "some" was an extension task. In both lessons the differentiation and challenge box had been filled in. The content of both referred to "challenges, for example, in the lesson on multiplying decimals the content of this box said "How do you divide a decimal by another – check on your calculator eg 0.258/0.03".

Some additional tasks are outlined in the starter section and main episode section of one plan (the first lesson plan made no reference to specific activities for specific students in these boxes). An additional starter was provided "Division available for some students", and in the main episode it was noted that questions from the text book would be "self-selected".

The personal lesson plan

Matthew does do regular personal lesson planning, "one, maybe two, but usually one lesson ahead... because I do it in detail the day before or maybe the day before that, it's fresh in my mind". His written plans do not use the official format, but they "very much prompt as to how I'm going to approach it with a list of key questions, a list of resources". He sees planning as important "to take them from where they are to where they need to be". He does not mention where he writes these plans (i.e. in a planner, on-line).

Understanding of differentiation

Differentiation is mentioned specifically on the plans in the box entitled "differentiation and challenge". When asked specifically to outline what he understood by this box his focus was on the challenge aspect – "The differentiation challenge would be - challenge is what would normally be, sort of, gifted and talented in the school. But we don't separate off gifted and talented pupils. We expect all pupils at all levels to have challenges appropriate to them". He goes on "We have challenge coordinators whose job it is to make sure that across the whole spectrum of activities the children do at the school, that people of all abilities are being challenged to be the best they can be". This was consistent with the "extension type" tasks he had included in this section of his plans.

Differentiation for Matthew was in terms of "natural or current level of Maths ability" rather than special educational need. He based this on ideas of groups within his lessons informing his planning – "I would normally break the class down to three or four groups based on how people have responded to the last lesson". Differentiation was by task in the lesson plans provided for example, writing that some students going on to explore division. He commented that he tries to plan "so that the activities are such that the differentiation is by outcome". Questioning was another aspect of differentiation – "I can ask different questions in different groups on the way round".

There was evidence of differentiation of resources in the lessons I observed for one pupil, the pupil who had a visual impairment. "Today she got a sheet when the [white]board was on there because it was a bad photocopy of a newsprint article so it was low contrast, it was just not a nice image. So she had a copy of it so she could look at". He would also enlarge any exam papers (usual practice in the school was to print exam pages as A5 with two pages per A4 sheet, but for this pupil he printed it off regular size). This provision of enlarged resources was rare as "providing the light levels are good enough she can read. So she doesn't need anything special".

Specific planning for diversity

When asked about specific planning for diversity in terms of if he considers specific pupils with special educational needs he replied "Yeah, as one of my considerations. It's not, I wouldn't say it was a prime consideration but it is, I mean, I try to address, I try to teach them as individuals and treat them as individuals and each of them knows what I expect from them"

Support for planning

Matthew makes brief reference to schemes of work as part of the planning process. "In terms of planning our lessons our scheme of work is broken down into what the requirements are for the year group, what they have to do, broken down by sets as to what this learning might look like, how the learning might emerge, the sort of questions we like to ask, the sort of resources we might like to use. So a lot of the medium term planning is done for us." There is some expectation regarding what should be contained in lessons – "He[the head of department] has certain activities and an overall mix of rich and robotic tasks, an overall standard that he would expect us to meet".

Matthew does not talk about support from teaching assistants, but does comment that he can go to "two or three" members of staff he can speak to to find out more about a particular pupil's needs.

Expanded planning

Planning for Matthew went beyond the aspects he recorded on the formal and personal lesson plans. He had ideas of tasks dependant on the ability of different groups in his class as informed by formative assessment. He describes a number of different groups – "doesn't always pick up new topics as quickly as others"; "the shy ones who don't always let me know if they're not understanding it"; "gifted and talented". He comments that he doesn't have to make a list of these groups/individuals within the "I don't need to list the pupils in the class because in Maths we see fewer pupils more often".

He also plans to "check in on" certain pupils in the course of a lesson – "I have key pupils in the room who I have learnt if they understand it then other people who are similar learners to them, are likely to understand it. So I do check in with, sort of, one person from each of those groups". His knowledge of pupils and their needs extends to awareness of cues he may (or may not) receive from pupils. "She [the pupil with VI] tends to look as if she's not paying attention because she doesn't need to make eye contact and read expressions, because she can't. So quite often when she's looking down at the desk it's not because she's disinterested and not because she's not listening. [..] I had to be aware and remind myself during the lesson that the visual cues I get from other students that they're interested or paying attention, I don't get from her".

He does have a seating plan for the class, but this is not influenced by pupils' SEN – "I don't group, they're not sat together. They're not some sort of, they're not treated [differently], as far as any of the children in the class are concerned". His seating plan "keep[s] them reasonably mixed, knowing that because they are set, I will have to only make minor tweaks as things appear. And as often as not it's because of behaviour or personality issues". He acknowledges that where Claire, the pupil with the visual impairment sits is based on her need, but another aspect of his complementary planning is brought up in his discussion – that of planning that is influenced by pupil voice as well as formative assessment.

"I allowed her to sit where she wanted, to start with, because I told her, and she underperformed in the first test in geometry type topics because her ability to look at whole class explanations on the board hadn't been what it should have been. So I had a chat with her after the first time that this appeared, and she said that the reason that she'd sat.. My plan said that she had to sit at the front on the right hand side. She sat at the front on the right hand side but further right than she would have wanted to have sat, and she hadn't sat elsewhere because there were already people there. And she hadn't said anything, and I hadn't specifically checked with her because she was sitting broadly where I was told that she would choose to sit. So I learnt from that! So she's now sat at the front and I didn't specifically move her as far as the class was concerned because she needed to sit there. I had a range of moves within the class and she ended up in a seat that was good for her!"

How Matthew's planning, in relation to areas of learner diversity, becomes enacted and to what extent

Enactment of the formal written lesson plan

The differentiation by task which Matthew had highlighted as "all, some and most" in his first lesson was "ditched...because they were all making progress and because the exercise was progressive, [...] they were all coming across different things. So as you went through they all had to, the numbers got more complicated". This demonstrates in-flight thinking in the lesson itself.

The specific differentiated resource created for the pupil with a visual impairment was also used, but he acknowledged that in some instances his writing was too small: "As far as the special education needs side of things for Claire went, there were three occasions the writing was too small on the board. I gave her a sheet at the beginning. [...]so she had a sheet which was fine, that worked". He also explained that his turning the lights on and off at different points during the lessons was to support Claire.

Enactment of the expanded planning

One of Matthew's complementary planning techniques was checking in of specific pupils – "canaries" as he calls them, students who represent particular groups. The following dialogue demonstrates how that was enacted in the lesson:

Researcher: [...]you came and mentioned to me about how you were going to go and check on, I can't remember his name, but, a specific pupil. Do you normally have a plan of pupils you want to check in with, or does it vary? Matthew: [...]I have key pupils in the room who I have learnt if they understand it then other people who are similar learners to them, are likely to understand it. [...]But he, as I was going round, he had been very quiet, and hadn't been engaging with those with whom he sat. So I wanted to make sure that he did

understand what was going on, and he did. [...]

Researcher: ...the groups that you were saying that he might have been a canary for or an indicator for, are they based on need or are they based on Maths level or topic level?

Matthew: For him, he's in a number of groups. He's in amongst the shy ones who don't always let me know if they're not understanding it. He's also one of those on the list so he doesn't always pick up new topics as quickly as others, so he sort of fits into a number of categories. So it's useful to check in with him.

The researcher noted that Matthew supported a whole range of pupils with questions, one-to-one support and demonstrations. When she raised this with Matthew he said it was something he would do in most lessons because "it gives me an opportunity to ask questions and explore their understanding so I can assess for next lesson". It also enabled him to give "reassurance on what they're doing, is fine".

Discussion

Some themes occurred across all four case studies (e.g. broadness of understandings of diversity; the existence of an 'official' formal plan compared to day-to-day lesson planning practice), while other themes are unique, seen in one teacher (for example, for one teacher, union and government policy came out strongly as an influence on planning, whereas others made no reference to this; another described the influence of school ethos on his beliefs about diversity). Other codes were common, but with different meanings or expressed in different ways by different teachers – for example, for all teachers 'responsibility' was a theme, but different 'holders of responsibility' were emphasised – for example, some of the teachers regarded finding out more information about a pupil with SEN as their personal responsibility, whilst others would view this as being the responsibility of learning support assistants to inform them, or as a shared responsibility.

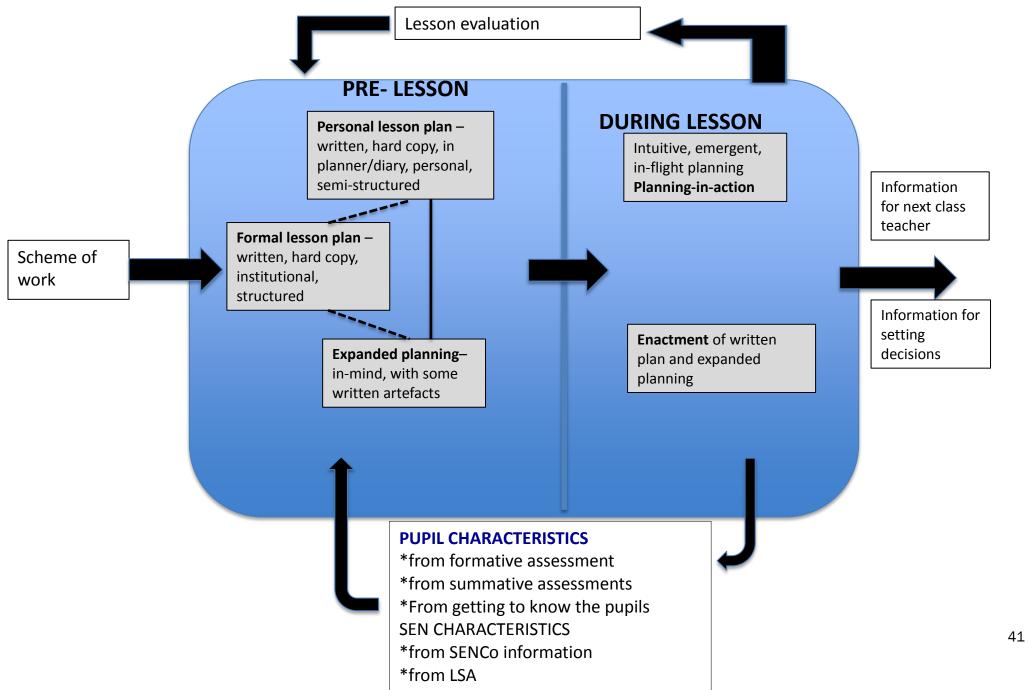
The teachers' understandings of diversity were much broader than diversity related to SEN. When asked to define learner diversity each of the teachers described a host of different groupings/ 'pupil types', for example: abilities in the subject; preferred learning styles; background; gender; behaviour. In two of the cases there was a focus on treating every learner as an individual, each of whom may need support; and one teacher described how all pupils may face barriers to learning.

The case studies and analysis of lesson plan has allowed the inductive development of a model of lesson planning for including pupils with SEN (see figure 4). This is based on what lesson planning for diversity looks like, and tries to account for the many facets of planning that have been revealed.

Pre-lesson planning is usually in the form of a personal plan, recorded in a planner (e.g. A4 size record book). The exact content recorded here is individual to the teacher concerned, although common elements were identified (see table 5). In tandem with this *personal lesson planning* is *expanded planning*, much of which is 'in-mind' (see table 6). For example, some teachers described how they planned to "touch base" with particular individuals during their lesson. Expanded planning sometimes also involved artefacts (seating plans/group lists) which were ongoing across lessons and often amended and updated. These two types of planning – the personal lesson plan and expanded planning, occur prior to the lesson. In addition, each of the teachers mentioned the production of a formal lesson plan if they were being observed (by senior management, inspectors or visitors). This was on an official school format in all but one case (Rebecca had adapted the school format to one she was more comfortable with). The dotted lines on the model reflect the idea that the formal lesson plan is only used in certain circumstances; whereas the solid line shows how the personal lesson plan and expanded planning always occur.

The pre-lesson planning (both the written plans and the expanded planning) are informed by: the scheme of work produced at a departmental level which act as a curriculum map; the evaluation of previous lessons (in terms of both earlier lessons with the same class and evaluation of how a particular lesson went in previous years); and knowledge of pupil characteristics. The teachers' knowledge of pupil characteristics, including, but not limited to, SEN characteristics, comes from a range of sources. This includes summative assessment data (for example, results from an end of unit assessment; KS 2 assessment data) and on-going formative assessment. Another source of information is school level information, such as indicators of status on various measures such as pupil premium status and SEN status.

Figure 4: model of lesson planning for including pupils with SEN



Where pupils have been identified as having SEN, additional written information is provided, which varies in detail – for example a sentence describing the need and a request to "please make classroom adjustments", or an A4 document which describes the pupil's difficulties, the impact these may have on learning, contextual information about the pupil's home life/background and lists strategies for support. Teachers' ideas about learner characteristics, particularly in relation to the specific subject, were also developed from the teacher's experience with learners in their lessons, and were thus not always deduced from a provided list of pre-identified pupils. Some of the teachers also describe how they can obtain further details about pupils with SEN – they can approach the Special Educational Needs Coordinator/ Special Needs department, or they can be informed of particular needs by a LSA who may accompany a particular pupil to a lesson. A further source of information about a pupil is from the pupils themselves. Some of the teachers stated that they had spoken to pupils about their needs and preferences.

Planning also occurred during the lesson itself. Though pre-lesson plans were enacted, there was also evidence of all teachers 'planning-in-action', making changes to the lesson activities, grouping structures and timings depending on various clues they were picking up on. This was in general terms (e.g. stopping reading a play before the point specified in the plan as the teacher felt more time should be given to discussion) and on an individual level (e.g. allowing a student to use a calculator rather than struggling with addition in a lesson focused on sequencing).

Finally there the information gained about particular pupils/lessons was 'passed on' in various ways. This could be information about particular pupils informing setting decisions, or information about a pupil for the next class teacher. In some cases it was stated how knowledge gained about specific pupils in a lesson may be passed to a SENCo or to inform SEN targets. In addition, formative assessment of pupils made during a lesson would inform future planning cycles, feeding back into pre-lesson planning. In addition generalised information about pupil characteristics was challenged and adapted by emerging evidence from specific teaching and fed into future lesson planning.

Limitations to study

There are a number of limitations to this study. We did not reach our target quota of teachers, schools did not want to take part for a variety of reasons relating to lack of time/general busyness; having no classes that matched the project requirements; and the reluctance of teachers to become involved. Therefore cross subject analysis cannot be undertaken as only one subject (Maths) is represented twice. Nor can we examine patterns that may occur at a school level, as only one school was able to provide us with two case study teachers.

Although we discussed how planning related to learner diversity was enacted, we cannot comment on its extent as it is difficult to fully measure extent in the observation of only two lessons.

Future work

Based on the study findings, for future work we would focus on wider conceptualisations of diversity, as all four teachers in the study saw diversity extending beyond special educational needs. We would also request copies of day-to-day personal lesson planning, such as a photocopy of their planner.

The emergent model of lesson planning for including pupils with SEN needs further empirical investigation to examine its applicability across a wider conceptualisation of diversity, a larger number of teachers, curriculum subjects and pupil age phases.

Further research in the future could explore if there is a link between years of teaching experience and its impact on planning for diversity. Another avenue would be to explore how trainee teachers learn about planning, including 'expanded planning' strategies, as this has implications for initial teacher training.

Conclusion

Although this research project focussed on the lesson planning practices of just four secondary school teachers, the detailed study of their practices through a sequence of interviews and observations has enabled the construction of four in-depth case studies. These show sufficient commonality to lead to the development of a provisional model for lesson planning for including pupils with SEN which has potential implications for teacher education.

The teachers who participated in this study all carried out some form of lesson planning, both on paper and 'in-mind'. This is in a context where OfSTED do not require to see individual lesson plans, but where teachers do produce them for 'official' observations. The question of is it the product, the concrete lesson plan, or the imaginative planning process itself most significant to lesson preparation and effectiveness remains.

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